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Technology for a better life

PRODUCT CATALOG

ver.3

Technology for a better life

ver.**3**

PRODUCT CATALOG

for Global Market

Improving Lives Around the World Through Contec Technologies

Contec established its expertise in highly reliable technology with electronic devices for factory automation. Leveraging this knowledge and proficiency, we have expanded into environment & energy, healthcare, and digital signage industries.
We strive to improve your daily life through creative technologies and products.

Our Management Philosophy

Contribute to society with creative technology and products

Corporate Slogan

Technology for a better life

Product Lineup

Edge Computing

Embedded Computers
- Fanless Embedded Computers
- Embedded Computers
- Industrial Motherboards

Industrial Computers
- Automation Computers
- Custom Computers

All-in-One Computers
- Panel Mount Computers

M2M / IoT

- CONPROSYS
- Remote I/O
- Wireless I/O
- Data Acquisition
- Communication
- Industrial LAN and Wireless

Solutions and Services

- Integration Support Services

PRODUCT CATALOG
for Global Market Ver.3

CONTENTS

Edge Computing

Proprietary Development Technologies Designed for a Wide Spectrum of Industries

Contec designs, develops and manufactures highly reliable, long-life and rugged industrial computers. Leveraging our expertise in the Factory Automation (FA) industry has allowed us to expand our business and quality product offerings to the growing Information and Communication Technology fields, including digital signage, healthcare, and energy.

CONTEC Craftsmanship

Contec's comprehensive quality assurance framework defines specific quality requirements to deliver unsurpassable reliability without sacrificing performance or usability. For example, our products must pass more than 500 checkpoints, developed over 30 years product development experience. At Contec, quality is the synonymous with reliability. This means much more to us than simply catalog specs or performance figures. We know that for our industrial customers, reliability is the single most important factor when choosing their technology.

True Performance Indicator: 0 to 50 °C Guaranteed

Pitfall of "Operating Temperature" Indication

Operating temperature is one of the product performance indicators. Did you know that there are no uniform testing standards for industrial technology? Each manufacturer establishes its own performance test procedures and standards. You cannot see actual product performance differences by just checking the value range of the performance indication in basic specifications. In Contec's standard, indicated values are those measured in no-wind condition, which is a very severe environmental condition. At Contec, we believe that performance standards are insignificant unless they are rigorously tested in the most extreme industrial conditions.
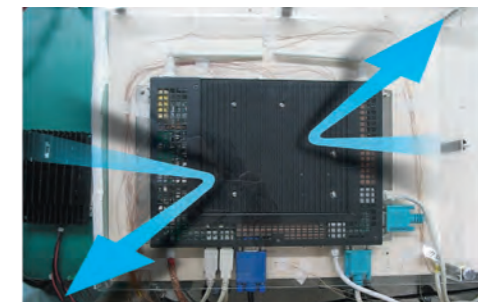
Performance test with ventilation from the outside minimized with an acrylic board

Operating temperature range between 0 to 50 °C is achieved

This performance indication is equivalent to
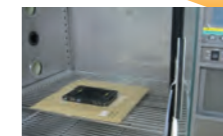
In thermostat bath test with ventilation

0 to 60 °C

In simple surface temperature measurement

0 to 65 °C

Quality Begins with Parts Selection

An industrial computer is composed of many electrical components, such as a CPU. Proper selection of high quality components is a decisive factor for the reliability of the final product. Parts must be meticulously selected based a deep understanding of how the product will be used and the conditions under which it must perform. When it comes to the quality and reliability of industrial box computers, we are meticulous in our attention to detail at every stage of part selection:
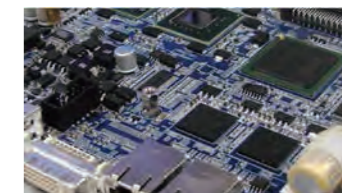
- CPU and chipsets for embedded devices
- Highly durable SLC chip types
- High performance battery with 10-year life cycle
- Highly reliable capacitors for each unit

Embedded Computers

Embedded Computers

Model	BX-T1000 P9	BX-U200 P10	BX-956S P11	BX-220 P12	BX-825 P13		BX-830 P14	BX-R100 P15	BX-S3300 P16	BX-S2000T P17	BX-S959SD P18
Main Feature	Intel 7th Gen. Core Processors	Extremely Compact Designing	Thin Size	RAS Functions	3 LAN Ports		Wide Operating Temperature Range	Target to Railway Applications	Support Intel Xeon Processor	Intel 6th Gen. Core Processor	Compact size w/ 2.5" disk bay
Processor	Core i7-7600U Core i5-7300U Celeron 3965U	Atom x5-E3940	Atom E3845	Atom E3845	Atom E3845		Atom E3845	Atom E3845	Xeon E-2278GEL Core i3-9100TE Celeron G4900T	Core i5-6300U Celeron 3955U	Atom E3845
System Memory	8GB	4GB (On Board)	4GB / 8GB	2GB / 4GB / 8GB	4GB		4GB	4GB	Up to 32GB	Up to 32GB	Up to 8GB
Storage	2x 2.5" drive bays	32GB SSD (MLC)	2x CFast slots	2x CFast slots	1x CFast slot		1x CFast slot	32GB SSD (MLC) 1x SD slot	2x 2.5" drive bays	1x 2.5" drive bay	1x 2.5" drive bay 1x CFast slot
Dimensions (mm/inch)	262/10.31 (W) x 180/7.09(D) x 49/1.93(H)	110/4.33(W) x 90/3.54(D) x 29/1.14(H)	182/7.17(W) x 155/6.10(D) x 29/1.14(H)	178/7.01(W) x 115/4.53(D) x 29/1.14(H)	220/8.66(W) x 118.9/4.68(D) x 49.8/1.96(H)		182/7.17(W) x 115.5/4.55(D) x 49.8/1.96(H)	200/7.87(W) x 185/7.28(D) x 46/1.81(H)	235/9.25(W) x 185/7.28(D) x 74/2.91(H)	189.0/7.44(W) x 147.4/5.80(D) x 58.2/2.29(H)	182/7.17(W) x 160/6.30(D) x 45/1.77(H)
Operating Temperature Range	0 to 45°C/ 32 to 113°F	-30 to 50°C/ -22 to 122°F	0 to 50°C/ 32 to 122°F	0 to 50°C/ 32 to 122°F	0 to 55°C/ 32 to 131°F		-40 to 70°C/ -40 to 158°F	-40 to 70°C/ -40 to 158°F	TBD	-10 to 50°C/ 14 to 122°F	-10 to 60°C/ 14 to 140°F

Model	BX-S3000 P19	CPS-BXC200 P20	BX-320 P21	BX-M1000 P22	EPC-3010 P23
Main Feature	2 Card Slots Model	Supports McAfee Whitelist Solution	PCIe (x1) Cable Port	2 Card Slots and 4 Card Slots Models	W/ Cooling Fan
Processor	Core i7-6700TE Core i5-6500TE Celeron G3900TE	Atom x7-E3950	Atom E3845	Core i5-7300U Celeron 3965U	Core i7-6700TE Core i5-6500TE Celeron G3900TE
System Memory	Up to 32GB	4GB / 8GB	4GB	8GB	Up to 16GB
Storage	2x 2.5" drive bays	32GB SSD / 64GB SSD (pSLC)	2x CFast slots	2x 2.5" drive bays	2x 2.5" drive bays
Dimensions (mm/inch)	BX-S3000: 235/9.25(W) x 185/7.28(D) x 74/2.91(H) BX-S3000P2/P2A: 235/9.25(W) x 185/7.28(D) x 129.5/5.10(H)	76.0/2.99(W) x 94.0/3.70(D) x 124.8/5.06(H)	94/3.70(W) x 120/8.27(D) x 74.7/2.94(H)	262/10.31(W) x 262/10.31(D) x 64/2.52 to 159/6.26(H)	262/10.31 (W) x 262/10.31(D) x 88/3.64 to 183/7.20(H)
Expansion	1x M.2 2242 slot/ 1x Mini-PCIe slot/ 2x PCIe (x8) (P2 model)/ 2x PCI (P2A model)	Contec stack bus (Up to 8 CONPROSYS I/O modules)	Contec F&eIT bus (Up to 8 F&eIT I/O modules) 1x PCIe (x1) cable port	None Model/ 2x PCI Model/ 1x PCIe(x4), 3x PCI Model	None Model/ 2x PCI Model/ 1x PCIe(x8), 3x PCI Model
Operating Temperature Range	0 to 50°C/ 32 to 122°F	-20 to 60°C/ -4 to 140°F	0 to 50°C/ 32 to 122°F	0 to 50°C/ 32 to 122°F	0 to 40°C/ 32 to 104°F

Model	GSPI-Q3700-LLVA P24	GMB-AQ3701-LLVA P25	GMB-AC2460-LLVA P26
Main Feature	Single Board Computer	Industrial Matherboard	Industrial Matherboard
Supported Processors	Intel 8th Gen. Core Processors	Intel 8th / 9th Gen. Core Processors	Intel 8th / 9th Gen. Core Processors
Processor Socket	LGA 1151	LGA 1151	LGA 1151
Chipset	Q370	Q370	C246
System Memory	Up to 64GB	Up to 64GB	Up to 64GB
Form Factor	PICMG 1.3	ATX	ATX
Operating Temperature Range	0 to 60°C/ 32 to 140°F	0 to 60°C/ 32 to 140°F	0 to 60°C/ 32 to 140°F

Embedded Computers

BX-T1000 Series

Fanless Embedded Computer - BX series

Features

- Intel 7th Gen. Core i7, Core i5, or Celeron processor
- Fanless design reduces maintenance
- Wide range of power supplies supported (10.8 to 31.2VDC)
- Rich peripherals support a wide variety of IO interfaces
- Retention fittings and cable clamps keep cables secure and minimize distruptions
- For Windows 10 IoT Enterprise installed model, the WF function of OS is supported.

Ordering Information

Equipped with Intel Core i7-7600U 2.80GHz

BX-T1000-NA02
(Memory 8GB, w/o OS, w/o storage devices)

BX-T1000-W10M02H07
(Memory 8GB, Windows 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr), 2.5 inch HDD 100GB)

BX-T1000-W10M02M08
(Memory 8GB, Windows 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr), 2.5 inch SSD (MLC) 256GB)

Equipped with Intel Core i5-7300U 2.60GHz

BX-T1010-NA02
(Memory 8GB, w/o OS, w/o storage devices)

BX-T1010-W19M02H07
(Memory 8GB, Windows 10 IoT Enterprise 2019 LTSC 64bit (Ja/En/Cn/Kr), 2.5 inch HDD 100GB)

BX-T1010-W19M02M08
(Memory 8GB, Windows 10 IoT Enterprise 2019 LTSC 64bit (Ja/En/Cn/Kr), 2.5 inch SSD (MLC) 256GB)

Equipped with Intel Celeron 3965U 2.20GHz

BX-T1020-NA02
(Memory 8GB, w/o OS, w/o storage devices)

BX-T1020-W19M02H07
(Memory 8GB, Windows 10 IoT Enterprise 2019 LTSC 64bit (Ja/En/Cn/Kr), 2.5 inch HDD 100GB)

BX-T1020-W19M02M08
(Memory 8GB, Windows 10 IoT Enterprise 2019 LTSC 64bit (Ja/En/Cn/Kr), 2.5 inch SSD (MLC) 256GB)

Specifications

Model		BX-T1000- xxxxxxxxx	BX-T1010-xxxxxxxxx	BX-T1020-xxxxxxxxx
System	CPU	Intel® Core™ i7 Processor 7600U (2.80GHz)	Intel® Core™ i5 Processor 7300U (2.60GHz)	Intel® Celeron Processor 3965U (2.20GHz)
	BIOS	BIOS (mfd. by AMI)		
	Security	TCG TPM2.0		
	Memory	8GB(260 pin SO-DIMM), PC4-17000 (DDR4-2133)		
Graphic controller		Intel® HD Graphics 620 (built-in CPU)		Intel® HD Graphics 610 (built-in CPU)
Interface	Display	DVI-Dx 1 (25pin DVI-D connector), DisplayPortx 1		
	SATA	Slot-in 2.5 inches SATA hard disk x 2 Serial ATA 3.0 compliant support		
	LAN	2x ports (1000BASE-T/100BASE-TX/10BASE-T (Wake On LAN support))		
	Audio	1x Line-out, 1x Line-in, 1x Mic-in		
	USB	4x USB3.1 Gen1 (USB3.0), 2x USB2.0 (TYPE-A)		
	Serial	2x RS-232C		
Hardware monitoring		Monitoring CPU temperature, power voltage		
Watchdog timer		Software programmable, 255 level (1sec to 255sec). Time up allows reset or shutdown.		
RTC/CMOS		Lithium backup battery life: 10 years or more. The real-time clock is accurate within ±3 minutes (at 25℃) per month		
Rated input voltage		12 to 24VDC *		
Range of input voltage		10.8 to 31.2VDC		
Power consumption(Max.)		12V 5.2A, 24V 2.7A	12V 4.2A, 24V 2.2A	12V 4.1A, 24V 2.1A
Operating temperature		0 to 45℃/32 to 113°F (With 1000BASE-T: 0 to 40℃/32 to 104°F)		
Opterating humidity		10 to 90%RH (No condensation)		
Storage temperature		-10 to 60℃/14 to 140°F		
Physical dimensions (mm/inch)		262/10.31 (W) x 180/7.09(D) x 49/1.93(H) (No protrusions)		
Weight		About 2.0kg/4.41lb (Excluding attachment fittings)		
Certification EMC saftery		VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive)		
Software operating support		Windows 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr)		

* Use a power cable shorter than 3m.

BX-U200 Series

Fanless Embedded Computer - BX series

Wireless LAN Equipped Model

Features

- Compatible with the latest industrial technology USB Type-C Connector
- Extremely small form factor - the size of just two business cards
- Connect anything 2xLAN+Wireless/Bluetooth*

* Standard-equipped with two LAN ports. Wi-Fi/Bluetooth: in the case of wireless models

Ordering Information

BX-U200-NA01M03
(Memory 4GB, w/o OS, w/ SSD (MLC) 32GB)

BX-U200R-NA01M03 (Japan only)
(Memory 4GB, w/o OS, w/ SSD (MLC) 32GB, w/ Wireless LAN)

BX-U200-W19M01M03
(Memory 4GB, w/ Windows 10 IoT Enterprise 2019 LTSC 64bit (Ja/En/Cn/Kr), w/ SSD (MLC) 32GB)

BX-U200R-W19M01M03 (Japan only)
(Memory 4GB, w/ Windows 10 IoT Enterprise 2019 LTSC 64bit (Ja/En/Cn/Kr), w/ SSD (MLC) 32GB, w/ Wireless LAN)

Specifications

Model		BX-U200
System	CPU	Intel®Atom®Processor x5-E3940 (1.6GHz)
	BIOS	BIOS (mfd. by AMI)
	Security	TCG TPM2.0
	Memory	4GB PC3-12800 (DDR3L 1600), On Board
Graphic controller		Intel® HD Graphics 500 (built-in CPU)
Interface	Display	1x DisplayPort, 1x USB Type-C (DP Alt Mode)
	Storage	M.2 2242 SATA 3.0
	LAN	2x ports (1000BASE-T/100BASE-TX/10BASE-T (Support Wake On LAN))
	Wireless LAN	IEEE 802.11ac/n/a/b/g & Bluetooth 4.2 (BX-U200R model) (Japan only)*
	USB	1x USB3.1 Gen1 (Type-C, DP Alt Mode), 2x USB3.1 Gen1 (Type-A),
Expansion		1x M.2 2242 slot: SATAIII M.2 Card(MLC) equipped. 1x M.2 2230 slot: IEEE802.11ac/n/a/b/g & Bluetooth 4.2 model equipped (for Wireless LAN model)
Hardware monitoring		Monitoring CPU temperature, power voltage
Watchdog timer		Software programmable, 1sec to 255sec. (A reset occurs upon time-up)
RTC/CMOS		Lithium backup battery life: 10 years or longer The real-time clock is accurate within ±3 minutes (at 25℃) per month (CPU built-in RTC).
Rated input voltage		12 to 24VDC
Range of input voltage		6 to 37VDC , USB Power Delivery (15V/3A)
Power consumption(Max.)		T.B.D.
Operating temperature		-30 to 50℃ /-22 to 122°F (-30 to 70℃ /-22 to 122°F w/ optional cooling fan) * (Some exceptions may apply.)
Storage temperature		-30 to 70℃ (-22 to 158°F)
Physical dimensions (mm/inch)		110/4.33(W)×90/3.54(D)×29/1.14(H) (No protrusions)
Weight		T.B.D.
Certification EMC saftery		VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive)
Software operating support		Windows 10 IoT Enterprise 2019 LTSC 64bit (Ja/En/Cn/Kr)

* In case of use the wireless LAN models in other regions, please contact us for more details.

BX-956S Series

Fanless Embedded Computer - BX series

Features

| Supports Windows 10 IoT Enterprise and Windows Embedded Standard 7
| Slitless/fanless design prevents ingress of dust and grime to reduce maintenance
| A5 size slim design
| Built in remote power management reduces operational activities to increase energy efficiency

Ordering Information

BX-956SD-DC700000
(Memory 4GB, w/o OS, w/o storage devices)
BX-956SD-DC800000
(Memory 8GB, w/o OS, w/o storage devices)
BX-956SD-DC731314
(Memory 4GB, Windows Embedded Standard 7 32bit, CFast(SLC) 16GB)
BX-956SD-DC761314
(Memory 4GB, Windows Embedded Standard 7 32bit, CFast(MLC) 32GB)
BX-956SD-DC771314
(Memory 4GB, Windows Embedded Standard 7 32bit, CFast(Q-MLC) 16GB)
BX-956SD-DC781314
(Memory 4GB, Windows Embedded Standard 7 32bit, CFast(Q-MLC) 32GB)
BX-956SD-DC761724
(Memory 4GB, Windows 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr), CFast(MLC) 32GB)
BX-956SD-DC781724
(Memory 4GB, Windows 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr), CFast(Q-MLC) 32GB)
BX-956SD-DC881724
(Memory 8GB, Windows 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr), CFast(Q-MLC) 32GB)

Specifications

Model		BX-956SD
System	CPU	Intel® Atom® Processor E3845 1.91GHz
	BIOS	BIOS (mfd. By AMI)
	Memory	BX-956SD-DC8xxxxx: 8GB, 204pin SO-DIMM socketx 1, PC3-10600(DDR3L 1333)ECC BX-956SD-DC7xxxxx: 4GB, 204pin SO-DIMM socketx 1, PC3-10600(DDR3L 1333)ECC
Graphic controller		Intel® HD Graphics (built-in CPU)
Disply I/F		DVI-I x 1 (29pin DVI-I connector)
Interface	CFast	2 slots, CFast CARD Type I, bootable One stot is used for built-in OS models.
	Audio	HD Audio compliant, LINE OUT x 1, MIC IN x 1
	USB	1x USB3.1 Gen1 (USB3.0), 5x USB2.0 (TYPE-A)
	Serial	2x RS-232C
	LAN	2x 1000BASE-T/100BASE-TX/10BASE-T (Wake On LAN support)
Hardware monitoring		Monitoring CPU temperature, power voltage
Watchdog timer:		Software programmable, 255 level (1 to 255 sec.). Causes a reset upon time-out.
RCT/CMOS		Lithium backup battery life: 10 years or more. The real-time clock is accurate within ±3 minutes (at 25℃) per month
Rated input voltage		12 to 24VDC
Range of input voltage		10.8 to 31.2VDC
Operating temperature		(1) Horizontal installation : 0 to 50℃ / 32 to 122F°(When using 1000BASE-T: 0 to 45℃ / 32 to 113F°) (2) Vertical installation other than above : 0 to 45℃ / 32 to 113F°(With 1000BASE-T : 0 to 40℃ / 32 to 104F°)
Storage temperature		-10 to 60℃ / 14 to 140F°
Humidity		10 to 90%RH (No condensation)
Physical dimensions (mm/inch)		182/7.17 (W) x 155/6.10(D) x29/1.14(H) (No protrusions)
Weight		About 1.0kg/2.20lb(Excluding attachment fittings)
Certification EMC safety		VCCI Class A FCC Class A CE Marking (EMC Directive Class A, RoHS Directive)
Software operating supported		Windows Embedded Standard 7 RUNTIME P 32bit (Ja/En/Cn/Kr) Windows 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr)

BX-220 Series

Fanless Embedded Computer - BX series

Backside

Features

| Low running cost with extreme energy efficiency
| Ultra-small form factor – about the size of a paperback book
| Slitless/fanless design prevents ingress of dust and grime to reduce maintenance
| Rich peripherals support a wide variety of extend interfaces including dual monitor (DVI & DP) and two CFast card slots
| Built in remote power management reduces operational activities to increase energy efficiency
| Built in monitoring function for improved reliability of industrial equipment
| Retention fittings and cable clamps keep cables secure and minimize disruptions

Ordering Information

BX-220D-DC700000
(Memory 4GB, w/o OS, w/o storage devices)
BX-220D-DC731211
(Memory 4GB, Windows Embedded Standard 7 32bit Japanese, CFast(SLC) 16GB)
BX-220D-DC731212
(Memory 4GB, Windows Embedded Standard 7 32bit English, CFast(SLC) 16GB)
BX-220D-DC761211
(Memory 4GB, Windows Embedded Standard 7 32bit Japanese, CFast(MLC) 32GB)
BX-220D-DC761212
(Memory 4GB, Windows Embedded Standard 7 32bit English, CFast(MLC) 32GB)
BX-220D-DC781724
(Memory 4GB, Windows 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr), CFast(Q-MLC) 32GB)
BX-220D-DC800000
(Memory 8GB, w/o OS, w/o storage devices)
BX-220D-DC861724
(Memory 8GB, Windows 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr), CFast(MLC) 32GB)

Specifications

Model		BX-220
System	CPU	Intel® Atom® Processor E3845 1.91GHz
	BIOS	BIOS (mfd. by AMI)
	Memory	BX-220D-DC8xxxxxx: 8GB, 204pin SO-DIMM socket x 1, PC3-10600(DDR3L 1333) ECC BX-220D-DC7xxxxxx: 4GB, 204pin SO-DIMM socket x 1, PC3-10600(DDR3L 1333) ECC
Graphic controller		Intel® HD Graphics (built-in CPU)
Interface	Display	1x DVI-I, 1x DisplayPort
	CFast *1	2x CFast CARD Type I slots, bootable
	LAN	2x 1000BASE-T/100BASE-TX/10BASE-T (Wake On LAN support)
	Audio	1x Line-out, 1x Mic-in
	USB	1x USB3.1 Gen1 (USB3.0), 2x USB2.0 (TYPE-A)
	Serial	2x RS-232C, 1x RS-422A/485 / General-purpose I/O / RAS (15pin D-SUB connector (female))
Hardware monitoring		Monitoring CPU temperature, power voltage
RTC/CMOS		Lithium backup battery life : 10 years or more. The real-time clock is accurate within ±3 minutes (at 25℃) per month (US15WP integrated RTC).
Rated input voltage		12 to 24VDC *2
Range of input voltage		10.8 to 31.2VDC
Power consumption(Max.)		12V 2.6A, 24V 1.5A
Operating temperature		0 to 50℃/32 to 122°F (When using 1000BASE-T: 0 to 45℃/32 to 113°F)
Opterating humidity		10 to 90%RH (No condensation)
Storage temperature		-10 to 60℃/14 to 140°F
Physical dimensions (mm/inch)		178/7.01(W) x 115/4.53(D) x 29/1.14(H) (No protrusions)
Weight		About 0.8kg/1.76lb (Excluding attachment fittings)
Certification EMC saftery		VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive), UL/c-UL
Software operating support		Windows Embedded Standard 7 32bit (Ja), Windows Embedded Standard 7 32bit (En), Windows 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr)

*1: The capacity of CFast is a value when 1GB is calculated by 1 billion bytes.
    The capacity that can be recognized from OS might be displayed fewer than an actual value.
*2: Use a power cable shorter than 3m.

BX-825 Series

Fanless Embedded Computer - BX series

Microsoft Azure Certified

McAfee Together is power.

Features

| 3 Gigabit LAN ports interconnect differing network hierarchy
| Supports a wide range of temperatures with operations guaranteed from 0 to 55°C*1
| Slitless/fanless design prevents ingress of dust and grime to reduce maintenance
| Wide variety of power supplies supported (9.6 to 31.2VDC) supported.

*1 This specification applies when forced air cooling is used. Derating may be necessary depending on the usage environment.

Ordering Information

BX-825D-DC760000
(Memory 4GB, w/mSATA SSD 32GB (MLC), w/o OS)

BX-825D-DC761824
(Memory 4GB, w/mSATA SSD 32GB (MLC), Windows 10 IoT Enterprise LTSB 2016 64bit (Japanese, English, Chinese, Korean) + McAfee)

Specifications

| Model		BX-825
System	CPU	Intel® Atom® Processor E3845 1.91GHz
	BIOS	BIOS (mfd. by AMI)
	Memory	4GB, 1x 204pin SO-DIMM socket, PC3-10600(DDR3L 1333) ECC
Graphic controller		Intel® HD Graphics (built-in CPU)
Interface	Display	1x DVI-I, 1x DisplayPort
	mSATA	32 GB (MLC NAND) built in *1
	CFast	1x CFast CARD Type I slot
	LAN	3x 1000BASE-T/100BASE-TX/10BASE-T (Wake On LAN support)
	USB	2x USB3.1 Gen1 (USB3.0), 3x USB2.0 (TYPE-A)
	Serial	1x RS-232C/422A/485
Hardware monitoring		Monitoring CPU temperature, power voltage
RTC/CMOS		Lithium backup battery life : 10 years or more. The real-time clock is accurate within ±3 minutes (at 25°C) per month.
Rated input voltage		12 to 24VDC *2
Range of input voltage		9.6 to 31.2VDC (no power supply protection function)
Power consumption(Max.)		12V 3.0A, 24V 1.6A
Operating temperature		0 to 55°C/32 to 131°F (When using 1000BASE-T: 0 to 50°C/32 to 122°F), During natural air cooling 0 to 55°C/32 to 131°F (During forced air cooling (0.5m/s))
Opterating humidity		10 to 90%RH (No condensation)
Storage temperature		-10 to 70°C/14 to 158°F
Physical dimensions (mm/inch)		220/8.66(W) x 118.9/4.68(D) x 49.8/1.96(H) (No protrusions)
Weight		About 1.2kg/2.56lb (Excluding attachment fittings)
Certification EMC saftery		VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive), CCC, UL(component certification), KC, BSMI, CB
Software operating support		Windows 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr)

*1: The capacity of CFast is a value when 1GB is calculated by 1 billion bytes. The capacity that can be recognized from OS might be displayed fewer than an actual value.
*2: Use a power cable shorter than 3m.

BX-830 Series

Fanless Embedded Computer - BX series

Microsoft Azure Certified

EN50155
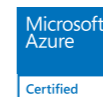
Backside

Features

| Supports a wide range of temperatures with operations guaranteed from -40 to 70°C
| Supports Windows 10 IoT Enterprise and Windows Embedded Standard 7
| Slitless/fanless design prevents ingress of dust and grime to reduce maintenance
| Conforms to railway standard EN50155 (Class TX) and fire safety standard EN45545-2.

Ordering Information

BX-830D-DC700000
Without operating system and storage

BX-830D-DC731314
Windows Embedded Standard 7 32bit (Japanese, English, Chinese, Korean), CFast Card (SLC) 16GB

BX-830D-DC781724
Windows 10 IoT Enterprise 64bit (Japanese, English, Chinese, Korean), Cfast Card (Q-MLC) 32GB

Specifications

Model		BX-830
System	CPU	Intel® Atom® Processor E3845 1.91GHz
	BIOS	BIOS (mfd. By AMI)
	Memory	4GB, 204pin SO-DIMM socket x 1 PC3-10600(DDR3L 1333)ECC
Graphic controller		Intel® HD Graphics (built-in CPU)
Disply I/F		DVI-I x 1 (29pin DVI-I connector), DisplayPort x1
Interface	CFast	1 slot, CFast CARD Type I, bootable For build-in OS type models, the CFast slot is used
	USB	1x USB3.1 Gen1 (USB3.0), 2x USB2.0 (TYPE-A)
	Serial	2x RS-232C, 1x RS-422A/485 / (general purpose I/O)
	LAN	Intel® I210IT Controller 1000BASE-T/100BASE-TX/10BASE-T 2 ports (Wake On LAN support)
Hardware monitoring		Monitoring CPU temperature, power voltage
Watchdog timer		Software programmable, 255 level (1sec - 255 sec) Causes a reset upon time-out.
RCT/CMOS		Lithium backup battery life: 10 years or more. The real-time clock is accurate within ±3 minutes (at 25°C) per month
Rated input voltage		12 to 24VDC
Range of input voltage		10.8 to 33.6VDC
Power consumption (Max.)		12V 2.2A, 24V 1.2A
Operating temperature		-40 to 70°C / -40 to 158F° (When using 1000BASE-T: -40 to 65°C / -40 to 149F°), during forced air cooling (0.5m/s) -40 to 60°C / -40 to 140F° (When using 1000BASE-T: -40 to 55°C / -40 to 131F°), during natural air cooling
Storage temperature		-40 to 80°C / -40 to 176F°
Humidity		10 - 90%RH (No condensation)
Physical dimensions (mm/inch)		182/7.17(W) x 115.5/4.55(D) x 49.8/1.96(H) (No protrusions)
Weight		About 1.3kg/2.87lb (Excluding attachment fittings)
Certification EMC safety		VCCI Class A, FCC Class A CE Marking(EMC Directive Class A,RoHS Directive) EN45545-2, EN50155 (Class TX)
Software operating supported		Windows Embedded Standard 7 RUNTIME P 32bit (Ja/En/Cn/Kr) Windows 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr)

BX-R100 Series

CE FC VCI RoHS compliant

Fanless Embedded Computer - BX series

Features

▌Conforms to railway standard EN50155 (Class TX) and fire safety standard EN45545-2.

▌PoE(IEEE802.3at) power reception and adaptable to a wide-range power of 10.8 to 33.6VDC input

▌M12 connecter interface

▌Excellent environmental capabilities

EN50155

Ordering Information

BX-R100-NA01M03
(Memory 4GB, w/ mSATA SSD 32GB (MLC), w/o OS)

BX-R100-W10M01M03
(Memory 4GB, w/ mSATA SSD 32GB (MLC), Windows 10 IoT Enterprise LTSB 2016 64bit (Japanese, English, Chinese, Korean))

Specifications

Model		BX-R100
System	CPU	Intel® Atom® Processor E3845 1.91GHz
	BIOS	BIOS (mfd. by AMI)
	Memory	4GB, 1x 204pin SO-DIMM socket, PC3-10600(DDR3L 1333) ECC
Graphic controller		Intel® HD Graphics (built-in CPU)
Interface	Display	1x DisplayPort
	mSATA *1	1x 32 GB (MLC NAND) built in
	SD	1x SD Card slot
	LAN	2x M12 Connectors (X-coded) (1000BASE-T/100BASE-TX/10BASE-T)
	USB	2x USB2.0 (TYPE-A)
	Serial	1x RS-232C
Hardware monitoring		Monitoring CPU temperature, power voltage
Watchdog timer		Software programmable, 255 level (1sec - 255sec) Time up allows reset shutdown.
RTC/CMOS		Lithium backup battery life : 10 years or more. The real-time clock is accurate within ±3 minutes (at 25℃) per month.(CPU built-in RTC)
Rated input voltage	PoE	PoE (25.5W input, 1x M12 8pin X-Coded connector)
	DC Input	12 to 24VDC (1x M12 4pin A-Coded connector) *2
Range of input voltage		10.8 to 33.6VDC
Power consumption (Max.)		12V 1.4A, 24V 0.8A
Operating temperature		-40 to 70℃/-40 to 158°F (When using 1000BASE-T: -40 to 65℃/-40 to 149°F) (during forced air cooling (0.5m/s)) -40 to 60℃/-40 to 140°F (When using 1000BASE-T: -40 to 55℃/-40 to 131°F) (during natural air cooling)
Opterating humidity		10 to 90%RH (No condensation)
Storage temperature		-10 to 80℃/14 to 176°F
Physical dimensions (mm/inch)		200/7.87(W) x 185/7.28(D) x 46/1.81(H) (No protrusions)
Weight		About 1.7kg/3.75lb (Excluding attachment fittings)
Certification EMC saftery		VCCI Class A, FCC Class B, CE Marking (EMC Directive Class A, RoHS Directive), EN45545-2, EN50155 (Class TX) *3 *4
Software operating support		Windows 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr)

*1: The capacity of storage device is a value when 1GB is calculated by 1 billion bytes. The capacity that can be recognized from OS might be displayed fewer than an actual value.
*2: Use a power cable shorter than 3m.
*3 Use a cable less than 3 meters to connect to USB 2.0 I / F.
*4 The noise resistance test, withstand voltage test, and isolation resistance test are conducted by connecting the PoE power unit "POW-CB60AT" (optional item). This standard is applicable for the BX-R100 main body only. Use a power supply that conforms to EN50155.

BX-S3300 Series

CE FC RoHS compliant

Fanless Embedded Computer - BX series

Backside

Features

▌C246 Chipset used to support Intel ® Xeon®/ Core™/ Celeron ® processor

▌RAID 0,1 available: 2x 2.5" storage devices, up to 2.5 TB/ each

▌Slitless/fanless design prevents ingress of dust and grime to reduce maintenance

▌Dual Giga LAN, 4x COM, 6x USB, and other rich expansion interfaces

▌ECC Supported

▌Cost effective

Ordering Information

PRODUCT BX-S3300-DC8800000
Xeon E-2278GEL 8GB

PRODUCT BX-S3300-DC9800000
i3-9100TE 8GB

PRODUCT BX-S3300-DCA800000
Celeron® G4900T 8GB

Specifications

Model		BX-S3300
System	CPU	Intel® Xeon® E-2278GEL (16M Cache, up to 3.90 GHz)
		Intel® Core™ i3-9100TE (6M Cache, up to 3.20 GHz)
		Intel® Celeron® G4900T (2M Cache, 2.90 GHz)
	Chipset	Intel® C246 controller HUB
	Security	TPM 2.0
	Memory	DDR4 2666/2400, 2x 260-pin SO-DIMM, Max. 32 GB (ECC Supported)
Graphic controller		CPU Intergrated Intel® HD Graphics
Storage slot		2x 2.5" HDD/SSD (Removeable Bay)
		1x M.2 Key-M
Interface	Display	1x DVI-I (DVI-D + VGA), 1x DisplayPort
	LAN	2x 1000BASE-T/100BASE-TX/10BASE-T (Wake On LAN support)
	Audio	1x Mic-in, 1x Line-out
	USB	4x USB3.1 Gen1 (USB3.0), 2x USB2.0 (TYPE-A)
	Serial	1x RS-232C/422A/485, 3x RS-232C
Expansion		1x Mini-PCI/e
		1x M.2 Key-M 2242(Reserve)
Rated input voltage		12 to 24VDC *1
Range of input voltage		10.8 to 26.2VDC
Physical dimensions (mm/inch)		235/9.25(W) x 185/7.28(D) x 74/2.91(H)(No protrusions)
Weight		About 3.0kg/6.61lb (Excluding attachment fittings)
Certification EMC saftery		CE & FCC class A
Software operating support		Windows 10

*1: Use a power cable shorter than 3m.

BX-S2000T Series

CE FC RoHS compliant

Fanless Embedded Computer - BX series

Features

▌Intel® Skylake SoC base platform
▌Slitless/fanless design prevents ingress of dust and grime to reduce maintenance
▌A5 Small design and cost effective
▌Dual LAN, 2x COM, 4x USB 3.1 GEN.1 (USB 3.0), 1x GPIO, 1x HDMI, 1x DP and other rich expansion interface
▌Wide range DC input
▌Cost effective

Ordering Information

BX-S2000T-DC28xxxxx
Base model with Intel Celeron 3955U, DDR4 8GB Memory, 2.5" SATA HDD/SSD

BX-S2000T-DC38xxxxx
Base model with Intel Core i5-6300U, DDR4 8GB Memory, 2.5" SATA HDD/SDD

Optional Configuration

- 1x 2.5" SATA HDD/SDD
- 1x mSATA
- 1x M.2 Key-E 2230 (PCIe / USB)
- 1x PCI Express Mini Card Slot
- AC adapter 19V/65W
- OS Win7 32/64-bit / Win 10 64-bit

Specifications

Model		BX-S2000T
System	CPU	Intel® Core™ i5-6300U
		Intel® Celeron® 3955U
	Memory	DDR4 2133/2400, 2x 260-pin SO-DIMM, Max. 32 GB (Non-ECC)
Graphic controller		Intel® HD Graphics
Storage Slot		1x 2.5" HDD/SSD (Default w/ SATA and SATA Power Cable in Accessories)
		1x mSATA
Interface	Display	1x DisplayPort, 1x HDMI
	LAN	2x 1000BASE-T/100BASE-TX/10BASE-T
	Audio	1x Mic-in, 1x Line-out
	USB	4x USB3.1 Gen1 (USB3.0) (TYPE-A)
	Serial	1x RS-232C/422A/485, 1x RS-232C
Hardware monitoring		Monitoring CPU temperature, power voltage
Watchdog timer		1 to 255 Steps by Software Program
Expansion		Storage: PCI Express Full-Length mini card slot (USB / PCIe / SATA)
		Wireless: M.2 Key-E 2230 (PCIe / USB)
Power input		8 to 24VDC
Operating temperature		-10 to 50°C/14 to 122°F with 0.7m/s Air Flow (w/ Extended Temp. SSD/mSATA/RAM) 0 to 40°C/32 to 104°F with 0.7m/s Air Flow (w/ Standard Temp.)
Opterating humidity		10 to 90%RH (No condensation)
Storage temperature		-10 to 60°C/14 to 140°F
Physical dimensions (mm/inch)		189.0/7.44(W) x 147.4/5.80(D) x 58.2/2.29(H) (No protrusions)
Weight		About 1.7kg/3.75lb (Excluding attachment fittings)
Certification EMC saftery		CE & FCC class A
Software operating support		Windows 10 (64bit) , Windows 7 (32/64bit) English

BX-S959SD Series

CE FC RoHS compliant

Fanless Embedded Computer - BX series

Features

▌Intel® Baytrail SoC base platform
▌Slitless/fanless design prevents ingress of dust and grime to reduce maintenance
▌Dual LAN, 4x COM, 7x USB, 1x DIO and rich interface
▌Easy to replace store device (2.5-inch SATA drive bay)
▌Supports 2x Cfast at BIOS selectable

Ordering Information

BX-S959SD-DC7000
BOX PC w/Atom E3845, 4GB DDR3L memory, 1x SATA bay, 1x CFast slot, without OS and storage

BX-S959SDF2-DC7000
BOX PC w/Atom E3845, 4GB DDR3L memory, 2x CFast slot, without OS and storage

Optional Configuration

- 1 x 2.5" HDD SATA3
- 1 x 2.5" SSD SATA3
- 1 or 2 x CFast Card
- AC adapter 19V/65W

Specifications

Model		BX-S959SD	BX-S959SDF2
System	CPU	Intel® Atom® Processor E3845 1.91GHz	
	Chipset	Intel® Baytrail SoC	
	BIOS	AMI SPI BIOS	
	Memory	1x 204-pin SO-DIMM socket supports DDR3L 1333 up to 8GB/ECC	
Graphic controller		Integrated Intel® HD Graphics Controller	
Disply I/F		1x DVI-I	
Interface	Storage	1x 2.5" drive bay for SATA HDD/SSD	-
		1x CFast slot	2x CFast slot
	Audio	1x Line-out, 1x Mic-in (Realtek ALC892 HD)	
	USB	USB 3.0 compliant 1 port USB 2.0 compliant 6 ports	
	Serial	3x RS-232C, 1x RS232C/422A/485	
	LAN	2x 1000BASE-T/100BASE-TX/10BASE-T	
	DIO port	Programmable 6-bit digital I/O	
Watchdog timer		255-level	
Rated input voltage		12 to 24VDC	
Operating temperature		0 to 40°C / 32 to 104F°(w/ HDD) 0 to 50°C / 32 to 122F°(w/ wide temperature HDD/SSD)	0 to 50°C / 32 to 122F°
Storage temperature		-10 to 60°C/ 14 to 140F°	
Humidity		10 - 90%RH (No condensation)	
Physical dimensions (mm/inch)		182/7.17 (W) x 160/6.30(D) x 45/1.77(H) (No protrusions)	
Weight		About 1.6kg/3.53lb(Excluding attachment fittings)	
Certification EMC safety		FCC Class A CE Marking (EMC Directive Class A, RoHS Directive)	
Software operating supported		Windows Embedded 7/8.1/10 (32/64-bit) English	

Embedded Computers　　　　　　　　　　　　　　　　　　　　　　Embedded Computers

BX-S3000/P2/P2A Series

CE FC RoHS compliant

Fanless Embedded Computer - BX series

BX-S3000 series　　　　BX-S3000P2/P2A series

Features

| Intel® 6th Gen. Skylake Platform
| Slitless/fanless design prevents ingress of dust and grime to reduce maintenance
| Dual Giga LAN, 4x COM, 4x USB 3.1 GEN1 (USB 3.0), 2x USB 2.0 1x GPIO, 1x DVI-I, 1x DP and other rich expansion interface
| Wide range DC input
| Cost effective

Ordering Information

BX-S3000-DC1800000
Base model with Intel Celeron G3900TE, DDR4 8GB Memory

BX-S3000-DC4800000
Base model with Intel Core i5-6500TE, DDR4 8GB Memory

BX-S3000-DC5800000
Base model with Intel Core i7-6700TE, DDR4 8GB Memory

BX-S3000P2-DC1800000
Base model with Intel Celeron G3900TE, DDR4 8GB Memory, 2x PCIe (x8) Slots

BX-S3000P2-DC4800000
Base model with Intel Core i5-6500TE, DDR4 8GB Memory, 2x PCIe (x8) Slots

BX-S3000P2-DC5800000
Base model with Intel Core i7-6700TE, DDR4 8GB Memory, 2x PCIe (x8) Slots

BX-S3000P2A-DC1800000
Base model with Intel Celeron G3900TE, DDR4 8GB Memory, 2x PCI Slots

BX-S3000P2A-DC4800000
Base model with Intel Core i5-6500TE, DDR4 8GB Memory, 2x PCI Slots

BX-S3000P2A-DC5800000
Base model with Intel Core i7-6700TE, DDR4 8GB Memory, 2x PCI Slots

Optional Configuration

- 2x 2.5" Drive Bay
- 3x RS232C, 1x RS-232C/422A/485, 1x GPIO (DB9)
- 1x M.2 Key-M Support (PCIe-x4 / SATA / SMBus)
- 1x PCI Express mini card slot (PCIe I/F)
- AC adapter 24V/120W
- OS Win7 32/64-bit / Win8.1 64-bit / Win 10 64-bit
- 2x Expansion slot (PCIe (x8), BX-S3000P2 model)
- 2x Expansion slot (PCI, BX-S3000P2A model)

Specifications

Model		BX-S3000	BX-S3000P2/BX-S3000P2A
System	CPU	6th Generation Skylake Intel® Core™ i7-6700TE	
		6th Generation Skylake Intel® Core™ i5-6500TE	
		6th Generation Skylake Intel® Celeron® G3900TE	
	Chipset	Intel® Q170	
	Security	TPM 2.0	
	Memory	DDR4 2133/2400, 2x 260-pin SO-DIMM, Max. 32 GB (Non-ECC)	
Graphic controller		Intel® HD Graphics	
Storage Slot		2x 2.5" HDD/SSD (Removeable Bay)	
		1x M.2 Key-M 2242	
Interface	Display	1x DVI-I, 1x DisplayPort	
	LAN	2x 1000BASE-T/100BASE-TX/10BASE-T (Wake On LAN support)	
	Audio	1x Mic-in, 1x Line-out	
	USB	4x USB3.1 Gen1 (USB3.0), 2x USB2.0	
	Serial	1x RS-232C/422A/485, 3x RS-232C	
Expansion		1x Mini-PCI/e	1x Mini-PCI/e
		1x M.2 Key-M 2242(Reserve)	1x M.2 Key-M 2242(Reserve)
		-	2x PCIe x8 (BXC-S3000P2 Model), or 2x PCI (BX-S3000P2A Model)
Rated input voltage		12 to 24VDC *1	
Range of input voltage		10.8 to 26.2VDC	
Operating temperature		0 to 50℃/32 to 122°F	
Opterating humidity		10 to 90%RH (No condensation)	
Storage temperature		-10 to 60°C/14 to 140°F	
Physical dimensions (mm/inch)		235/9.25(W) x 185/7.28(D) x 74/2.91(H)(No protrusions)	235/9.25(W) x 185/7.28(D) x 129.5/5.10(H)(No protrusions)
Weight		About 3.0kg/6.61lb (Excluding attachment fittings)	About 4.6kg/10.14lb (Excluding attachment fittings)
Certification EMC saftery		CE(including LVD) & FCC class A	CE(including LVD) & FCC & VCCI class A
Software operating support		Windows 10 IoT Enterprise (64-bit), Windows 8.1 (64-bit) English	

*1: Use a power cable shorter than 3m.

CPS-BXC200 Series

CE FC VCI RoHS compliant

Fanless Embedded Computer - BX series

Image connected with three optional I/O modules

Features

McAfee Whitelist Solution Installed

| Windows 10 IoT Enterprise
| Intel® Quad-core Apollo Lake SoC
| Three Intel Gigabit LAN ports
| Operation temperature range : -20 to 60℃(-4 to 140°F)
| DIN rail mounting

McAfee™ Together is power.

Ordering Information

CPS-BXC200-NA01P03
(Memory 4GB, w/o OS , w/ 32GB SSD (pSLC))

CPS-BXC200-W10M01P03
(Memory 4GB, Windows 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr) + McAfee Security Whitelist Software, w/ 32GB SSD (pSLC))

CPS-BXC200-NA02P05
(Memory 8GB, w/o OS , w/ 64GB SSD (pSLC))

CPS-BXC200-W10M02P05
(Memory 8GB, Windows 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr) + McAfee Security Whitelist Software, w/ 64GB SSD (pSLC))

Options

17 types of CONPROSYS I/O modules
Analog input, Analog output, Digital input, Digital output, Digital I/O, Serial Communication, Counter, etc. (Refer the Industrial IoT chapter for details)

CPS-PWD-90AW24-01
24VDC Power Supply (100 to 240VDC input, Din-rail mountable)

Specifications

Model		CPS-BXC200
System	CPU	Intel® Atom® Processor x7-E3950 1.6 GHz
	BIOS	BIOS (mfd. by AMI)
	Memory	204pin SO-DIMM socket x 1, PC3-12800(DDR3L 1600) ECC, 4GB or 8GB
Graphic controller		Intel® HD Graphics 505 (built into CPU)
Storage Slot		1 slot, M.2 2242, SATAIII. M.2 card (pSLC) equipped: 32GB*1 or 64GB*1
Interface	Display	1x Analog RGB (15-pinHD-SUB connector), 1x DisplayPort
	CFast	1x CFast CARD Type I, bootable
	LAN	3x 1000BASE-T/100BASE-TX/10BASE-T (Wake On LAN support)
	USB	3x USB3.1 Gen1 (USB3.0) (TYPE-A)
	Serial	1x RS-232C
Hardware monitoring		Monitoring CPU temperature, power voltage
RAS		1 port (3.81mm pitch 6-pin)
Watchdog timer		Software programmable, 1sec to 255sec (Time up allows reset or shutdown).
RTC/CMOS		Lithium battery backup battery life: 10 years or longer. The real-time clock is accurate within ±3 minutes (at 25°C) per month. (CPU built-in RTC).
Expansion		Up to 8 CONPROSYS I/O modules can be stacked through the Contec developed stack bus *2
Rated input voltage		24VDC (±10%)
Power consumption(Max.)		24V 1.5A (USB I/F, without stack bus power) 24V 4.8A (USB I/F, with stack bus power)
Operating temperature		-20 to 60℃/-4 to 140°F (-20 to 55℃/-4 to 131°F when operating 1000BASE-T)
Opterating humidity		10 to 90%RH (No condensation)
Storage temperature		-20 to 60℃/-4 to 140°F
Physical dimensions (mm/inch)		76.0/2.99(W) x 94.0/3.70(D) x 124.8/5.06(H) (No protrusions)
Weight		About 1.1kg/2.43lb (Excluding attachment fittings)
Installation method		Quick mounting on the 35mm DIN rail
Certification EMC saftery		VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive)
Software operating support		Windows 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr)

*1: The capacity of SSD is a value when 1GB is calculated by 1 billion bytes. The capacity that can be recognized from OS might be displayed fewer than an actual value.
*2: The total power consumption of stack bus I/F should be less than 24VDC 3.3A.

BX-320 Series

CE FC VCI RoHS compliant

Fanless Embedded Computer - BX series

Features

| PCI Express cable port equipped
| Supports Windows 10 IoT Enterprise and Windows Embedded Standard 7
| Completely spindle-free design
| Small, palm sized design supports many types of peripherals
| Can also be a Contec's F&eIT Series controller to connect up to 8 I/O modules.

Ordering Information

BX-320-DC700000
Without operating system and storage

BX-320-DC731314
Windows Embedded Standard 7 32bit (Japanese, English, Chinese, Korean), CFast Card (SLC) 16GB

BX-320-DC781724
Windows 10 IoT Enterprise 64bit (Japanese, English, Chinese, Korean), Cfast Card (Q-MLC) 32GB

Specifications

Model		BX-320
System	CPU	Intel® Atom® Processor E3845 1.91GHz
	BIOS	BIOS (mfd. By AMI)
	Memory	4GB, 1x 204pin SO-DIMM socket PC3-10600(DDR3L 1333)ECC
Graphic controller		Intel® HD Graphics (built-in CPU)
Disply I/F		1x Analog RGB
Interface	CFast	2x CFast CARD Type I slots, bootable One stot is used for built-in models.
	Audio	HD Audio compliant, 1x Line-out, 1x Mic-in
	USB	1x USB3.1 Gen1 (USB3.0), 3x USB2.0 (TYPE-A)
	Serial	2x RS-232C
	LAN	2x 1000BASE-T/100BASE-TX/10BASE-T (Wake On LAN support)
	F&eIT	1x F&eIT bus socket
	Bus expander (PCIe)	1x PCI Express 1.0a (x1) compliant PCI Express cable port
Hardware monitoring		Monitoring CPU temperature, power voltage
Watchdog timer		Software programmable, 255 level (1sec to 255 sec) Causes a reset upon time-out.
General-purpose I/O		Photocoupler insulation inputs/outputs (3 of each) (However, one output can be switched to WDT external output.)
RCT/CMOS		Lithium backup battery life: 10 years or more. The real-time clock is accurate within ±3 minutes (at 25°C) per month
Rated input voltage		12 to 24VDC
Range of input voltage		10.8 to 31.2VDC
Operating temperature		0 to 50°C / 32 to 122F° (When using 1000BASE-T: 0 to 45°C / 32 to 113F°)
Storage temperature		-10 to 60°C / 14 to 140F°
Humidity		10 to 90%RH (No condensation)
Physical dimensions (mm/inch)		94/3.70 (W) x 120/8.27(D) x 74.7/2.94(H) (No protrusions)
Weight		About 1.0kg/2.20lb(Excluding attachment fittings)
Certification EMC safety		VCCI Class A FCC Class A CE Marking (EMC Directive Class A, RoHS Directive)
Software operating supported		Windows Embedded Standard 7 RUNTIME P 32bit (Ja/En/Cn/Kr) Windows 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr)

BX-M1000 Series

CE FC VCI RoHS compliant

Fanless Embedded Computer - BX series

No slot model   2-slot model   4-slot model

Features

| 7th Gen. Core i5, Celeron processor adopted
| Slitless/fanless design prevents ingress of dust and grime to reduce maintenance
| Expansion slots to hold PCI bus boards (Type with Expansion Slot).
BX-M10x0P2 has two PCI slots.
BX-M10x0P4 has one PCI-Express(x4) slot and three PCI slots.
| Retention fittings and cable clamps keep cables secure and minimize disruptions.

Ordering Information

BTO model (For your quotation, please select required components from the below menu.)

No. of Expansion Slots	2 Expansion Bus Slots	4 Expansion Bus Slots	None
CPU	Core i5	Celeron	
Storage 1	100GB HDD	256GB SSD (MLC)	
Storage 2	100GB HDD	256GB SSD (MLC)	None
OS	Windows 10 IoT Enterprise 2019 LTSC 64bit		
RAID Configuration	Software RAID	Hardware RAID *1	None

*1 Only BX-M1010P2 and BX-M1020P2 support the Hardware RAID configuration.

Specifications

Model		BX-M1010	BX-M1020
System	CPU	Intel® Core™ i5 Processor 7300U (2.60GHz)	Intel® Celeron® Processor 3965U (2.20GHz)
	BIOS	BIOS (mfd. by AMI)	
	Memory	8GB (260 pin SO-DIMM), PC4-17000 (DDR4-2133)	
Graphic controller		Intel® HD Graphics 620 /610 (built-in CPU)	
Interface	Display	1x DVI-D, 1x DisplayPort	
	SATA	2x Slot-in 2.5 inches SATA hard disk bays. Serial ATA 3.0 compliant support	
	LAN	2x 1000BASE-T/100BASE-TX/10BASE-T (support Wake On LAN)	
	Audio	1x Line-out, 1x Line-in, 1x Mic-in	
	USB	4x USB3.1 Gen1 (USB3.0), 2x USB2.0 (TYPE-A)	
	Serial	3x RS-232C	
Expansion		None expansion slot model; 2x PCI model; or 1x PCIe(x4), 3x PCI model	
Hardware monitoring		Monitoring CPU temperature, board temperature, and power voltage	
Watchdog timer		Software programmable, 1sec to 255sec (Time-up allows reset, shutdown, or external output.)	
Real time clock		Lithium backup battery life: 10 years or longer The real-time clock is accurate within ±3 minutes (at 25°C) per month (CPU built-in RTC).	
Power supply	Input voltage range	100 to 240VAC	
	Current consumption	No slot model: 100 to 240VAC, 0.58 to 0.27A 2-slot model: 100 to 240VAC, 0.88 to 0.37A 4-slot model: 100 to 240VAC, 1.0 to 0.45A	No slot model: 100 to 240VAC, 0.57 to 0.26A 2-slot model: 100 to 240VAC, 0.81 to 0.37A 4-slot model: 100 to 240VAC, 0.96 to 0.43A
	Capacity for power supply to the expansion cards	2-slot model *1: 12VDC: 1.5A, 5VDC: 2.8A, 3.3VDC: 4.0A, -12VDC: 0.1A 4-slot model *2: 12VDC: 3.0A, 5VDC: 4.0A, 3.3VDC: 5.0A, -12VDC: 0.1A, 3.3VSB: 0.375A	
Operating temperature		0 to 50°C/32 to 122°F (When DVI is used: 0 to 45°C/32 to 113°F)	
Opterating humidity		10 to 90%RH (No condensation)	
Storage temperature		-10 to 60°C/14 to 140°F	
Physical dimensions (mm/inch)		No slot model: 262/10.31 (W) x 262/10.31(D) x 64/2.52(H) (No protrusions) 2-slot model: 262/10.31 (W) x 262/10.31(D) x 119/4.69(H) (No protrusions) 4-slot model: 262/10.31 (W) x 262/10.31(D) x 159/6.26(H) (No protrusions)	
Weight		No slot model: About 3.1kg/6.83lb (Excluding attachment fittings) 2-slot model: About 4.2kg/9.26lb (Excluding attachment fittings) *3 4-slot model: About 4.6kg/10.14lb (Excluding attachment fittings)	
Certification EMC saftery		VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, Low Voltage Directive, RoHS Directive)	
Software operating support		Windows 10 IoT Enterprise 2019 LTSC 64bit (Ja/En/Cn/Kr)	

*1: The total capacity for power supply to the expansion board of the 2-slot model must fall within 20 W.
*2: The total capacity for power supply to the expansion board of the 4-slot model must fall within 40 W.
*3: The spec of Hardware RAID model is different.

EPC-3010 Series

CE FC VCI **RoHS** compliant

Embedded Computer - EPC series

No slot model   2-slot model   4-slot model

Features

▌Compatible with Intel® Core™ processor series Skylake
▌CPU includes built-in high-performance graphics
▌Expansion slots hold PCI bus boards (type with expansion slot). EPC-30x0P2 has two PCI slots. EPC-30x0P4 has one PCI-Express(x8) slot and three PCI slots.
▌Removable storage
▌Identical dimensions enables easy replacement with the EPC-2010 series

Ordering Information

EPC-3010 series BTO model (For your quotation, please select required components from the below menu.)

No. of Expansion Slots	None	2 Expansion Bus Slots	4 Expansion Bus Slots
CPU	Core i7-6700TE	Core i5-6500TE	Celeron G3900TE
Memory	8GB	16GB	
Storage	None	500GB HDD	256GB SSD (MLC)
	500GB HDD Mirroing (Software-RAID)	256GB SSD (MLC) Mirroring (Software-RAID)	
OS	Windows 10 IoT Enterprise LTSB 2016 64bit	Windows 7 Pro 32bit	Windows 7 Pro 64bit

Specifications

Model		EPC-3010
System	CPU	Intel® Core™ i7 Processor 6700TE 2.4GHz, Intel® Core™ i5 Processor 6500TE 2.3GHz, or Intel® Celeron® Processor G3900TE 2.3GHz
	Chipset	Intel® Q170
	BIOS	BIOS (mfd. by AMI)
	Security	TCG TPM2.0
	Memory	Max16GB, 2x 260pin SO-DIMM Sockets, PC4-17000(DDR4 2133)DDR4 SDRAM
Graphic controller		Intel® HD Graphics 530 (Core™ i7, Core™ i5 model) Intel® HD Graphics 510 (Celeron® model)
Interface	Display	1x DVI-I, 1x HDMI, 1x DisplayPort (Supports three displays)
	SATA	2x removable 2.5-inch SATA storage bays, serial ATA3.0 standard port
	LAN	3x ports (RJ-45 connector) (1000BASE-T/100BASE-TX/10BASE-T (support Wake On LAN))
	Audio	1x Line-out, 1x Line-in, 1x Mic-in
	USB	6x USB3.1 Gen1 (USB3.0) (TYPE-A)
	Serial	4x RS-232C
	GPIO	6 points (input/output is chosen by BIOS setup)
Expansion		None expansion slot model; 2x PCI model; or 1x PCIe(x8), 3x PCI model
Hardware monitoring		Monitoring CPU temperature, board temperature, and power voltage
Watchdog timer		Software programmable, 255 level (1sec to 255 sec), Causes a reset upon time-out.
Real time clock		The real-time clock is accurate within ±3 minutes (at 25°C) per month, Lithium backup battery life : 7 years or more
Input voltage range		90 to 264VAC
Power consumption (Max.)		100 to 240VAC 2.1 to 0.9A
External device power supply capacity		No slot model: USB I/F 5VDC/5.4A 2-slot model: USB I/F 5VDC/5.4A; PCI slots: +3.3V/4A, +5V/4A, +12V/1A 4-slot model: USB I/F 5VDC/5.4A; PCI slots: +3.3V/3A, +5V/3A, +12V/0.5A; PCI-Express(x8) slot: +3.3V/3A, +12V/2.1A
Operating temperature		0 to 40°C/32 to 104°F
Opterating humidity		20 to 85%RH (No condensation)
Storage temperature		-20 to 60°C/-4 to 140°F
Physical dimensions (mm/inch)		No slot model: 262/10.31 (W) x 262/10.31(D) x 88/3.64(H) (No protrusions) 2-slot model: 262/10.31 (W) x 262/10.31(D) x 143/5.36(H) (No protrusions) 4-slot model: 262/10.31 (W) x 262/10.31(D) x 183/7.20(H) (No protrusions)
Weight		No slot model: About 4.0kg/8.82lb (Excluding attachment fittings) 2-slot model: About 4.8kg/10.58lb (Excluding attachment fittings) 4-slot model: About 5.6kg/12.35lb (Excluding attachment fittings)
Certification EMC saftery		VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive)
Software operating support		Windows 10 IoT Enterprise, Win 7 Pro 32bit, Win 7 Pro 64bit

GSPI-Q3700-LLVA

CE FC **RoHS** compliant

PICMG 1.3 Single Board Computer

Features

▌Support Intel® Core™ i3/i5/i7/Pentium®/Celeron® processors in LGA 1151 package
▌Up to 64GB maximum DDR4-2400 SO-DIMM on four sockets
▌Support multiple displays by DVI-I(DVI-D+VGA) and HDMI
▌Dual Gigabit Ethernet based on PCI express x1 , high bandwidth I/O interface
▌Rich I/O connections such as four serial ports, USB 3.0/2.0, SATA III ports
▌Support on board TPM2.0

Ordering Information

**GSPI-Q3700-LLVA**   PICMG 1.3 Industrial Single Board Computer

Specifications

Model		GSPI-Q3700-LLVA
System	CPU	Intel® 8th Gen. Core™ Processor (LGA1151)
	Chipset	Intel® Q370 Express chipset
	BIOS	AMI UEFI BIOS
	Memory	Up to 64GB in 4 slots 260-pin SO-DIMM sockets. Supports DDR4 2400/2133 MHz SDRAM.
	Security (TPM)	TPM2.0
SATA Interface		5x SATA 3.0 ports (Dual ports via Backplane)
Interface	Display	1x DVI-I Port (DVI-D + VGA) on bracket, 1x HDMI port on board
	Audio	One on board audio pin header
	LAN	2x 1000BASE-T/100BASE-TX/10BASE-T (Wake On LAN support) (on bracket)
	USB	4x USB 2.0 ports (through backplane) 10x USB 3.1 (Gen1) ports on board (8 ports on board, 2 ports on bracket (TYPE-A))
	Serial	2x RS-232C/422A/485 Selectable, and 2x RS-232C ports (on board)
Expansion interface		CPU: 1x PCIe (x16) or 2x PCIe (x8) or 1x PCIe (x8) + 2x PCIe (x4) by jumper setting (Gen3 up to 8.0 GT/s) PCH: 1x PCIe (x4) or 4x PCIe (x1) by different bios support (Gen 3 up to 8 0 GT/s) 4x PCI devices at 32bit 33MHz
Power supply		Typical 12V, 5V / Support ATX mode
Operating temperature		0 to 60°C/32 to 140°F
Opterating humidity		5 to 95%RH (Non-condensing)
Storage temperature		-20 to 80°C/-4 to 176°F
Physical dimensions (mm/inch)		338.5/13.33 x 126.39/4.98(No protrusions)
Certification EMC saftery		CE / FCC Class A
Software operating support		Windows 10 2019

Edge Computing

Embedded Computers
Fanless Embedded Computers
Embedded Computers
Industrial Motherboards
Industrial Computers
Automation Computers
Custom Computers
All-in-One Computers
Panel Mount Computers

M2M / IoT

Industrial IoT
CONPROSYS Series
Remote I/O
CONPROSYS nano Series
Wireless I/O
IO-Link

Data Acquisition(DAQ), Measurement and Control

Analog I/O
Digital I/O
Counters
Motion Controllers
Serial Communications
GPIB Communications
Software
Cables

Communication, Industrial LAN and Wireless

Network Products

Solutions and Services

Case Studies

Corporate Network

GMB-AQ3701-LLVA

ATX Industrial Motherboard
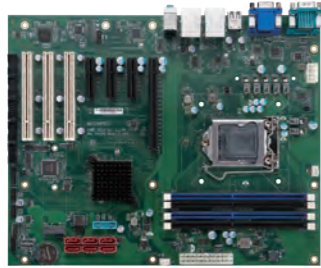
Features

▌Support Intel® 8th / 9th Gen. Core™ Processor (LGA1151)
▌Up to 64 GB in 4 slots 288-pin DIMM sockets.
　Support dual channel DDR4 2400/2666 MHz SDRAM
▌1x PCIe by 16, 3x PCIe by 4 + 3x PCI slot
▌Six SATA 3.0 (6Gb/s) ports and Twelve USB ports
▌Dual Giga LAN port with intel I219LM and intel I211AT
▌VGA + HDMI + DisplayPort by I/O panel

Ordering Information

GMB-AQ3701-LLVA

Recommended CPU List

- Intel® Core™ i7-9700E
- Intel® Core™ i5-9500E
- Intel® Core™ i3-9100E
- Intel® Core™ i7-8700
- Intel® Core™ i5-8500
- Intel® Core™ i3-8100
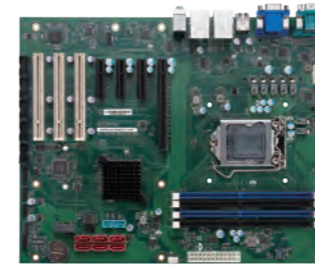- Intel® Pentium® G5400
- Intel® Celeron® G4900

Specifications

Model		GMB-AQ3701-LLVA
System	CPU	Intel® 8th / 9th Gen. Core™ Processor (LGA1151)
	Chipset	Intel® Q370 with CoffeeLake Refresh-S
	BIOS	AMI UEFI BIOS
	Memory	Up to 64GB in 4 slots 288-pin DIMM sockets. Supports dual channel DDR4 2400/2666 MHz SDRAM.
	Security (TPM)	TPM2.0
Graphic controller		Intel® Gen 9 graphic engine supports DirectX 12, OpenGL 4.5 Intel® UHD 610 & 630 graphics (by processor)
Storage Devices		6x SATA 3.0 (6Gb/s) ports
Interface	Display	1x VGA Port, 1x DisplayPort, 1x HDMI Port
	Audio	1x Line-in, 1x Line-out, 1x Mic-in (Rear I/O)
	LAN	2x 1000BASE-T/100BASE-TX/10BASE-T (Wake On LAN support) (Rear I/O)
	USB	4x USB 3.1 (Gen2) ports (Rear Panel), 2x USB 2.0 ports (Rear Panel) (TYPE-A) 2x USB 3.1 (Gen1) ports with pin header on board, 4x USB 2.0 ports with pin header on board
	Serial	1x RS-232C/422A/485 (Rear Panel), 5x RS-232C with pin header on board
Hardware monitoring		System monitor (Voltage, Fan speed and temperature)
Watchdog timer		Programmable by embedded controller
Expansion		1x PCIe (x16) (Gen3) slot, 3x PCIe (x4) (Gen3) slots, 3x PCI slots 1x M.2 Key-M (2242/2280) slot (PCIe x2)
Power supply		ATX 24-pin power connector, 12V 8-pin power connector
Operating temperature		0 to 60°C/32 to 140°F
Opterating humidity		5 to 95%RH (Non-condensing)
Storage temperature		-40 to 80°C/-40 to 176°F
Physical dimensions (mm/inch)		304.8/12.0 x 243.84/9.6(No protrusions)
Certification EMC saftery		FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive)
Software operating support		Windows 10 2019

GMB-AC2460-LLVA

ATX Industrial Motherboard

Features

▌Support Intel® 8th / 9th Gen. Core™ Processor (LGA1151)
▌Up to 64 GB in 4 slots 288-pin DIMM sockets.
　Support dual channel DDR4 2400/2666 MHz SDRAM
▌1x PCIe by 16, 3x PCIe by 4 + 3x PCI slot
▌6x SATA 3.0 (6Gb/s) ports and 12x USB ports
▌Dual Giga LAN port with intel I219LM and intel I211AT
▌VGA + HDMI + DisplayPort by I/O panel

Ordering Information

GMB-AC2460-LLVA

Recommended CPU List

- Intel® Xeon E-2278GE
- Intel® Core™ i7-9700E
- Intel® Core™ i5-9500E
- Intel® Core™ i3-9100E
- Intel® Xeon E-2176G
- Intel® Core™ i3-8100
- Intel® Pentium® G5400
- Intel® Celeron® G4900

Specifications

Model		GMB-AC2460-LLVA
System	CPU	Intel® 8th / 9th Gen. Core™ Processor (LGA1151)
	Chipset	Intel® C-246 with CoffeeLake Refresh-S
	BIOS	AMI UEFI BIOS
	Memory	Up to 64GB in 4 slots 288-pin DIMM sockets. Supports dual channel DDR4 2400/2666 MHz SDRAM.
	Security (TPM)	TPM2.0
Graphic controller		Intel® Gen 9 graphic engine supports DirectX 12, OpenGL 4.5 Intel® UHD 610 & 630 graphics (by processor)
Storage Devices		6x SATA 3.0 (6Gb/s) ports
Interface	Display	1x VGA Port, 1x DisplayPort, 1x HDMI Port
	Audio	1x Line-in, 1x Line-out, 1x Mic-in (Rear I/O)
	LAN	2x 1000BASE-T/100BASE-TX/10BASE-T (Wake On LAN support) (Rear I/O)
	USB	4x USB 3.1 (Gen2) ports (Rear Panel), 2x USB 2.0 ports (Rear Panel) (TYPE-A) 2x USB 3.1 (Gen1) ports with pin header on board, 4x USB 2.0 ports with pin header on board
	Serial	1x RS-232C/422A/485 (Rear Panel), 5x RS-232C with pin header on board
Hardware monitoring		System monitor (Voltage, Fan Speed and Temperature)
Watchdog timer		Programmable by embedded controller
Expansion		1x PCIe (x16) (Gen3) slot, 3x PCIe (x4) (Gen3) slots, 3x PCI slots 1x M.2 Key-M (2242/2280) slot (PCIe x2)
Power supply		ATX 24-pin power connector, 12V 8-pin power connector
Operating temperature		0 to 60°C/32 to 140°F
Opterating humidity		5 to 95%RH (Non-condensing)
Storage temperature		-40 to 80°C/-40 to 176°F
Physical dimensions (mm/inch)		304.8/12.0 x 243.84/9.6(No protrusions)
Certification EMC saftery		FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive)
Software operating support		Windows 10 2019

Industrial Computers

Model	VPC-700 P29	VPC-1700 P30	VPC-3100 P31	VPC-5000 P32		GSPF07MQ170-4U / GSPF07MQ171-4U P33	GSPF07MQ170-W / GSPF07MQ171-W P34	LPC-200A P35
Main Feature	Small Tower	Intel 8th Gen. Core Processor	Intel 8th Gen. Core Processor	Intel Xeon Processor		19" Rack Mount	Wall Mount	New structure housing for high performance CPU
Processor	Core i7-6700TE Core i5-6500TE Celeron G3900TE	Core i7-8700T Core i5-8500T Celeron G4900T	Core i7-8700 Core i5-8500 Celeron G4900	Xeon E-2278GE Xeon E-2226GE Core i3 9100E Celeron G4900		Core i7-6700 Core i5-6500 Core i3-6100 Celeron G3900	Core i7-6700 Core i5-6500 Core i3-6100 Celeron G3900	Core i5-8500T Core i3-8100T Celeron G4900T
Chipset	Q170	Q370	Q370	C246		Q170	Q170	-
System Memory	8GB/16GB	8GB/16GB/32GB	8GB/16GB/32GB	8GB/16GB/32GB/64GB		4GB/8GB/16GB, Up to 64GB	4GB/8GB/16GB, Up to 64GB	8GB/16GB
Storage	2x 2.5" SATA drive bays	2x 3.5" SATA drive bays 1x 2.5" shadow drive bay	2x 3.5" SATA drive bays 1x 3.5" shadow drive bay	4x 3.5" SATA drive bays M.2 16GB (Intel Optane Memory)		4x 3.5" SATA drive bays	3x 3.5" SATA drive bays	1x 2.5" SATA drive bays 1x M.2 SATA
Serial Ports	1x RS232C/422A/485	1x RS232C/422A/485 3x RS232C	1x RS232C/422A/485 3x RS232C	1x RS232C/422A/485 4x RS232C		2x RS232C / -	2x RS232C / -	1x RS232C
USB Ports	6x USB3.1 Gen1 (USB3.0) 2x USB2.0	2x USB2.0 (Front) 4x USB3.1 Gen1 (USB3.0), 2x USB2.0 (Rear)	2x USB2.0 (Front) 4x USB3.1 Gen1 (USB3.0), 2x USB2.0 (Rear)	2x USB3.1 Gen1 (USB3.0) (Front) 4x USB3.1 Gen1 (USB3.0), 2x USB2.0 (Rear)		4x USB 3.1 Gen.1 (USB 3.0) / 4x USB 3.1 Gen.1 (USB 3.0), 2x USB2.0	4x USB 3.1 Gen.1 (USB 3.0) / 4x USB 3.1 Gen.1 (USB 3.0), 2x USB2.0	2x USB3.1 Gen1 (USB3.0) 4x USB2.0
Graphic Chipset	Intel HD Graphics 530/510	Intel HD Graphics 630/610	Intel HD Graphics 630/610	Intel UHD Graphics 630/610		-	-	Intel UHD Graphics 630/610
Audio	1x Line-out, 1x Mic-in (Front) 1x Line-in, 1x Line-out, 1x Mic-in (Rear)	1x Line-out, 1x Line-in, 1x Mic-in	1x Line-out, 1x Line-in, 1x Mic-in	1x Line-out, 1x Mic-in (Front) 1x Line-in, 1x Line-out, 1x Mic-in (Rear)		1x Audio	1x Audio	1x Line-out, 1x Mic-in
Ethernet	3x Gigabit LAN ports	3x Gigabit LAN ports	3x Gigabit LAN ports	2x Gigabit LAN ports		2x Gigabit LAN ports	2x Gigabit LAN ports	1x Gigabit LAN port
Display Output	1x DisplayPort, 1x HDMI 1x DVI-I (Supports 3 screens)	1x DisplayPort, 1x HDMI 1x DVI-I (Supports 3 screens)	1x DisplayPort, 1x HDMI 1x DVI-I (Supports 3 screens)	TBD		1x DVI-D, 1x VGA, 1x HDMI / 1x DVI-D, 1x VGA, 2x DisplayPort	1x DVI-D, 1x VGA, 1x HDMI / 1x DVI-D, 1x VGA, 2x DisplayPort	1x HDMI, 1x DisplayPort
Expansion	1x LowProfile PCIe (x16) slot	None model/ 3x PCI model/ 1x PCIe (x1) slot, 2x PCI model	1x PCIe (x16), 2x PCIe (x4), 1x PCI	1x PCIe (x16), 3x PCIe (x4), 3x PCI		Up to 5x PCIe, 2x PCI / Up to 3x PCIe, 4x PCI	Up to 5x PCIe, 2x PCI / Up to 3x PCIe, 4x PCI	-
Power Input	100 to 240VAC	100 to 240VAC	100 to 240VAC	100 to 240VAC		100 to 240VAC	100 to 240VAC	100 to 240VAC

Edge Computing

Embedded Computers
Fanless Embedded Computers
Embedded Computers
Industrial Motherboards
Industrial Computers
Automation Computers
Custom Computers
All-in-One Computers
Panel Mount Computers

M2M / IoT

Industrial IoT
CONPROSYS Series
Remote I/O
CONPROSYS nano Series
Wireless I/O
IO-Link

Data Acquisition(DAQ), Measurement and Control

Analog I/O
Digital I/O
Counters
Motion Controllers
Serial Communications
GPIB Communications
Software
Cables

Communication, Industrial LAN and Wireless

Network Products

Solutions and Services

Case Studies

Corporate Network

VPC-700 Series

CE FC VCI RoHS compliant

Automation Computer

Features

- Compatible with Intel® Core ™ processor series Skylake
- Compact size for easy installation in small areas
- Removable storage
- Supports mirroring (RAID1)
- Supports key peripherals with rich interfaces including 1x VDI-I, 1x DHMI, 1x DisplayPort, 1x Low profile size PCI Express (x16) slot, 3x Giga LAN, etc.

Ordering Information

VPC-700 series BTO model (For your quotation, please select required components from the below menu.)

CPU		Core i7-6700TE	Core i5-6500TE	Celeron G3900TE	
Memory			8GB (1x 8GB)	16GB (2x 8GB)	
Storage	None	1x 500GB HDD	2x 500GB HDD	1x 256GB SSD (MLC)	2x 256GB SSD (MLC)
		2x 500GB HDD Mirroing (Software-RAID)		2x 256GB SSD (MLC) Mirroing (Software-RAID)	
		2x 500GB HDD Mirroing (Hardware-RAID)		2x 256GB SSD (MLC) Mirroing (Hardware-RAID)	
OS	None	Windows 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr)	Windows 7 Pro 32bit (Ja or En *1)	Windows 7 Pro 64bit (Ja or En *1)	
Extension COM Port		None	1x COM port	2x COM port (1x Expansion slot occupied)	

*1 Select at initial setup

Specifications

Model		VPC-700
System	CPU	Intel® Core™ i7 Processor 6700TE 2.4GHz, Intel® Core™ i5 Processor 6500TE 2.3GHz, Intel® Celeron® Processor G3900TE 2.3GHz
	Chipset	Intel® Q170
	BIOS	BIOS (mfd. by AMI)
	Memory	2x 260pin SO-DIMM Sockets, PC4-17000(DDR4 2133) DDR4 SDRAM 8GB: 1x 8GB DDR4 SO-DIMM 2133MHz 16GB: 2x 8GB DDR4 SO-DIMM 2133MHz
Graphic controller		Intel® HD Graphics 530 (Core™ i7, Core™ i5 model) Intel® HD Graphics 510 (Celeron® model)
Storage Devices		2x 2.5-inch drive bays, SATA 3.0 (6Gb/s)
Interface	Display	1x DVI-I Port, 1x DisplayPort, 1x HDMI Port
	Audio	1x Line-out, 1x Mic-in (Front), 1x Line-in, 1x Line-out, 1x Mic-in (Rear)
	LAN	3x 1000BASE-T/100BASE-TX/10BASE-T (Wake On LAN support)
	USB	6x USB 3.1 (Gen1) ports (Rear), 2x USB 2.0 ports (Front) (TYPE-A)
	Serial	1x RS-232C/422A/485 (Rear Panel). Up to 2x RS-232C ports can be added. (It occupies the expansion board slot)
Hardware monitoring		Monitoring CPU temperature, system temperature, power voltage
RTC/CMOS		The real-time clock is accurate within ±3 minutes (at 25°C) per month, Lithium backup battery life : 7 years or more
Expansion		1x PCI Express (x16) slot for Low Profile card Usable card dimension(mm/inch): Max. 150/5.91(L) x 67.9/2.67(H)
Power supply		90 to 264VAC
Operating temperature		5 to 40°C/41 to 104°F
Opterating humidity		20 to 80%RH (Non-condensing)
Storage temperature		-20 to 60°C/-4 to 140°F
Physical dimensions (mm/inch)		264/10.39(W) x 263/10.35(D) x 112/4.41(H)(No protrusions)
Certification EMC saftery		VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive), CCC *1
Software operating support		Windows 10 IoT Enterprise 2016 LTSB 64bit (Ja/En/Cn/Kr) Windows 7 Professional for Embedded Systems SP1 32bit (Ja/En) Windows 7 Professional for Embedded Systems SP1 64bit (Ja/En)

*1 For the CCC models only

VPC-1700 Series

CE FC VCI RoHS compliant

Automation Computer

Features

- Support Intel® 8th Gen. Core™ Processor
- Intel® Q370 chipset
- Corresponds to mirroring (RAID1)
- Suitable chassis for embedded applications
- No expansion slot model, 1x PCIe (x1) + 2x PCI bus expansion slots model, or 3x PCI bus expansion slots model are selectable.

Ordering Information

VPC-1700 series BTO model (For your quotation, please select required components from the below menu.)

CPU		Core i7-8700T	Core i5-8500T	Celeron G4900T
Memory		8GB	16GB	32GB
Storage		1x 3.5-inch 2TB HDD	2x 3.5-inch 2TB HDD	1x 3.5-inch 4TB HDD
		2x 3.5-inch 4TB HDD	1x 2.5-inch 256GB SSD	2x 2.5-inch 256GB SSD
Optical drive / Shadow bay		None	Slim DVD Super Drive	1x 2.5-inch 256GB SSD
RAID Configuration		None	Software RAID (mirrorring)	Hardware RAID (mirroring)
Expansion Slots		None	3 PCI Bus Slots	1 PCIe Bus, 2 PCI Bus Slots
OS		None	Windows 10 IoT Enterprise 2019 LTSC 64bit (Ja/En/Cn/Kr)	

Specifications

Model		VPC-1700
System	CPU	Intel® Core™ i7-8700T Processor 2.4GHz, Intel® Core™ i5-8500T Processor 2.1GHz, Intel® Celeron® G4900T Processor 2.9GHz
	Chipset	Intel® Q370
	BIOS	BIOS (mfd. by AMI)
	Security (TPM)	TCG TPM2.0
	Memory	4x 288-pin U-DIMM sockets. Supports PC4-21333 (DDR4 2666) SDRAM. 8GB: 1x 8GB DDR4 U-DIMM 2666MHz 16GB: 2x 8GB DDR4 U-DIMM 2666MHz 32GB: 4x 8GB DDR4 U-DIMM 2666MHz
Graphic controller		Intel® HD Graphics 630 (Core™ i7, Core™ i5 model) Intel® HD Graphics 610 (Celeron® model)
Interface	Display	1x DVI-I, 1x HDMI, 1x DisplayPort (Supports three displays)
	Storage	2x removable 3.5-inch drive bays, 1x 2.5-inch shadow bay, serial ATA3.0 standard ports
	LAN	3x 1000BASE-T/100BASE-TX/10BASE-T (support Wake On LAN)
	Audio	1x Line-out, 1x Line-in, 1x Mic-in
	USB	Front: 2x USB2.0; Rear: 4x USB3.1 Gen1 (USB3.0), 2x USB2.0 (TYPE-A)
	Serial	1x RS-232C/422A/485, 3x RS-232C
Expansion *1		No expansion slot model/ 3x PCI slots model/ 1x PCIe (x1) slot, 2x PCI slots model
Hardware monitoring		Monitoring CPU temperature, board temperature, and power voltage
Watchdog timer		Software programmable, 255 level (1sec to 255 sec), Causes a reset upon time-out.
RTC/CMOS		The real-time clock is accurate within ±3 minutes (at 25°C) per month, Lithium backup battery life : 7 years or more
Input voltage range		100 to 240VAC
Power consumption (Max.)		100 to 240VAC 3.5 to 2.0A
Operating temperature		5 to 40°C/41 to 104°F
Opterating humidity		20 to 80%RH (No condensation)
Storage temperature		-20 to 60°C/-4 to 140°F
Physical dimensions (mm/inch)		115/4.53 (W) x 410/16.14(D) x 310/12.20(H) (No protrusions)
Weight		TBD
Certification EMC saftery		VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive)
Software operating support		Windows 10 IoT Enterprise 2019 LTSC 64bit (Ja/En/Cn/Kr)

*1 Expansion card size (mm/inch) (Max.): 176/6.93(L) x 110/4.33(H)

VPC-3100 Series

CE FC VCCI RoHS compliant

Automation Computer

Features

- Support Intel® 8th Gen. Core™ Processor
- Intel® Q370 chipset
- Corresponds to mirroring (RAID1)
- Suitable chassis for embedded applications
- 1x PCIe (x16), 2x PCIe (x4), 1x PCI expansion slots

Ordering Information

VPC-3100 series BTO model (For your quotation, please select required components from the below menu.)

CPU		Core i7-8700	Core i5-8500	Celeron G4900	
Memory		8GB	16GB	32GB	
Storage	1x 3.5-inch 2TB HDD	2x 3.5-inch 2TB HDD	1x 3.5-inch 4TB HDD	2x 3.5-inch 4TB HDD	1x 2.5-inch 256GB SSD	2x 2.5-inch 256GB SSD
Optical drive / Shadow bay	None	Slim DVD Super Drive	1x 2.5-inch 256GB SSD	1x 3.5-inch 2TB HDD	1x 3.5-inch 4TB HDD	
RAID Configuration		None	Software RAID (mirroring)	Hardware RAID (mirroring)	
OS		None	Windows 10 IoT Enterprise 2019 LTSC 64bit (Ja/En/Cn/Kr)		

Specifications

Model		VPC-3100
System	CPU	Intel® Core™ i7-8700 Processor 3.2GHz, Intel® Core™ i5-8500 Processor 3.0GHz, Intel® Celeron® G4900 Processor 3.1GHz
	Chipset	Intel® Q370
	BIOS	BIOS (mfd. by AMI)
	Security (TPM)	TCG TPM2.0
	Memory	4x 288-pin U-DIMM sockets. Supports PC4-21333 (DDR4 2666) SDRAM. 8GB: 1x 8GB DDR4 U-DIMM 2666MHz 16GB: 2x 8GB DDR4 U-DIMM 2666MHz 32GB: 4x 8GB DDR4 U-DIMM 2666MHz
Graphic controller		Intel® HD Graphics 630 (Core™ i7, Core™ i5 model) Intel® HD Graphics 610 (Celeron® model)
Interface	Display	1x DVI-I, 1x HDMI, 1x DisplayPort (Supports three displays)
	Storage	2x removable 3.5-inch storage bays, 1x 3.5-inch shadow bay, serial ATA3.0 standard ports
	LAN	3x 1000BASE-T/100BASE-TX/10BASE-T (support Wake On LAN)
	Audio	1x Line-out, 1x Line-in, 1x Mic-in
	USB	Front: 2x USB2.0; Rear: 4x USB3.1 Gen1 (USB3.0), 2x USB2.0 (TYPE-A)
	Serial	1x RS-232C/422A/485, 3x RS-232C
Expansion *1		1x PCIe (x16) slot, 2x PCIe (x4) slots, 1x PCI slot
Hardware monitoring		Monitoring CPU temperature, board temperature, and power voltage
Watchdog timer		Software programmable, 255 level (1sec - 255 sec), Causes a reset upon time-out.
RTC/CMOS		The real-time clock is accurate within ±3 minutes (at 25℃) per month, Lithium backup battery life : 7 years or more
Input voltage range		100 to 240VAC
Power consumption (Max.)		100 to 240VAC 3.5 to 2.0A
Operating temperature		5 to 40℃/41 to 104°F
Opterating humidity		20 to 80%RH (No condensation)
Storage temperature		-20 to 60℃/-4 to 140°F
Physical dimensions (mm/inch)		166/6.54 (W) x 470/18.50(D) x 370/14.57(H) (No protrusions)
Weight		TBD
Certification EMC saftery		VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive)
Software operating support		Windows 10 IoT Enterprise 2019 LTSC 64bit (Ja/En/Cn/Kr)

*1 Expansion card size (mm/inch) (Max.): 176/6.93(L) x 110/4.33(H)

VPC-5000 Series

CE FC VCCI RoHS compliant

Automation Computer

Features

- Intel® Xeon E Processor, 9th Gen. Core Processor
- Intel® C246 chipset
- Suitable chassis for embedded applications
- 1x PCIe (x16), 3x PCIe (x4), 3x PCI expansion slots
- Support both hardware and software RAID1, 5, 10
- Support ECC memory

Ordering Information

VPC-5000 series BTO model (For your quotation, please select required components from the below menu.)

CPU		Xeon E-2278GE	Xeon E-2226GE	Core i3-9100E	Celeron G4900
Memory		8GB	16GB	32GB	64GB
Storage		1x 3.5-inch 2TB HDD	2x 3.5-inch 2TB HDD	3x 3.5-inch 2TB HDD	4x 3.5-inch 2TB HDD
		1x 2.5-inch 256GB SSD	2x 2.5-inch 256GB SSD	3x 2.5-inch 256GB SSD	4x 2.5-inch 256GB SSD
		1x 2.5-inch 512GB SSD	2x 2.5-inch 512GB SSD	3x 2.5-inch 512GB SSD	4x 2.5-inch 512GB SSD
RAID Configuration		None	Software RAID (RAID 1, 5, 10)	Hardware RAID (RAID 1, 5, 10)	
Power Supply		500W ATX Power Supply	700W ATX Power Supply		
OS		None	Windows 10 IoT Enterprise 2019 LTSC 64bit (Ja/En/Cn/Kr)		

Specifications

Model		VPC-5000
System	CPU	Intel® Xeon® E-2278GE Processor 3.3GHz, Intel® Xeon® E-2226GE Processor 3.4GHz, Intel® Core™ i3 9100E Processor 3.1GHz, Intel® Celeron® G4900 Processor 3.1GHz
	Chipset	Intel® C246
	BIOS	BIOS (mfd. by AMI)
	Security (TPM)	TCG TPM2.0
	Memory	4x 288-pin U-DIMM sockets. Supports PC4-21333 (DDR4 2666) ECC SDRAM. 8GB: 1x 8GB DDR4 U-DIMM 2666MHz, 16GB: 1x 16GB DDR4 U-DIMM 2666MHz 32GB: 2x 16GB DDR4 U-DIMM 2666MHz, 64GB: 4x 16GB DDR4 U-DIMM 2666MHz
Graphic controller		Intel® UHD Graphics 630 (Xeon® , Core™ i3 model) Intel® UHD Graphics 610 (Celeron® model)
Interface	Display	1x HDMI, 1x DisplayPort, 1x VGA
	Storage	4x 3.5-inch storage bays, serial ATA3.0 standard ports Hardware RAID (RAID 1, 5, 10), Software RAID (RAID 1)
	LAN	2x 1000BASE-T/100BASE-TX/10BASE-T (support Wake On LAN)
	Audio	Front: 1x Line-out, 1x Mic-in Rear: 1x Line-out, 1x Line-in, 1x Mic-in
	USB	Front: 2x USB3.1, Rear: 4x USB3.1, 2x USB2.0 (TYPE-A)
	Serial	1x RS-232C/422A/485, 4x RS-232C
Expansion *1		1x PCIe (x16) slot, 3x PCIe (x4) slots, 3x PCI slot
Hardware monitoring		Monitoring CPU temperature, board temperature, and power voltage
Watchdog timer		Software programmable, 255 level (1sec to 255 sec), Causes a reset upon time-out.
RTC/CMOS		The real-time clock is accurate within ±3 minutes (at 25℃) per month, Lithium backup battery life : 7 years or more
Input voltage range		100 to 240VAC
Power consumption (Max.)		TBD
Operating temperature		5 to 40℃/41 to 104°F
Opterating humidity		20 to 80%RH (No condensation)
Storage temperature		-20 to 60℃/-4 to 140°F
Physical dimensions (mm/inch)		TBD
Weight		TBD
Certification EMC saftery		VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive)
Software operating support		Windows 10 IoT Enterprise 2019 LTSC 64bit (Ja/En/Cn/Kr)

Edge Computing

Embedded Computers
Fanless Embedded Computers
Embedded Computers
Industrial Motherboards
Industrial Computers
Automation Computers
Custom Computers
All-in-One Computers
Panel Mount Computers

M2M / IoT

Industrial IoT
CONPROSYS Series
Remote I/O
CONPROSYS nano Series
Wireless I/O
IO-Link

Data Acquisition(DAQ), Measurement and Control

Analog I/O
Digital I/O
Counters
Motion Controllers
Serial Communications
GPIB Communications
Software
Cables

Communication, Industrial LAN and Wireless

Network Products

Solutions and Services

Case Studies

Corporate Network

GSPF07MQ170-4U Series ⟨CE⟩ ⟨FC⟩ RoHS compliant

Custom Computer

Features

| Hyper high performance Industrial 4U IPC
| Intel® 6th Skylake-S processor
| Includes high performance CPUs configuration options
| Drive cover with a key-lock fitted comes standard
| Rich expansion slot options

Ordering Information

GSPF07MQ170-4U (19" 4U Rackmount Industrial PC Chassis, SMB-AQ1700-LLVA, 500W ATX Power Supply)
GSPF07MQ171-4U (19" 4U Rackmount Industrial PC Chassis, GMB-Q17000-LLVA, 500W ATX Power Supply)
·For your quotation, please select required components from the below menu.

CPU	Intel Core i7-6700 Processor 3.4GHz	Intel Core i5-6500 Processor 3.2GHz
	Intel Core i3-6100 Processor 3.7GHz	Intel Celeron G3900 Processor 2.8GHz

Memory	Support to max 64GB (4 slots, max 16GB/slot)	4GB	8GB	16GB

DVD Optical Drive	1x 5.25-inch DVD super multi (if installed, the storage changes to max 2 drivers)

Drive Bay	1x 3.5-inch Hot-Swap Bay	3x 3.5-inch Hot-Swap Drive Bays

Storage	3.5-inch HDD max 2TB, connecte to max 3drives	2.5-inch SSD max 1TB (MLC), connecte to max 3drives
	2.5-inch SSD max 256TB (SLC), connecte to max 3drives	

RAID Configuration	Using software RAID 0/1/5

OS	Windows 7 Pro 32bit	Windows Pro 7 64bit	Windows 8.1 64bit	Windows 10 64bit

Specifications

Model	GSPF07MQ170-4U	GSPF07MQ171-4U
Basic model		
Motherboard	SMB-AQ1700-LLVA	GMB-Q17000-LLVA
Chipset	Intel® Q170	
Chassis	19" 4U Rackmount Industrial PC Chassis, 7 slots	
Physical dimensions (mm/inch)	445/17.5(W) x 430/16.9(D) x 176/6.9(H) (No protrusions)	
Power type	500W ATX Power Supply (100 to 240VAC autorange)	
Expansion	1x PCIe (x16) (by jumper selectable to PCIe (x8))	1x PCIe (x16)
	1x PCIe (x8) (at PCIe (x16) change to PCIe (x8) only work this slot)	
	Pattern A: work PCIe (x16), not work PCIe (x8)	
	Pattern B: work two PCIe (x8) (PCIe (x16) changed to PCIe (x8))	
	2x PCIe (x4), 1x PCIe (x1)	2x PCIe (x4)
	2x PCI	4x PCI
Interface	4x USB 3.1 Gen.1 (USB 3.0) (TYPE-A), 2x LAN, 2x COM	4x USB 3.1 Gen.1 (USB 3.0), 2x USB2.0, (TYPE-A) 2x LAN, 1x PS/2 Keyboard & Mouse
	1x DVI-D, 1x VGA, 1x HDMI, 1x Audio	1x DVI-D, 1x VGA, 2x DisplayPort, 1x Audio
Certification EMC saftery	FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive)	

GSPF07MQ170-W Series ⟨CE⟩ ⟨FC⟩ RoHS compliant

Custom Computer

Features

| Hyper high performance Industrial Wall Mount IPC
| Use of Intel 6th Gen. Skylake-S processor
| Equipped high performance CPUs which are selectable according to your usage
| Rich expansion slot selectable

Ordering Information

GSPF07MQ170-W (Wall Mount Industrial PC Chassis, SMB-AQ1700-LLVA, 500W ATX Power Supply)
GSPF07MQ171-W (Wall Mount Industrial PC Chassis, GMB-Q17000-LLVA, 500W ATX Power Supply)
·For your quotation, please select required components from the below menu.

CPU	Intel Core i7-6700 Processor 3.4GHz	Intel Core i5-6500 Processor 3.2GHz
	Intel Core i3-6100 Processor 3.7GHz	Intel Celeron G3900 Processor 2.8GHz

Memory	Support to max 64GB (4 slots, max 16GB/slot)	4GB	8GB	16GB

DVD Optical Drive	1x 5.25-inch DVD super multi (if installed, the storage changes to max 1 drivers)

Drive Bay	1x 3.5-inch Hot-Swap Bay	2x 3.5-inch Hot-Swap Drive Bays

Storage	3.5-inch HDD max 2TB, connecte to max 2drives	2.5-inch SSD max 1TB (MLC), connecte to max 2drives
	2.5-inch SSD max 256TB (SLC), connecte to max 2 drives	

RAID Configuration	Using software RAID 0/1/5

OS	Windows 7 Pro 32bit	Windows 7 Pro 64bit	Windows 8.1 64bit	Windows 10 64bit

Specifications

Model	GSPF07MQ170-W	GSPF07MQ171-W
Basic model		
Motherboard	SMB-AQ1700-LLVA	GMB-Q17000-LLVA
Chipset	Intel® Q170	
Chassis	Wall Mount Industrial PC Chassis, 7 slots	
Physical dimensions (mm/inch)	480/16.1(W) x 330/12.9(D) x 180/6.7(H) (No protrusions)	
Power type	500W ATX power supply (100 to 240VAC autorange)	
Expansion	1x PCIe (x16) (by jumper selectable to PCIe (x8))	1x PCIe (x16)
	1x PCIe (x8) (at PCIe (x16) change to PCIe (x8) only work this slot)	
	Pattern A: work PCIe (x16), not work PCIe (x8)	
	Pattern B: work two PCIe (x8) (PCIe (x16) changed to PCIe (x8))	
	2x PCIe (x4), 1x PCIe (x1)	2x PCIe (x4)
	2x PCI	4x PCI
Interface	4x USB 3.1 Gen.1 (USB 3.0) (TYPE-A), 2x LAN, 2x COM	4x USB 3.1 Gen.1 (USB 3.0), 2x USB2.0, (TYPE-A) 2x LAN, 1x PS/2 Keyboard & Mouse
	1x DVI-D, 1x VGA, 1x HDMI, 1x Audio	1x DVI-D, 1x VGA, 2x DisplayPort, 1x Audio
Certification EMC saftery	FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive)	

Industrial Computers

LPC-200A Series

CE FC VCI RoHS compliant

Custom Computer

Using the optional vertical stand

Features

- Use of Intel® 8th Gen. Core i5, i3, and Celeron processors
- Various, extendable interfaces are provided
- New structure housing for high performance CPU
- Long-term product availability contributes to low-cost operation
- Pre-installation of OS to support the latest integrated type

Ordering Information

LPC-200A series BTO model (For your quotation, please select required components from the below menu.)

CPU			
	Core i5-8500T 2.1GHz	Core i3-8100T 3.1GHz	Celeron G4900T 2.9GHz
Memory	8GB (1x DDR4 8GB)	16GB (2x DDR4 8GB)	
Storage 1 (OS)	500GB HDD (SATA)	128GB SSD (SATA)	128GB SSD (M.2)
Storage 2	500GB HDD (SATA)	128GB SSD (SATA)	128GB SSD (M.2) / None
Aditional LAN Port *1	Gigabit LAN port	None	
Wireless LAN *2	IEEE 802.11 ac/a/b/g/n	None	
OS	Windows 10 IoT Enterprise 2019 LTSC 64bit	None	
Other Options	Partition Selecting Service	Vertical Stand	Brackets / None

*1: If a Gigabit LAN port is selected for Additional LAN Port, 1) the 128GB SSD (M.2) is not available for Storage 1 (OS) and Storage 2. And 2) the wireless LAN (IEEE 802.11 ac/a/b/g/n) is not selectable.
*2: The wireless LAN installed model is not certified for CE Marking.

Specifications

Model		LPC-200A
System	CPU *1	Intel® Core™ i5-8500T Processor (2.1GHz 6 core /6-thread) Intel® Core™ i3-8100T Processor (3.1GHz 4 core /4-thread) Intel® Celeron® G4900T Processor (2.9GHz 2 core /2-thread)
	Memory *1	Max. 16GB, 2x 260-pin SO-DIMM Sockets, PC4-21333(DDR4-2666) DDR4 SDRAM
Graphic controller		Intel® UHD Graphics 630 / 610
Interface	Display	1x HDMI, 1x DisplayPort
	Storage *1	1x shadow 2.5 inches SATA drive bay, 1x M.2 SATA
	LAN A	1-port (RJ-45 connector) (1000BASE-T/100BASE-TX/10BASE-T (support Wake On LAN))
	LAN B *1	1-port (RJ-45 connector) (1000BASE-T/100BASE-TX/10BASE-T *2
	Wireless LAN *1	Wireless LAN IEEE 802.11 ac/a/b/g/n *3
	Audio	1x Line-out, 1x Mic-in
	USB	2x USB3.1 Gen1 (USB3.0), 4x USB2.0 (TYPE-A)
	Serial	1x RS-232C
Power Supply	Rated voltage	100 to 240VAC
	Range of input voltage	90 to 246VAC
	Power consumption	79W
Operating temperature		5 to 40℃/41 to 104°F
Opterating humidity		20 to 80%RH (No condensation)
Storage temperature		-20 to 60℃/-4 to 140°F
Physical dimensions (mm/inch)		220/8.66(W) x 291/11.46(D) x 40/1.57(H) (No protrusions)
Weight		2.6kg/5.73lb (Excluding AC adapter)
Certification EMC saftery		VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive) *4
Software operating support		Windows 10 IoT Enterprise 2019 LTSC 64-bit (Ja/En/Cn/Kr)

*1: The type of CPU, memory, and storage are selectable. Additional LAN is available.
*2: Storage [M.2 SSD 128GB] is unavailable when this additional LAN B is selected.
*3: The LAN B and wireless LAN cannot be selected simultaneously.
*4: The wireless LAN installed model is not certified for CE Marking.

Edge Computing Products

All-in-One Computers

All-in-One Computers

Model	XPT-T1000 P39	PT-956S P40	PT-970 P41	PT-S3000HX P42		PT-S2000HX/ HXC P43	PT-S2000LX/ LXC P44	PT-S959SDHX/ SDHXC P45	PT-S959SDLX/ SDLXC P46
Main Feature	Fanless	Fanless	Fanless, Foldable Display w/ UPS Battery for 5 min.	Fanless		Fanless Resistive or PCAP Touch Panel Modes	Fanless Resistive or PCAP Touch Panel Modes	Fanless Resistive or PCAP Touch Panel Modes	Fanless Resistive or PCAP Touch Panel Modes
LCD Panel	12.1" 1024 x 768 15" 1024 x 768	12.1" 1024 x 768 15" 1024 x 768	10.1" 1280 x 800	15" 1024 x 768		15" 1024 x 768	12.1" 1024 x 768	15" 1024 x 768	12.1" 1024 x 768
Installation	Panel mount	Panel mount	Desktop	Panel mount VESA 100 x 100		Panel mount VESA 100 x 100	Panel mount VESA 100 x 100	Panel mount VESA 100 x 100	Panel mount VESA 100 x 100
Processor	Core i7-7600U	Atom E3845	Atom E3845	Core i7-6700TE Core i5-6500TE Celeron G3900TE		Core i5-6300U Celeron 3955U	Core i5-6300U Celeron 3955U	Atom E3845	Atom E3845
Chipset	-	Intel Baytrail Soc	Intel Baytrail Soc	Intel Q170		CPU integrated	CPU integrated	Intel Baytrail Soc	Intel Baytrail Soc
System Memory	8GB	4GB / 8GB	4GB	Up to 32GB		Up to 32GB	Up to 32GB	Up to 8GB	Up to 8GB
Storage	2x 2.5" SATA drive bays	2x CFast slots	1x 2.5" 500GB HDD	2x 2.5" SATA drive bays		1x 2.5" SATA drive bays	1x 2.5" SATA drive bays	1x 2.5" SATA drive bay 1x CFast slot	1x 2.5" SATA drive bay 1x CFast slot
Serial Ports	2x RS-232C	2x RS-232C	3x RS-232C	2x RS-232C		1x RS-232C/422A/485 1x RS-232C	1x RS-232C/422A/485 1x RS-232C	1x RS-232C/422A/485 3x RS-232C	1x RS-232C/422A/485 3x RS-232C
USB Ports	4x USB3.1 Gen1 (USB3.0) 2x USB2.0	1x USB3.1 Gen1 (USB3.0) 3x USB2.0	5x USB2.0	4x USB3.1 Gen1 (USB3.0) 2x USB2.0		4x USB3.1 Gen1 (USB3.0)	4x USB3.1 Gen1 (USB3.0)	1x USB3.1 Gen1 (USB3.0) 6x USB2.0	1x USB3.1 Gen1 (USB3.0) 6x USB2.0
Graphic Chipset	Intel HD Graphics 620	Intel HD Graphics	Intel HD Graphics	Intel HD Graphics		Intel HD Graphics	Intel HD Graphics	Intel HD Graphics	Intel HD Graphics
Audio	1x Line-out, 1x Line-in, 1x Mic-in	1x Line-out, 1x Mic-in	1x speaker	1x Line-out, 1x Mic-in		1x Line-out, 1x Mic-in	1x Line-out, 1x Mic-in	1x Line-out, 1x Mic-in	1x Line-out, 1x Mic-in
Ethernet	2x Gigabit LAN ports	2x Gigabit LAN ports	2x Gigabit LAN ports	2x Gigabit LAN ports		2x Gigabit LAN ports	2x Gigabit LAN ports	2x Gigabit LAN ports	2x Gigabit LAN ports
Touch Screen Type	Five-wire resistive	Five-wire resistive	Resistive-film analog	Five-wire resistive		Five-wire resistive / PCAP	Five-wire resistive / PCAP	Five-wire resistive / PCAP	Five-wire resistive / PCAP
Display Output	1x DisplayPort 1x DVI-D	1x DVI-I	-	1x DisplayPort 1x DVI-I (DVI-D + VGA)		1x DisplayPort, 1x HDMI	1x DisplayPort, 1x HDMI	1x DVI-I	1x DVI-I
Power Input	12 to 24VDC	12 to 24VDC	12 to 24VDC	12 to 24VDC		12 to 24VDC	12 to 24VDC	12 to 24VDC	12 to 24VDC

Embedded Computers
Fanless Embedded Computers
Embedded Computers
Industrial Motherboards
Industrial Computers
Automation Computers
Custom Computers
All-in-One Computers
Panel Mount Computers

M2M / IoT

Industrial IoT
CONPROSYS Series
Remote I/O
CONPROSYS nano Series
Wireless I/O
IO-Link

Data Acquisition(DAQ), Measurement and Control

Analog I/O
Digital I/O
Counters
Motion Controllers
Serial Communications
GPIB Communications
Software
Cables

Communication, Industrial LAN and Wireless

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All-in-One Computers

XPT-T1000 Series

Panel Mount Computer

XPT-T1000LX   XPT-T1000HX

Features

▌Intel® 7th Gen. Core i7 processor adopted
▌Slitless/fanless design prevents ingress of dust and grime to reduce maintenance
▌Highly durable 5-wire resistive film touch screen
▌Rich peripherals
▌Support a wide range of power supplies (10.8 to 31.2VDC)

Ordering Information

XPT-T1000HX series BTO model (15-inch LCD / Core i7-7600U / 8GB Memory)
XPT-T1000LX series BTO model (12-inch LCD / Core i7-7600U / 8GB Memory)
·For your quotation, please select required components from the below menu.

Storage			
	None	1x 100GB HDD	1x 256GB SSD (MLC)
	2x 100GB HDD Mirroring (Software-RAID)	2x 256GB SSD (MLC) Mirroring (Software-RAID)	

OS		
	None	Windows 10 IoT Enterprise 2019 LTSC 64bit

Specifications

Model		XPT-T1000LX	XPT-T1000HX
System	CPU	Intel® Core™ Processor 7600U (2.80GHz)	
	BIOS	BIOS (mfd. by AMI)	
	Memory	8GB (21x 60-pin SO-DIMM), PC3-17000 (DDR4-2133)	
Graphic controller		Intel® HD Graphics 620 (CPU integrated)	
LCD type	LCD	12.1-inch TFT color LCD, XGA (1024 x 768), 16,770,000 colors	15-inch TFT color LCD, XGA (1024 x 768), 16,770,000 colors
	Backlight	LED method, The ON/OFF can be controlled by software command.	
Touch-screen *1*2	Resolution	4096×4096 (emulated in 1024 x 768 mode)	
	Detection method	Five-wire resistive film analog method	
	Connection	Internal serial port	
Interface	External display	1x DVI-D (25-pin DVI-D connector), 1x DisplayPort	
	Storage	2x Slot-in 2.5" SATA drive bays. Serial ATA 3.0 compliant support	
	LAN	2x ports (1000BASE-T/100BASE-TX/10BASE-T (Wake On LAN support))	
	Audio	1x Line-out, 1x Line-in, 1x Mic-in	
	USB	4x USB3.1 Gen1 (USB3.0), 2x USB2.0 (TYPE-A)	
	Serial	2x RS-232C	
Hardware monitoring		Monitoring CPU temperature, board temperature, power voltage	
Watchdog timer		Software programmable, 255 level (1sec to 255sec). Time up allows reset shutdown or external output.	
Real time clock		Lithium backup battery life: 10 years or more. The real-time clock is accurate within ±3 minutes (at 25°C) per month (CPU built-in RTC)	
Rated input voltage		12 to 24VDC *3	
Range of input voltage		10.8 to 31.2VDC	
Power sonsumption(Max.)		12V 4.9A, 24V 2.6A	12V 4.6A, 24V 2.3A
Waterproffting and dust-proofing		Front part conforming to IP65 (Use the packing supplied.)	
Operating temperature		0 to 45°C/32 to 113°F	
Opterating humidity		10 to 90%RH (No condensation)	
Storage temperature		-10 to 60°C/14 to 140°F	
Cutting dimensions of the screen (mm/inch)		303/11.93 (W) x 243/9.57(H)	358/14.09(W) x 289/11.38(H)
Physical dimensions (mm/inch)		316/12.44(W) x 73/2.87(D) x 256/10.08(H) (No protrusions)	373/14.69(W) x 73/2.87(D) x 304/11.97(H) (No protrusions)
Weight (Excluding attachment fittings)		4.2kg/9.26lb (approx.) (Not including the attachment fittings)	5.1kg/11.24lb (approx.) (Not including the attachment fittings)
Certification EMC saftery		VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive)	

*1: Accuracy is within the error of 1.5% for the periphery of the touchable area, and the other areas are within 1%.
*2: When using Windows 10, the mouse cursor is not displayed if the mouse device is not connected. The virtual mouse driver is required to display the cursor. Please download it from the CONTEC website.
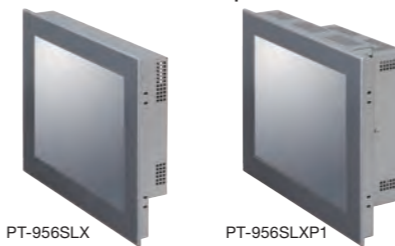*3: Use a power cable shorter than 3m.

All-in-One Computers

PT-956S Series

Panel Mount Computer

PT-956SLX   PT-956SLXP1

Features

▌Slitless/fanless design prevents ingress of dust and grime to reduce maintenance
▌Highly durable 5-wire resistive film touch screen
▌Built in remote power management reduces operational activities to increase energy efficiency
▌High definition DVI external display output
▌Retention fittings and cable clamps keep cables secure and minimize disruptions
▌Expansion slot to hold PCI bus board (PT-S956SLXP1)

Ordering Information

PT-956SHX-DC700000
15" LCD, Memory 4GB, w/o OS, w/o Cfast card

PT-956SHX-DC731314
15" LCD, Memory 4GB, WES 7 32bit (Ja/En/Cn/Kr), CFast card (SLC) 16GB

PT-956SHX-DC781724
15" LCD, Memory 4GB, WIN 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr), CFast card (Q-MLC) 32GB

PT-956SHX-DC800000
15" LCD, Memory 8GB, w/o OS, w/o Cfast card

PT-956SHX-DC861724
15" LCD, Memory 8GB, WIN 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr), CFast card (MLC) 32GB

PT-956SHX-DC881724
15" LCD, Memory 8GB, WIN 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr), CFast card (Q-MLC) 32GB

PT-956SLX-DC700000
12" LCD, Memory 4GB, w/o OS, w/o Cfast) card

PT-956SLX-DC731314
12" LCD, Memory 4GB, WES 7 32bit (Ja/En/Cn/Kr), CFast card (SLC) 16GB

PT-956SLX-DC781724
12" LCD, Memory 4GB, WIN 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr), CFast card (Q-MLC) 32GB

PT-956SLX-DC800000
12" LCD, Memory 8GB, w/o OS, w/o Cfast card

PT-956SLX-DC861724
12" LCD, Memory 8GB, WIN 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr), CFast card (MLC) 32GB

PT-956SLX-DC881724
12" LCD, Memory 8GB, w/o OS, WIN 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr), CFast card (Q-MLC) 32GB

PT-956SLXP1-DC700000
12" LCD, Memory 4GB, w/o OS, w/o Cfast card, 1x PCI

PT-956SLXP1-DC731314
12" LCD, Memory 4GB, WES 7 32bit (Ja/En/Cn/Kr), CFast card (SLC) 16GB, 1x PCI

PT-956SLXP1-DC781724
12" LCD, Memory 4GB, WIN 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr), CFast card (Q-MLC) 32GB, 1x PCI

Specifications

Model		PT-956SLX-DCxxxxxx	PT-956SLXP1-DCxxxxxx	PT-956SHX-DCxxxxxx
System	CPU	Intel® Atom® Processor E3845 1.91GHz		
	BIOS	BIOS (mfd. by AMI)		
	Memory	DC7xxxxx : 4GB (204pin SO-DIMM x 1), PC3-10600 DDR3L 1333 ECC DC8xxxxx : 8GB (204pin SO-DIMM x 1), PC3-10600 DDR3L 1333 ECC		
Graphic controller		Intel® HD Graphics (Built-in CPU)		
LCD type	LCD	12.1-inch TFT color LCD, XGA (1024 x 768), 260,000 colors		15-inch TFT color LCD, XGA (1024 x 768), 260,000 colors
	Backlight	LED method, The ON/OFF can be controlled by software command.		
Touch-screen *1*2	Resolution	4096×4096 (emulated in 1024 x 768 mode)		
	Detection method	Five-wire resistive film analog method		
	Connection	Internal serial port		
Interface	External display	1x DVI-I port, DVI to analog RGB conversion adapter attachment		
	CFast card slot	2x CFast CARD Type I slots, bootable		
		DCx00000 : w/o card DCx3xxxx : w/ one CFast card (SLC) (16GB, 1 partition) *3 DCx8xxxx : w/ CFast card (Q-MLC) B12:B13(32GB, 1 partition) *3		
	LAN	2x ports (1000BASE-T/100BASE-TX/10BASE-T (Wake On LAN support))		
	Audio	1x Line-out, 1x Mic-in		
	USB	1x USB3.1 Gen1 (USB3.0), 3x USB2.0 (TYPE-A)		
	Serial	2x RS-232C		
	Expansion	-	1x PCI slot. Max. dimension(mm/inch): 177/6.97(L) x 107/4.21(H)	-
Hardware monitoring		Monitoring CPU temperature, board temperature, power voltage		
Watchdog timer		Software programmable, 255 level (1sec to 255sec). Causes a reset upon time-out.		
Real time clock		Lithium backup battery life: 10 years or more. The real-time clock is accurate within ±3 minutes (at 25°C) per month (CPU built-in RTC)		
Rated input voltage		12 to 24VDC *4		
Range of input voltage		10.8 to 31.2VDC		
Power sonsumption(Max.)		12VDC: 1.7A (Typ.) 3.6A (Max.) 24VDC: 1.0A (Typ.) 1.9A (Max.)	12VDC: 3.2A (Typ.) 5.0A (Max.) 24VDC: 1.8A (Typ.) 2.6A (Max.)	12VDC: 1.7A (Typ.) 3.5A (Max.) 24VDC: 1.0A (Typ.) 1.9A (Max.)
External board power supply capacity *6		-	12VDC 0.5A, 5VDC 1A *5, 3.3VDC 0.5A *5, -12V 80mA	-
Waterproffting and dust-proofing		Front panel IP65 standard		
Operating temperature		0 to 50°C/32 to 122°F(With 1000BASE-T: 0 to 45°C/32 to 113°F) (the total current for the expansion devices and card is 1.9A (5V) or higher: 0 to 45°C/32 to 113°F)		
Opterating humidity		10 to 90%RH (No condensation)		
Storage temperature		-10 to 60°C/14 to 140°F		
Cutting dimensions of the screen (mm/inch)		303/11.93 (W) x 243/9.57(H)		358/14.09(W) x 289/11.38(H)
Physical dimensions (mm/inch)		316/12.44(W) x 43.8/1.72(D) x 256/10.08(H) (No protrusions)	316/12.44(W) x 102/4.05(D) x 256/10.08(H) (No protrusions)	373/14.69(W) x 47.8/1.88(D) x 304/11.97(H) (No protrusions)
Weight (Excluding attachment fittings)		About 3.4kg/7.50lb (without mounting bracket) About 3.5kg/7.72lb (with mounting bracket)	About 4.5kg/9.92lb (without mounting bracket) About 4.6kg/10.14lb (with mounting bracket)	About 4.4kg/9.70lb (without mounting bracket) About 4.5kg/9.92lb (with mounting bracket)
Certification EMC saftery		VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive)		

*1: Accuracy is within the error of 1.5% for the periphery of the touchable area, and the other areas are within 1%.
*2: When using Windows 10, the mouse cursor is not displayed if the mouse device is not connected. The virtual mouse driver is required to display the cursor. Please download it from the CONTEC website.
*3: The capacity of CFast is a value when 1GB is calculated by 1 billion bytes. The capacity that can be recognized from OS might be displayed fewer than an actual value.
*4: Use a power cable shorter than 3m.
*5: Ensure that the total current for the USB port power supply capacity and the expansion board power supply capacity (5V) is 2.4A or lower.
When using a total current 1.9 A or higher, be careful of the ambient temperature.
*6: The maximum power for an expansion board that can be equipped is 7.5 W or lower.

PT-970 Series

Desktop Touch Panel Computer

Display panel folded

Features

- Installable computer with desktop-type touch panel
- Safe even if power is interrupted. UPS backup power supply, OS automatic shutdown function
- Abundant expansion interface matched with device incorporation
- Slitless/fanless design prevents ingress of dust and grime to reduce maintenance
- Built in remote power management reduces operational activities to increase energy efficiency
- Supports a wide range of power supplies (10.8 to 31.2VDC)

Ordering Information

PT-970W10WDT-DC711724
Desktop, Fan-less, Atom E3845, 10.1' WXGA, Memory 4GB ECC, Windows 10 IoT Enterprise LTSB 2016 64bit (Ja/En/Cn/Kr), HDD 500GB, DC input, UPS

PT-970W10WDT-DC712211
Desktop, Fan-less, Atom E3845, 10.1' WXGA, Memory 4GB ECC, Windows 7 Professional for Embedded Systems 32bit (Japanese), HDD 500GB, DC input, UPS

Specifications

Model		PT-970W10WDT-DCxxxxxx
System	CPU	Intel® Atom® Processor E3845 1.91GHz
	BIOS	BIOS (mfd. by AMI)
	Memory	4GB, PC3-10600 DDR3L 1333 ECC, On Board
	Security (TPM)	TCG TPM2.0
Graphic controller		Intel® HD Graphics (Built-in CPU)
LCD type	LCD	10.1-inch TFT color LCD, WXGA (1280 x 800)
	Backlight	LED method, The ON/OFF can be controlled by software command.
Touch-screen *1*2	Resolution	WXGA (1280 x 800)
	Detection method	Resistive-film analog type
	Connection	Internal serial port
Interface	Storage	1x Shadow drive bay (2.5" SATA HDD bay) PT-970W10WDT-DC71xxxx : Built-in HDD (500GB, 1 partition) *1
	LAN	2x ports (1000BASE-T/100BASE-TX/10BASE-T (Wake On LAN support))
	Audio	Internal piezoelectric speaker (monaural)
	USB	5x USB2.0 (TYPE-A)
	Serial	3x RS-232C
Hardware monitoring		Monitoring CPU temperature, power voltage
Watchdog timer		Software programmable, 255 level (1sec to 255sec). Time up allows reset.
Real time clock		Lithium backup battery life: 10 years or more. The real-time clock is accurate within ±3 minutes (at 25°C) per month
Rated input voltage		12 to 24VDC
Range of input voltage		10.8 to 31.2VDC
Power sonsumption(Max.)		12V 3.2A, 24V 1.6A
External device power supply capacity		SATA I/F: 5VDC 1A USB2.0 I/F: 5VDC 2.5A (500mA x 5) *2
UPS Batery	Type	Ni-MH battery
	Nominal voltage	6V
	Nominal capacity	1,000mAh
	Backup time	Over 5 minutes
Operating temperature		0 to 35°C/32 to 95°F
Opterating humidity		10 to 85%RH (No condensation)
Storage temperature *3		-10 to 50°C/14 to 122°F (within 30 days) -10 to 40°C/14 to 104°F (within 90 days) -10 to 30°C/14 to 86°F (within 1 year)
Physical dimensions (mm/inch)		254.0/10.00(W) x 130.0/5.19(D) x 228.6/9.00(H) (No protrusions)
Weight (Excluding attachment fittings)		About 2.0kg/4.41lb
Certification EMC saftery		VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive)

*1: The capacity of HDD is a value when 1GB is calculated by 1 billion bytes. The capacity that can be recognized from OS might be displayed fewer than an actual value.
*2: When the battery is operated, the power supply to the rear 4 USB ports is stopped.
*3: Storing in high temperature environments for long periods of time greatly affects the life of the nickel-metal hydride secondary battery. Make sure to store at the lowest temperature possible.

PT-S3000HX Series

Panel Mount Computer

Features

- Intel® 6th Gen. Skylake Platform
- Slitless/fanless design prevents ingress of dust and grime to reduce maintenance
- IP65 front panel for waterproof & dustproof applications
- 15" LCD with long-life touch screen and LED backlight for power saving
- Dual Giga LAN, 2x COM, 4x USB 3.0, 2x USB 2.0, 1x DVI-I, 1x DP and other rich expansion interface
- Wide range DC input

Ordering Information

PT-S3000HX-DC1800000
15 inch touch-panel PC with Intel Celeron 3900TE, DDR4 8GB Memory

PT-S3000HX-DC4800000
15 inch touch-panel PC with Intel Core i5-6500TE, DDR4 8GB Memory

PT-S3000HX-DC5800000
15 inch touch-panel PC with Intel Core i7-6700TE, DDR4 8GB Memory

Optional Configuration

- 2x 2.5" Drive Bay
- 2x RS232/422/485 support or 1x M.2 Key-M Support (PCIe x4/ SATA/SMBus)
- 1x PCI Express Mini Card Slot (PCIe I/F)
- AC adapter 24V/120W
- OS Win7 32/64-bit/Win8.1 64-bit/ Win10 64-bit

Specifications

Model		PT-S3000HX
System	CPU	Intel® Core™ i7-6700TE Intel® Core™ i5-6500TE Intel® Celeron® G3900TE
	Chipset	Intel® Q170 Controller Hub
	Memory	DDR4 2133/2400, 260-pin SO-DIMM x 2, Max. 32 GB (Non-ECC)
	Security	TPM2.0
Graphic controller		Intel® HD Graphics
Display	LCD panel	15", XGA (1024 x 768)
Touch panel	Touch type	5-wire resistive (Frame touch)
	Max. operating force	80g (R0.8 Touch Pen)
	Connection	Internal RS-232C connection
Interface	Display	1x DisplayPort, 1x DVI-I (DVI-D + VGA)
	Storage	2x Removeable drive bays (2.5" HDD/SSD) 1x M.2 key-M (If using 2xRS232/422/485 (for option) or other interface card, this slot is not availabile.)
	LAN	2x ports (1000BASE-T/100BASE-TX/10BASE-T (Wake On LAN support))
	Audio	Mic-in, Line-out
	USB	4x USB3.1 Gen1 (USB3.0), 2x USB2.0 (TYPE-A)
	Serial	2x RS-232C
Expansion slot		1x Mini-PCIe 1x M.2 key-M 2242(Reserve) or 2x RS232/422/485 for option
Power input		12 to 24VDC (±10%,DC10.8 to 26.4V) Wide Rage DC Input w/ Terminal Block Connectivity
Power adapter		AC to DC, DC 24V/ 5A, 120W adaptor w/ Terminal Block Connectivity
Operating temperature		0 to 50°C/32 to 122°F with Air Flow: 0.5 m/s (w/ Standard Temp. SSD) (w/ Extended Temp. mSATA) 0 to 40°C/32 to 104°F with Air Flow: 0.6 m/s (w/ Standard Temp. HDD)
Opterating humidity		10 to 90%RH (No condensation)
Storage temperature		-10 to 60°C/14 to 140°F
Physical dimensions (mm/inch)		372/14.65(W) x 303/1.93(D) x 103.2/4.06(H) (No protrusions)
Weight (Excluding attachment fittings)		5.8kg/12.79lb
Certification EMC saftery		CE(including LVD) & FCC & VCCI class A
OS support		Windows 10 (64-bit), Windows 8.1 (64-bit), Windows 7 (32/64-bit) English

PT-S2000HX/PT-S2000HXC Series

CE FC RoHS compliant

Panel Mount Computer

Features

- Intel® Skylake-U SoC base platform
- Slitless/fanless design prevents ingress of dust and grime to reduce maintenance
- IP65 front panel for waterproof & dustproof applications
- 15" LCD with long-life touch screen and LED backlight provides optimal energy efficiency
- Support 5-wire resistive or multi-touch projective capacitive touchscreen
- Dual LAN, 2x COM, 4x USB 3.0, 1x GPIO, 1x HDMI, 1x DP and other rich expansion interfaces
- Wide range DC input

Ordering Information

PT-S2000HX-DC28xxxxx
15 inch touch-panel PC with Intel Celeron 3955U, DDR4 8GB Memory, 2.5" SATA HDD/SSD

PT-S2000HX-DC38xxxxx
15 inch touch-panel PC with Intel Core i5-6300U, DDR4 8GB Memory, 2.5" SATA HDD/SSD

PT-S2000HXC-DC28xxxxx
15 inch touch-panel PC with Intel Celeron 3955U, DDR4 8GB Memory, 2.5" SATA HDD/SSD

PT-S2000HXC-DC38xxxxx
15 inch touch-panel PC with Intel Core i5-6300U, DDR4 8GB Memory, 2.5" SATA HDD/SSD

Optional Configuration

- 1x 2.5" SATA HDD/SSD
- 1x mSATA
- 1x M.2 E Key 2230 (PCIe/USB)
- 1 x PCI Express Full-length Mini Card slot.
- AC adapter 19VDC/65W
- OS Win7 32/ 64-bit/Win8.1 64-bit/ Win10 64-bit

Specifications

Model		PT-S2000HX	PT-S2000HXC
System	CPU	Intel® Core™ ULV (i5-6300U / Celeron 3955U)	
	Chipset	Intel® SoC integrated	
	Memory	DDR4 2133/2400, 260-pin SO-DIMM x 2, Max. 32 GB (Non-ECC)	
Graphic controller		Intel® HD Graphics	
Display	LCD panel	15", XGA(1024x768), 262k colors	
Touch panel	Touch type	5-wire resistive (Frame touch)	Multi-touch 15" projective capacitive
	Max. operating force	80g (R0.8 Touch Pen)	-
	Connection	Internal USB connection	
Interface	Display	1x DisplayPort, 1x HDMI	
	Storage	1x 2.5" HDD/SSD (Default w/ SATA and SATA Power Cable in Accessories)	
	LAN	2x ports (1000BASE-T/100BASE-TX/10BASE-T (Wake On LAN support))	
	Audio	Mic-in, Line-out	
	USB	4x USB3.1 Gen1 (USB3.0) (TYPE-A)	
	Serial	1x RS-232C/422A/485, 1x RS-232C	
Expansion		Storage: 1x mSATA, PCIe Full-Length Mini Card slot (USB/ PCIe/SATA) Wireless: 1x M.2 Key-E 2230(PCIe/USB)	
Hardware monitoring		Temperature Monitor, Voltage Monitor	
Watchdog timer		1 to 255 Steps by Software Program	
Power input		12 to 24VDC (±10%,DC10.8 to 26.4V) Wide Rage DC Input w/ Terminal Block Connectivity	
Power adapter		AC to DC, DC19V/ 3.4A, 65W adaptor	
Operating temperature		0 to 50℃/32 to 122°F with 0.7m/s Air Flow (w/ Extended Temp. HDD/SSD/mSATA/RAM) 0 to 40℃/32 to 104°F with 0.7m/s Air Flow (w/ Standard Temp. HDD/SSD/mSATA/RAM)	
Opterating humidity		10 to 90%RH (No condensation)	
Storage temperature		-10 to 60℃/14 to 140°F	
Physical dimensions (mm/inch)		372/14.65(W) x 303/1.93(D) x 84.7/3.33(H) (No protrusions)	
Weight (Excluding attachment fittings)		4.6kg/10.14lb	
Certification EMC saftery		CE & FCC class A	
OS support		Windows 10 (64-bit), Windows 8.1 (64-bit), Windows 7 (32/64-bit) English	

PT-S2000LX/PT-S2000LXC Series

CE FC RoHS compliant

Panel Mount Computer

Features

- Intel® Skylake-U SoC base platform
- Slitless/fanless design prevents ingress of dust and grime to reduce maintenance
- IP65 front panel for waterproof & dustproof applications
- 12.1" LCD with long-life touch screen and LED backlight provides optimal energy efficiency
- Support 5-wire resistive or multi-touch projective capacitive touchscreen
- Dual LAN, 2x COM, 4x USB 3.0, 1x GPIO, 1x HDMI, 1x DP and other rich expansion interfaces
- Wide range DC input

Ordering Information

PT-S2000LX-DC28xxxxx
12.1 inch touch-panel PC with Intel Celeron 3955U, DDR4 8GB Memory, 2.5" SATA HDD/SSD

PT-S2000LX-DC38xxxxx
12.1 inch touch-panel PC with Intel Celeron 3955U, DDR4 8GB Memory, 2.5" SATA HDD/SSD

PT-S2000LXC-DC28xxxxx
12.1 inch touch-panel PC with Intel Celeron 3955U, DDR4 8GB Memory, 2.5" SATA HDD/SSD

PT-S2000LXC-DC38xxxxx
12.1 inch touch-panel PC with Intel Core i5-6300U, DDR4 8GB Memory, 2.5" SATA HDD/SSD

Optional Configuration

- 1x 2.5" SATA HDD/SSD
- 1x mSATA
- 1x M.2 E Key 2230 (PCIe/USB)
- 1 x PCI Express Full-length Mini Card slot.
- AC adapter 19VDC/65W
- OS Win7 32/ 64-bit/Win8.1 64-bit/ Win10 64-bit

Specifications

Model		PT-S2000LX	PT-S2000LXC
System	CPU	Intel® Core™ ULV (i5-6300U / Celeron 3955U)	
	Chipset	Intel® SoC integrated	
	Memory	DDR4 2133/2400, 260-pin SO-DIMM x 2, Max. 32 GB (Non-ECC)	
Graphic controller		Intel® HD Graphics	
Display	LCD panel	12.1", XGA(1024x768), 262k colors	
Touch panel	Touch type	5-wire resistive (Frame touch)	Multi-touch 12.1" projective capacitive
	Max. operating force	80g (R0.8 Touch Pen)	-
	Connection	Internal USB connection	
Interface	Display	1x DisplayPort, 1x HDMI	
	Storage	1x 2.5" HDD/SSD (Default w/ SATA and SATA Power Cable in Accessories)	
	LAN	2x ports (1000BASE-T/100BASE-TX/10BASE-T (Wake On LAN support))	
	Audio	Mic-in, Line-out	
	USB	4x USB3.1 Gen1 (USB3.0) (TYPE-A)	
	Serial	1x RS-232C/422A/485, 1x RS-232C	
Expansion		Storage: 1x mSATA, PCIe Full-Length Mini Card slot (USB/PCIe/SATA) Wireless: 1x M.2 Key-E 2230(PCIe/USB)	
Hardware monitoring		Temperature Monitor, Voltage Monitor	
Watchdog timer		1 to 255 Steps by Software Program	
Power input		12 to 24VDC (±10%,DC10.8 to 26.4V) Wide Rage DC Input w/ Terminal Block Connectivity	
Power adapter		AC to DC, DC19V/ 3.4A, 65W adaptor	
Operating temperature		0 to 50℃/32 to 122°F with 0.7m/s Air Flow (w/ Extended Temp. HDD/SSD/mSATA/RAM) 0 to 40℃/32 to 104°F with 0.7m/s Air Flow (w/ Standard Temp. HDD/SSD/mSATA/RAM)	
Opterating humidity		10 to 90%RH (No condensation)	
Storage temperature		-10 to 60℃/14 to 140°F	
Physical dimensions (mm/inch)		316/12.44(W) x256/10.08(D) x 85.4/3.36(H) (No protrusions)	
Weight (Excluding attachment fittings)		3.7kg/8.16lb	
Certification EMC saftery		CE & FCC class A	
OS support		Windows 10 (64-bit), Windows 8.1 (64-bit), Windows 7 (32/64-bit) English	

PT-S959SDHX/PT-S959SDHXC Series CE FC RoHS compliant

Panel Mount Computer

Features

| Intel® Baytrail SoC base platform
| Slitless/fanless design prevents ingress of dust and grime to reduce maintenance
| IP65 front panel for water-proof applications
| 15" LCD with long-life touch screen and LED backlight provides optimal energy efficiency
| Support 5-wire resistive or multi-touch projective capacitive touch panel
| Dual LAN, 4x COM, 7x USB 3.0, 1x GPIO and other rich expansion interfaces. Easy replacement of the storage device 2.5-inch SATA drive bay
| Support 2x CFast at BIOS selectable

Ordering Information

PT-S959SDHX-DC70000
15" 5-wire resistive PANEL PC w/Atom E3845, 4GB DDR3L Memory

PT-S959SDHXF2-DC70000
15" 5-wire resistive PANEL PC w/Atom E3845, 4GB DDR3L Memory, support 2x CFast

PT-S959SDHXC-DC70000
15" capacitive PANEL PC w/Atom E3845, 4GB DDR3L Memory

PT-S959SDHXF2C-DC70000
15" capacitive PANEL PC w/Atom E3845, 4GB DDR3L Memory, support 2x CFast

Optional Configuration

• 1x 2.5" SATA HDD or SSD
• 1 or 2x CFast Card
• AC adapter 19VDC/65W
• OS Win 7/8.1/10 (32/64-bit)

Specifications

Model		PT-S959SDHX	PT-S959SDHX
System	CPU	Intel® Atom® Processor E3845 1.91GHz	
	Chipset	Intel® Baytrail SoC	
	Memory	1x 204pin SO-DIMM socket support DDR3L 1333 up to 8GB/ECC	
Graphic controller		Integrated Intel® HD Graphics controller	
Display	LCD panel	15", XGA(1024x768), 262k colors	
	Backlight	LED ON/OFF by software control	
Touch panel	Touch type	5-wire resistive (Frame touch)	Multi-touch projective capacitive
	Max. operating force	80g (R0.8 Touch Pen)	-
	Connection	Internal RS-232C connection	
Interface	Display	1x DVI-I	
	Storage	1x 2.5" drive bay for SATA HDD/SSD (Standard) 2x CFast (at BIOS selectable)	
	LAN	2x ports (1000BASE-T/100BASE-TX/10BASE-T)	
	Audio	Mic-in, Line-out	
	USB	1x USB3.1 Gen1 (USB3.0), 6x USB2.0 (TYPE-A)	
	Serial	1x RS-232C/422A/485, 3x RS-232C	
Watchdog timer		255-level	
Power input		12 to 24VDC	
Operating temperature		0 to 50℃/32 to 122°F (with wide temperature HDD/SSD) 0 to 40℃/32 to 104°F (with HDD)	
Opterating humidity		10 to 90%RH (No condensation)	
Storage temperature		-10 to 60℃/14 to 140°F	
Physical dimensions (mm/inch)		372/14.65(W) x 303/1.93(D) x 72.6/2.68(H) (No protrusions)	
Weight (Excluding attachment fittings)		4.35kg/9.59lb	
Certification EMC saftery		CE & FCC class A	
OS support		Windows 7/8.1/10 (32/64-bit) English	

PT-S959SDLX/PT-S959SDLXC Series CE FC RoHS compliant

Panel Mount Computer

Features

| Intel® Baytrail SoC base platform
| Slitless/fanless design prevents ingress of dust and grime to reduce maintenance
| IP65 front panel for water-proof applications
| 12.1" LCD with long-life touch screen and LED backlight provides optimal energy efficiency
| Support 5-wire resistive or multi-touch projective capacitive touch panel
| Dual LAN, 4x COM, 7x USB 3.0, 1x GPIO and other rich expansion interfaces. Easy replacement of the storage device 2.5-inch SATA drive bay
| Support 2x CFast at BIOS selectable

Ordering Information

PT-S959SDLX-DC70000
12.1" 5-wire resistive PANEL PC w/ Atom E3845, 4GB DDR3L Memory

PT-S959SDLXF2-DC70000
12.1" 5-wire resistive PANEL PC w/ Atom E3845, 4GB DDR3L Memory, support 2x CFast

PT-S959SDLXC-DC70000
12.1" PCAP PANEL PC w/Atom E3845, 4GB DDR3L Memory

PT-S959SDLXC-DC80000
12.1" PCAP PANEL PC w/Atom E3845, 8GB DDR3L Memory

PT-S959SDLXF2C-DC70000
12.1" PCAP PANEL PC w/Atom E3845, 4GB DDR3L Memory, support 2x Cfast

PT-S959SDLXF2C-DC80000
12.1" PCAP PANEL PC w/Atom E3845, 8GB DDR3L Memory, support 2x CFast

Optional Configuration

• 1x 2.5" SATA HDD or SSD
• 1 or 2x CFast Card
• AC adapter 19VDC/65W
• OS Win 7/8.1/10 (32/64-bit)

Specifications

Model		PT-S959SDLX	PT-S959SDLX
System	CPU	Intel® Atom® Processor E3845 1.91GHz	
	Chipset	Intel® Baytrail SoC	
	BIOS	AMI SPI BIOS	
	Memory	1x 204pin SO-DIMM socket support DDR3L 1333 up to 8GB/ECC	
Graphic controller		Integrated Intel® HD Graphics controller	
Display	LCD panel	12.1", XGA(1024x768), 262k colors	
	Backlight	LED ON/OFF by software control	
Touch panel	Touch type	5-wire resistive (Frame touch)	Multi-touch Projective capacitive (PCAP)
	Max. operating force	80g (R0.8 Touch Pen)	-
	Connection	Internal RS-232C connection	
Interface	Display	1x DVI-I	
	Storage	1x 2.5" drive bay for SATA HDD/SSD (Standard) 2x CFast (at BIOS selectable)	
	LAN	2x ports (1000BASE-T/100BASE-TX/10BASE-T)	
	Audio	Mic-in, Line-out	
	USB	1x USB3.1 Gen1 (USB3.0), 6x USB2.0 (TYPE-A)	
	Serial	1x RS-232C/422A/485, 3x RS-232C	
Watchdog timer		255-level	
Power input		12 to 24VDC	
Operating temperature		0 to 50℃/32 to 122°F (with wide temperature HDD/SSD) 0 to 40℃/32 to 104°F (with HDD)	
Opterating humidity		10 to 90%RH (No condensation)	
Storage temperature		-10 to 60℃/14 to 140°F	
Physical dimensions (mm/inch)		316/12.44(W) x 256/10.08(D) x 72.4/2.85(H) (No protrusions)	
Weight (Excluding attachment fittings)		3.57kg/7.87lb	
Certification EMC saftery		CE & FCC class A	
OS support		Windows 7/8.1/10 (32/64-bit) English	

Break into the IoT Revoluti on with CONPROSYS™

CONPR OSYS series

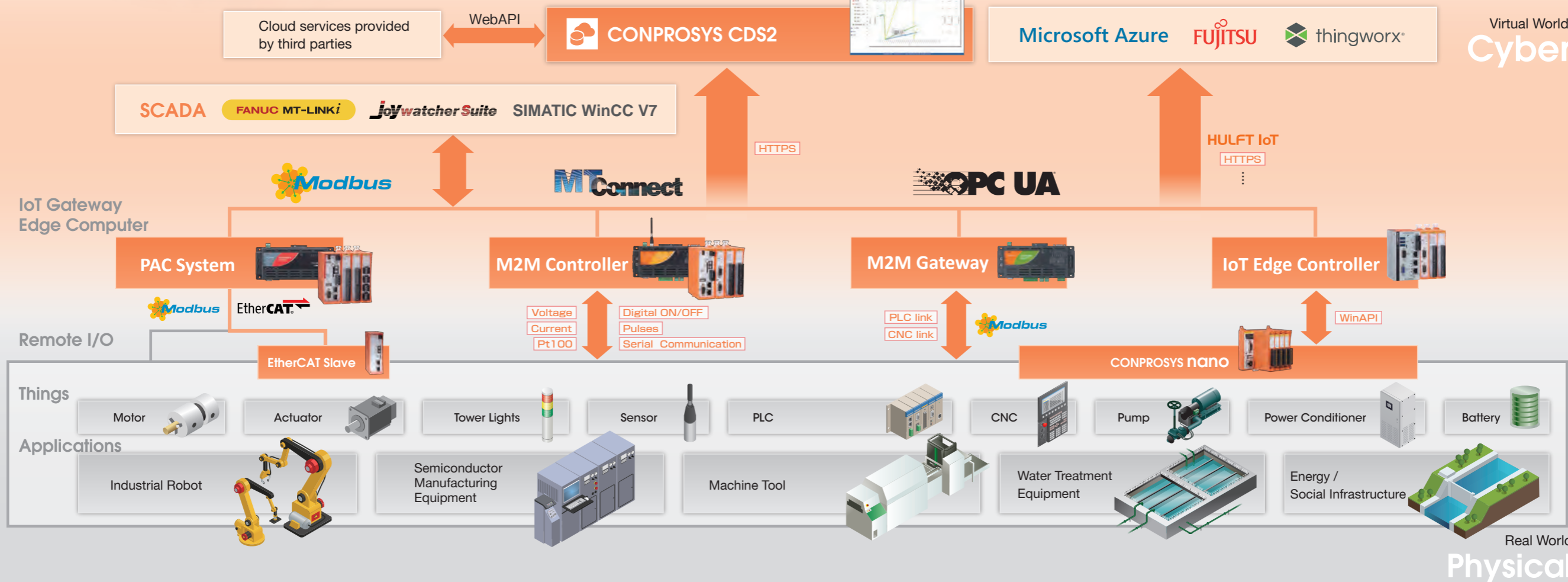— Innovation in Measurement Control and Remote Monitoring Systems —

Connecting Everything
Excellent Lineup of Industrial IoT Devices

These IIoT devices can be used without programming
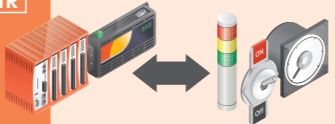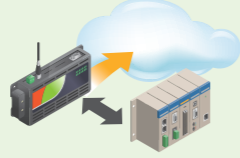**Various Useful Func tions Built-in**

The convenient and simple **Cloud Service** provides IoT solutions by one-stop.

データ送信　信号入出力　OPC UA
CDS2
VTC
HMI
CNC
3G/920MHz

Modbus マスタ
EtherCAT
PLC通信
MTConnect
PLCマスタ

CONPROSYS CDS2

Cloud services provided by third parties

WebAPI

CONPROSYS CDS2

Microsoft Azure　FUJITSU　thingworx®

Virtual World
Cyber

SCADA　FANUC MT-LINK*i*　joywatcher Suite　SIMATIC WinCC V7

HTTPS

HULFT IoT
HTTPS

Modbus　**MTConnect**　**OPC UA**

**IoT Gateway
Edge Computer**

PAC System　**M2M Controller**　**M2M Gateway**　**IoT Edge Controller**

Modbus　EtherCAT

Voltage / Current / Pt100　Digital ON/OFF / Pulses / Serial Communication

PLC link / CNC link　Modbus

WinAPI

Remote I/O

EtherCAT Slave

CONPROSYS nano

Things

Motor　Actuator　Tower Lights　Sensor　PLC　CNC　Pump　Power Conditioner　Battery

Applications

Industrial Robot　Semiconductor Manufacturing Equipment　Machine Tool　Water Treatment Equipment　Energy / Social Infrastructure

Real World
Physical

C O N T E N T S

Varied Functionality of CONPROSYS | P51-

Easily visualize multiple factory systems operating in multiple locations with CONPROSYS.

Examples of CONPROSYS Usage

APP 1

Supporting Process Reform in Manufacturing Industries. Initiative of Industrial 4.0

IoT-based Factories

IoT-based factories
Machine equipment operation management

CONPROSYS IoT devices have a built-in OPC UA server function. This makes it possible to use a SCADA system equipped with OPC UA client function to visualize the operating status of machine equipment. By making use of the open technology that complies with international standards and that is proposed by CONPROSYS, it is possible to carry out future investments in a scalable manner and with no waste such as by using MES/ERP linking to optimize supply chains and by implementing mass customization that uses the IoT.

[Functions] Signal I/O | Data Transmission | 3G/920MHz | PLC Master | OPC UA | CNC *Refer Pages 51 to 54

[Components]
- Indicator lights, sensor inputs, CNC → M2M Controller (OPC UA Model)
- PLC data usage → M2M Gateway (OPC UA Model)
- Storage, management and visualization of operation data → OPC Client (MT-LINKi, other SCADA systems)
- Actuators and indicator lights → M2M Controller (OPC UA Model)

APP 2

Adding New Value to Businesses with Simple Cloud Services

Manages Infrastructure Facilities of Multi-locations

Manages infrastructure facilities of multi-locations
Monitors plant facilities

The CONPROSYS can be used to quickly construct work systems that make use of cloud technology to manage the operation of and perform predictive maintenance in multiple locations. CONPROSYS Cloud Data Service 2, a cloud service for data management, can be used to perform data linking with external machine learning and analysis tools by way of an API. CONTEC is your one-stop solution provider for everything from IoT devices to server management.

[Functions] Signal I/O | Data Transmission | 3G/920MHz | PLC Master | CDS2 *Refer Pages 51 to 54 and page 63

[Components]
- Inputs of indicator lights and sensors → M2M Controller
- PLC data usage → M2M Gateway
- Storage, management and visualization of machine operation data → CONPROSYS Cloud Data Service 2 (CDS2)

APP 3

CODESYS, a Sequence Control Software Using Open Technology

Forward to the Global Factories of the Next Generation

Real-time control
Smart agriculture plant

With the CONPROSYS PAC Series, it is possible to develop programs using an international-standard language that complies with IEC 61131-3. This makes it possible to apply PLC development technology to a variety of fields. The built-in web monitor function makes it possible to easily visualize data.

[Functions] PLC Languages | HMI | OPC UA | EtherCAT *Refer Pages 51 to 54 and Pages 62

[Components]
- IEC 61131-3-compliant CODESYS → PAC series
- EtherCAT communication → EtherCAT Slave Unit
- Visualization of operating data → CONPROSYS HMI

Varied Functionality of CONP ROSYS

Built-in application functions that can be used to easily implement an IoT environment for collecting and storing data from sensors and controllers.
Data can be processed, controlled, and visualized with intuitive operations from a web browser.

CTR **M2M Controller** series   GW **M2M Gateway** series   PAC **PAC** series

CONPROSYS VTC (Visual Task Control)   CTR GW PAC

Drag function icons from the tool box to the grid area. A variety of task processing can be added with these intuitive operations. There is no need for knowledge of programming languages or for a special development environment. A variety of tasks such as device I/O, calculations, flow control, character string operations, cloud data transmission, and file operations can be set easily from a web browser in the same manner as drawing a flow chart.

Remote control through a web browser

Monitor alarms   Communication
Filter processing   Condition judgment

| Up to 30 kinds of function-icons support you scripting easily | Up to 20 main tasks and 10 subtasks are supported | Data linking with CONPROSYS HMI |

■ Easy Processing and Control
— Device setting, data saving, and script debugging are completed with a Web browser —
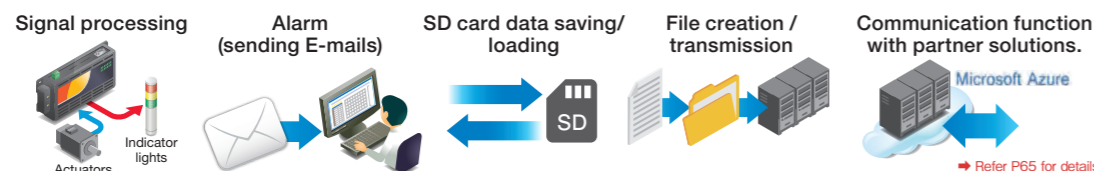Support multiple platforms (Windows, Android, iOS, MAC, Linux)

Drag function icons from tool box to the grid area

Set the function icon in property area

Test the script in the debug window

CONPROSYS VTC is easy and convenient

| Signal processing | Alarm (sending E-mails) | SD card data saving/ loading | File creation / transmission | Communication function with partner solutions. |

Actuators   Indicator lights   SD   Microsoft Azure

➡ Refer P65 for details

Sample Programs of Task Script Language for Monitoring and Controlling Routines

We have released some routine VTC sample programs in our HP that are used in monitoring and control processing, such as self-holding circuit, seven-segment display etc.
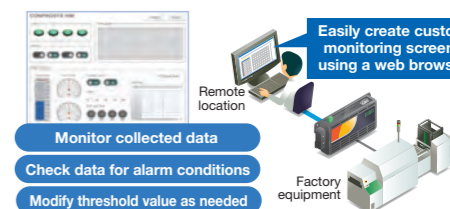
◎ Online help is available. Visit our website for details.

CONPROSYS HMI (Human-Machine Interface)   CTR GW PAC

Simply arrange the prepared display components to monitor the status of the input signals. Screens can be created with a web browser. There is no need for knowledge of programming languages or for a special development environment. Just drag the prepared display components to create screens. Furthermore, the properties area window is used to configure display component settings and to set the linking of data with sensors and devices.

Easily create custom monitoring screens using a web browser

Monitor collected data
Check data for alarm conditions
Modify threshold value as needed

Remote location   Factory equipment

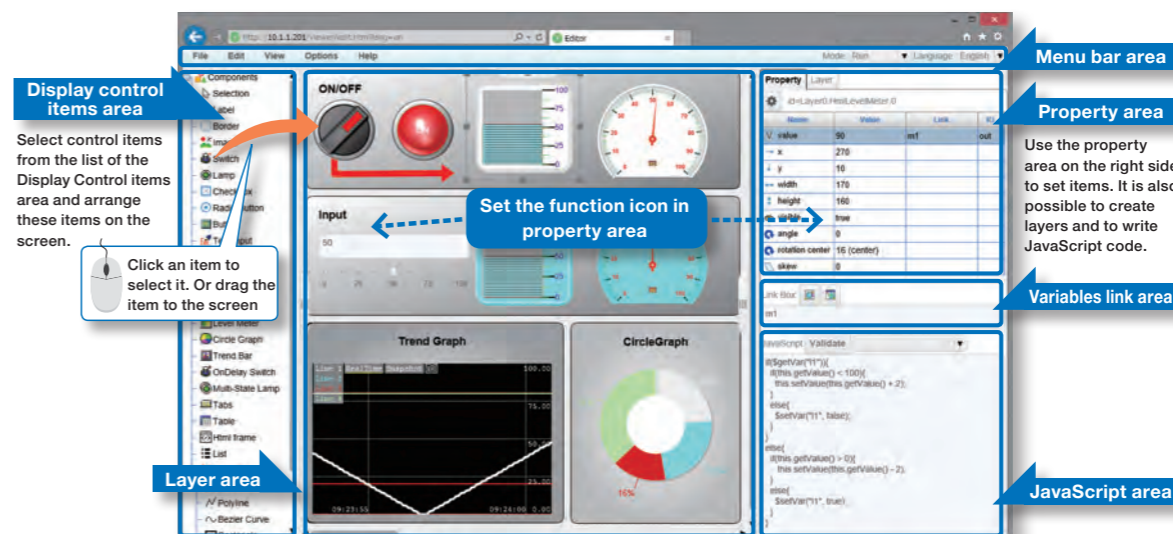| Creating screens with a variety of prepared display items | Data linking and checking can be performed at the same time as editing the screen | Enables visualization just with the CONPROSYS |

■ Monitoring
— Device setting, data saving, and script debugging are completed with a Web browser —
Support multiple platforms (Windows, Android, iOS, MAC, Linux)

Menu bar area

Display control items area
Select control items from the list of the Display Control items area and arrange these items on the screen.

Property area
Use the property area on the right side to set items. It is also possible to create layers and to write JavaScript code.

Click an item to select it. Or drag the item to the screen

Set the function icon in property area

Variables link area

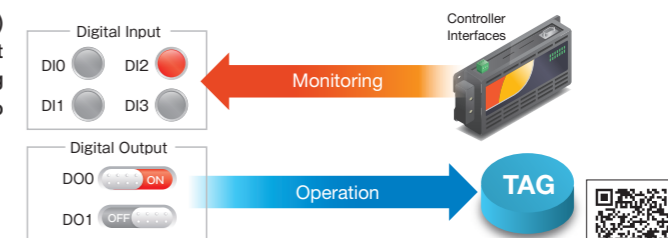Layer area

JavaScript area

The screen above is the image when creating the monitoring screen.
The factory default setting is a white background.

Data linking with CONPROSYS VTC

It is possible to use internal variables (TAGs) to link with CONPROSYS VTC. This makes it possible to display the results of processing with VTC and to apply the HMI operations to VTC flow control.

Digital Input   Controller Interfaces
DI0   DI2
DI1   DI3   Monitoring

Digital Output
DO0   ON
DO1   OFF   Operation   TAG

◎ Online help is available. Visit our website for details.

Industrial IoT

Varied Functionality of CONP ROSYS

Built-in application functions that can be used to easily implement an IoT environment for collecting and accumulating data from sensors and controllers. OPC UA, Modbus, and other such international standard industrial protocols are supported, which makes it possible to connect with software made by other companies.

CTR M2M Controller series   **GW** M2M Gateway series   **PAC** PAC series

Data Capitalization

Data Transmission CTR GW PAC

Cloud Server
Internet (VPN)
Mobile Wireless Internet
Server PC
Local Area Network
CONPROSYS M2M controller

Easily transmit data over mobile wireless Internet

Supports both Internet and 3G Mobile Wireless Internet
Data transfer is set easily by simply entering the server's address.

Supports OPC UA Standard CTR GW PAC

ERP
MES
OPC UA
SCADA (OPC UA client)
CONPROSYS M2M Controller (OPC UA model)
CONPROSYS M2M Gateway (OPC UA model)
CONPROSYS M2M Controller (OPC UA model)
PLC
Actuator
Indicator Lights
CNC

The data collected is easily displayed on SCADA and HMI systems adding monitoring capability to these systems. With the simple installation of merely connecting devices, SCADA systems can be used to monitor existing facilities that could not be monitored up to now.

MTConnect CTR GW PAC

MTConnect Client (Server Computer)
Ethernet
MTConnect Client (Tablet or Smartphone)
Machine Tool
Machine Tool
MTConnect Adapter + Agent (MTConnect model)
Machine Tool

MTConnect is a communication protocol for machine tools. It has been standardized by the MTConnect Institute.

The CONPROSYS has built-in MTConnect Adapter and Agent, which makes it possible to be used from Client software that supports MTConnect.

* The CONPROSYS signals that support MTConnect are digital inputs and outputs, analog inputs and CNC serial communication data.

Modbus Slave CTR GW PAC

SCADA System etc.

The slave responses to data requests and returns the acquired information or the results of calculations.

In the case of a write request the corresponding part of memory is changed to the specified value

Host Device (Modbus Master)

Modbus Data Request

Modbus data response

CONPROSYS
Ethernet
Indicator Lights
Actuator
Sensor

Responds to the data request of host communication device which is built-in the Modbus master function and returns the acquired information, calculation results, etc.
Just several simple settings makes it possible to communicate with the host device. It can be used as a remote I/O device.

Connectivity

Modbus Master CTR GW PAC

Simple settings make it easy to collect data with limited programming

CONPROSYS M2M Gateway
Ethernet
Serial
Supports multiple interfaces
CONPROSYS nano series
Modbus compatible PLC
Meter
Electricity meter

Easily configure, collect, measure and monitor data with different communication devices.

PLC Master CTR GW PAC

Simple settings make it easy to collect PLC data with limited programming

Batch collect data from multiple equipment sources

CONPROSYS M2M Gateway
Ethernet
Serial
Supports multiple interfaces
PLC
PLC
PLC
Supports multi-vendor PLCs

Easily connect to a variety of PLC devices to collect and monitor data.

Supported PLC manufacturers Mitsubishi Electric / Omron / JTEKT Corporation Panasonic / KEYENCE

Signal Input and Output CTR GW PAC

Configurable type
Integrated type
CONPROSYS

Pulse signal input
Analog signal output
Analog signal input
Digital signal output
Digital signal input
Counted number of production
Control value output
Analog meter
Indicate lights
Switches

CONPROSYS supports a wide range of equipment with interfaces for analog and digital signal input and output. CONPROSYS is available in integrated and configurable models. The integrated type is an all-in-one device. The configurable type offers a high degree of expandability.

CNC Communication CTR GW PAC

SCADA (OPC UA, MTConnect, Modbus TCP)
Ethernet
CONPROSYS (OPC UA / MTConnect Model)
Serial
CNC

Collect information such as output messages and indicator light status from the CNC and send the data to the host system (MT-LINKi) etc. This makes it possible to add Ethernet communication function to old model machine tools that are not have equipped with external communication means.

* Data communication may not be possible with some machine tools and CNCs. Contact us for details.

Supported CNC manufacturers FANUC / Mitsubishi Electric / Brother Industry

Rich Variety of Interfaces and Excellent Lineup

| M2M Controller series

The M2M Controller Series consists of two types of controllers: a stand-alone integrated type and an I/O interface expandable configurable type. The system is adaptable to a wide variety of locations, wiring methods and number of I/O channels.
You can build a custom control and monitoring system to meet your specific needs.

Integrated Type

[Data Transmission | OPC UA | MTConnect | Signal I/O | 3G/920MHz | Modbus Master | Modbus Slave | PLC Master | HMI | VTC]

Refer pages 6 to 9 for icon definitions

The integrated type offers a wide range of models with a variety of I/O interfaces and communication protocols.

3G model

DIN rail mounted image

[**Key Features**]

- DIN rail or fixed mounting options available
- Embedded CPU
- Operating temperature range: -20 to 60°C (-4 to 140°F)
- Durable hardware reduces maintenance costs
- Daisy-chain connections do not required a HUB (Except some models)
- Power supply voltage: 12 to 24 VDC
- Physical dimensions: 188.0(W)x78.0(D)x30.5(H) mm (7.40"x3.07"x1.20") (does not include protrusions and antenna)

OPC UA server built-in model
CPS-MC341-ADSC1-931
OPC UA server is built-in the firmware. It can directly communicate with an Information network without a bridge PC
FANUC MT-LINKi enabled

CNC

Configurable Type

[Data Transmission | OPC UA | MTConnect | Signal I/O | 3G/920MHz | Modbus Master | Modbus Slave | PLC Master | HMI | VTC]

Refer pages 6 to 9 for icon definitions
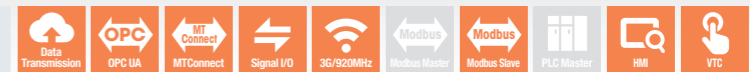
The configurable type allows users to add a variety of I/O modules to a CPU controller providing ultimate flexibility.

3G model

DIN rail mounted image
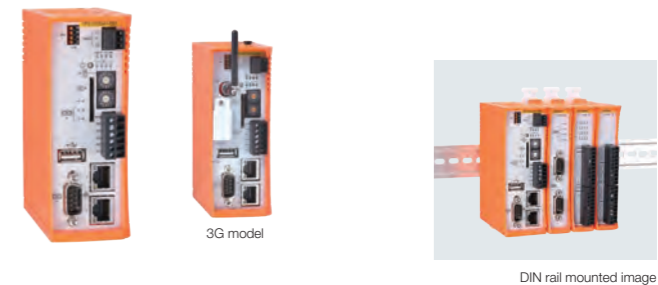
[**Key Features**]

- Capable of supporting up to 16 I/O modules on a single controller
- DIN rail mountable
- Embedded CPU
- Operating temperature range: -20 to 60°C (-4 to 140°F)
- Durable hardware reduces maintenance costs
- Daisy-chain connections do not required a HUB
- Power supply voltage: 24 VDC
- Physical dimensions: 44.7(W)x94.7(D)x124.8(H) mm (1.76"x3.83"x4.91") (does not include protrusions and antenna)

1 2 3 16

Controller + Up to 16 I/O modules
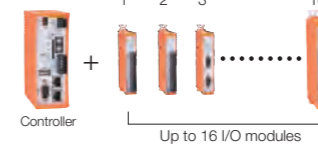
OPC UA server built-in model
CPS-MCS341-DS1-131
CPS-MCS341G-DS1-130
CPS-MCS341Q-DS1-131
FANUC MT-LINKi enabled

CNC

Type	Integrated Type										
Product Name	Multi I/O	Multi I/O with built-in OPC UA server and MTConnect Adapter & Agent	Multi I/O with additional RS-485	Digital I/O with RS-485	Digital I/O with RS-232C	Digital I/O with CAN	Analog I/O	Multi I/O with 3G WAN (Global) *3*4	Multi I/O with 3G WAN*4 (Japan only)	Multi I/O with 920MHz LAN (Japan only)
Model	CPS-MC341-ADSC1-111	CPS-MC341-ADSC1-931	CPS-MC341-ADSC2-111	CPS-MC341-DS1-111	CPS-MC341-DS11-111	CPS-MC341-DS2-911	CPS-MC341-A1-111	CPS-MC341G-ADSC1-110	CPS-MC341G-ADSC1-111	CPS-MC341Q-ADSC1-111
Interfaces LAN	2ch	2ch	2ch	2ch	2ch	2ch	2ch	2ch	2ch	2ch
SD Card Slot	1 Slot	1 Slot	1 Slot	1 Slot	1 Slot	1 Slot	1 Slot	1 Slot	1 Slot	1 Slot
USB	1ch	1ch	1ch	—	1ch	—	—	1ch	1ch	1ch
Digital Input	4ch*1	4ch*5	4ch*1	8ch*1	8ch*6	8ch*1	—	4ch*1	4ch*1	4ch*1
Digital Output	2ch	2ch	2ch	8ch	8ch	8ch	—	2ch	2ch	2ch
Analog Input (Current)	2ch	2ch	2ch	—	—	—	—	2ch	2ch	2ch
Analog Input (Voltage)	—	—	—	—	—	—	8ch	—	—	—
Analog Output (Voltage)	—	—	—	—	—	—	2ch	—	—	—
Counter	2ch*2	2ch*2	2ch*2	—	—	—	—	2ch*2	2ch*2	2ch*2
RS-422A/485	1ch	1ch	2ch	1ch	—	1ch	—	1ch	1ch	1ch
RS-232C	1ch	1ch	1ch	—	1ch	—	—	1ch	1ch	1ch
CAN	—	—	—	—	—	1ch	—	—	—	—
3G SIM (Standard)	—	—	—	—	—	—	—	1 Slot	1 Slot	—
920MHz	—	—	—	—	—	—	—	—	—	○
Functions Data Transmission	○	○	○	○	○	○	○	○	○	○
OPC UA Server	—	○	—	—	—	—	—	—	—	—
MTConnect	—	○	—	—	—	—	—	—	—	—
Signal I/O	○	○	○	○	○	○	○	○	○	○
Modbus Master	—	—	—	—	—	—	—	—	—	—
Modbus Slave	○	○	○	○	○	○	○	○	○	○
PLC Master	—	—	—	—	—	—	—	—	—	—
HMI	○	○	○	○	○	○	○	○	○	○
VTC	○	○	○	○	○	○	○	○	○	○
CNC Communication	—	○	—	—	—	—	—	—	—	—
Others Operating temperature	-20 to 60°C (-4 to 140°F)									
Physical dimensions	188.0(W)×78.0(D)×30.5(H)mm (7.40"x3.07"x1.20") (does not include protrusions and antenna)									
Power supply voltage	12 to 24VDC									

Type	Configurable Type			
Name of Product	Controller	Controller with built-in OPC UA server and MTConnect Adapter & Agent	Controller with built-in OPC UA server and MTConnect Adapter & Agent + 3G WAN*4 (Japan only)	Controller with built-in OPC UA server and MTConnect Adapter & Agent + 920MHz LAN (Japan only)
Model	CPS-MCS341-DS1-111	CPS-MCS341-DS1-131	CPS-MCS341G-DS1-130	CPS-MCS341Q-DS1-131
Interfaces LAN	2ch	2ch	2ch	2ch
SD Card Slot	1 Slot	1 Slot	1 Slot	1 Slot
USB	1ch	1ch	1ch	1ch
Digital Input	4ch*1	4ch*1	4c*1	4ch*1
Digital Output	4ch*2	4ch*2	4ch*2	4ch*2
Analog Input (Current)	—	—	—	—
Analog Input (Voltage)	—	—	—	—
Analog Output (Voltage)	—	—	—	—
Counter	—	—	—	—
RS-422A/485	—	—	—	—
RS-232C	1ch	1ch	1ch	1ch
CAN	—	—	—	—
3G SIM (Standard)	—	—	1 Slot	—
920MHz	—	—	—	○
Functions Data Transmission	○	○	○	○
OPC UA Server	—	○	○*7	○*7
MTConnect	—	○	○*7	○*7
Signal I/O	○	○	○	○
Modbus Master	—	—	—	—
Modbus Slave	○	○	○	○
PLC Master	—	—	—	—
HMI	○	○	○	○
VTC	○	○	○	○
CNC Communication	—	○	—	—
Others Operating temperature	-20 to 60°C (-4 to 140°F)			
Physical dimensions	44.7(W)×94.7(D)×124.8(H)mm (1.76"x3.83"x4.91") (does not include protrusions and antenna)			
Power supply voltage	24VDC			

*1 Opto-isolated input (supports sink output). Built-in 12VDC power. *2 Share with digital inputs. *3 CPS-MC341G-ADSC1-110 can be used in EU(R&TTE directive), USA, Japan, Philippine, and India. (As of August 2019)
*4 SIM card not included. Standard size SIM card only. Visit www.contec.com for details. *5 Opto-isolated (supports sink output and current source output). Built-in 12VDC power or external 12 to 24VDC power is switchable.
*6 Opto-isolated (supports sink output). External 12 to 24VDC power supply is needed. *7 Available only for Ethernet communication. 3G and 920Mhz wireless communication do not support this function.
* The specifications are supported by the newest firmware drivers. Please download the newest firmware from Contec website when you need.

Multi-vendor Compatible PLC to IoT

|M2M Gateway series

A single CONPROSYS controller can collect data from multiple PLC controlled equipment.
M2M Gateway series supports devices from a variety of vendors,
including Mitsubishi's MELSEC series, Omron's Sysmac series, JTEKT's TOYOPUC series, Panasonic series and KEYENCE series.
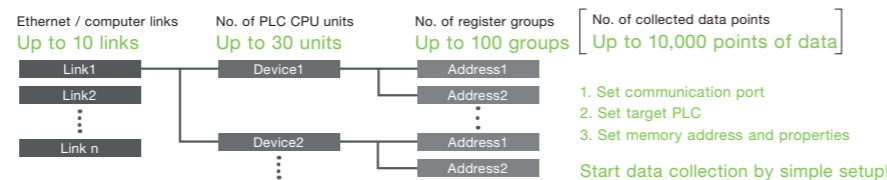
Cloud Data Service

CDS2 Data Browser

Internet (VPN)

M2M Gateway series

Easily collect data from PLCs with a few simple settings

RS-485

Ethernet

Brand A PLCs
Brand B PLCs
Brand C PLCs

Support local data collection

Free of charge

Sample software for local area network data collection

→ Download from Contec website
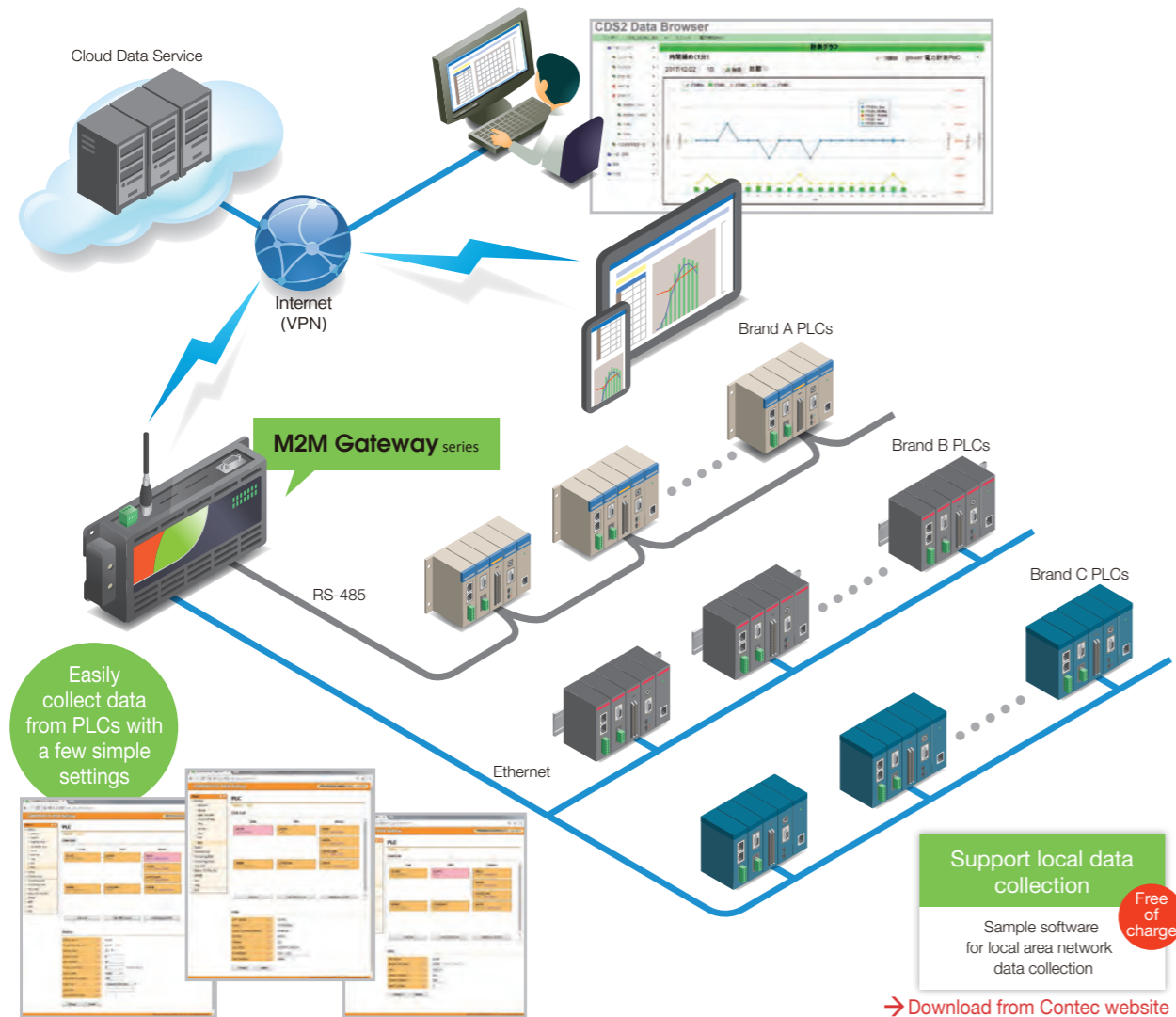
• Monitoring PLC Device Memory

- Reads data from PLC memory (I/O status, data register, link register, file register, etc.)
- Transmits collected data to the cloud through simple settings.
- It is possible to communicate with the PLC at an arbitrary timing by setting the communication attribute and using the VTC function

• Link up to 10 Systems and 100 Register Groups

Connect up to 10 PLCs using an Ethernet connection or up to 30 PLCs using a serial connection. Connect up to 100 register groups to collect up to 10,000 points of data.

| Ethernet / computer links | No. of PLC CPU units | No. of register groups | No. of collected data points |
| Up to 10 links | Up to 30 units | Up to 100 groups | Up to 10,000 points of data |

Link1	Device1	Address1
Link2		Address2
Link n	Device2	Address1
		Address2

1. Set communication port
2. Set target PLC
3. Set memory address and properties

Start data collection by simple setup!

Lineup

Integrated Type

Data Transmission | OPC UA | MTConnect | Signal I/O | 3G | Modbus Master | Modbus Slave | PLC Master | HMI | VTC | CNC

Refer pages 6 to 9 for icon definitions

LAN Model
CPS-MG341-ADSC1-111

Built-in OPC UA Server Model
CPS-MG341-ADSC1-931

FANUC MT-LINKi enabled

3G Model
CPS-MG341G-ADSC1-111

Built-in OPC UA Server Model
CPS-MG341G-ADSC1-930

FANUC MT-LINKi enabled

* Key features are same as integrated type M2M controller series. Refer P10 for details.

Type	Integrated Type			
Name of Product	PLC data logger + Multi I/O	PLC data logger + Multi I/O with built-in OPC UA server and MTConnect Adapter & Agent	PLC data logger + Multi I/O + 3G WAN (Japan Only)*1	PLC data logger + Multi I/O + 3G WAN (Japan Only)*1 with built-in OPC UA server and MTConnect Adapter & Agent
Model	CPS-MG341-ADSC1-111	CPS-MG341-ADSC1-931	CPS-MG341G-ADSC1-111	CPS-MG341G-ADSC1-930
Interfaces — LAN	2ch	2ch*4	2ch	2ch*4
SD Card Slot	1 Slot	1 Slot	1 Slot	1 Slot
USB	1ch	1ch	1ch	1ch
Digital Input	4ch*2	4ch*5	4ch*2	4ch*5
Digital Output	2ch	2ch	2ch	2ch
Analog Input (Current)	2ch	2ch	2ch	2ch
Analog Input (Voltage)	–	–	–	–
Analog Output (Voltage)	–	–	–	–
Counter	2ch*3	2ch*3	2ch*3	2ch*3
RS-422A/485	1ch	1ch	1ch	1ch
RS-232C	1ch	1ch	1ch	1ch
CAN	–	–	–	–
3G SIM (Standard)	–	–	1 Slot	1 Slot
920MHz	–	–	–	–
Functions — Data Transmission	○	○	○	○
OPC UA Server	–	○	–	○
MTConnect	–	○*6	–	○*6
Signal I/O	○	○	○	○
Modbus Master	○	○	○	○
Modbus Slave	○	○	○	○
PLC Master	○	○	○	○
HMI	○	○	○	○
VTC	○	○	○	○
CNC Communication	–	○	–	○
Others — Operating temperature	-20 to 60°C (-4 to 140°F)			
Physical dimensions	188.0(W)×78.0(D)×30.5(H)mm (7.40"x3.07"x1.20") (does not include protrusions and antenna)			
Power supply voltage	12 to 24VDC			

*1 SIM card not included. Standard size SIM card only. Visit www.contec.com for details.
*2 Opto-isolated input (supports sink output). Built-in 12VDC power. *3 Counter inputs share with digital inputs.
*4 The LAN ports are independent, which makes it possible to split the network segment.
*5 Opto-isolated inputs (supports both current sink output and current source output). Built-in 12VDC power or external 12 to 24VDC power is switchable.
*6 Transmittable signals by MTConnect are the collected data through the gateway module's inferfaces, and the serial communication data with the CNC.
* The specifications are supported by the newest firmware drivers. Please download the newest firmware from Contec website when you need.

• Supports Multiple PLC Devices and Modbus Equipment from Different Vendors

Compatible with Mitsubishi MELSEC-FX / -A / -Q / -L / iQ-F / iQ-R series,
Omron Sysmac C / CPM / CS /CJ / CP series,
JTEKT TOYOPUC PC10G-CPU series,
Panasonic FP7 / FPΣ / FP-X / FP-X0 series / Eco-POWER METER,
and KEYENCE KV-3000 / KV-5000 / KV-7000 / KV-8000 / KV Nano series.
Communicates with a variety of Modbus equipment.

Please visit our website for the latest information regarding supported PLCs and Modbus devices.

PLC ▶ | Modbus devices ▶

I/O Modules and Options

I/O Modules

I/O interface expansion modules of the configurable type controllers and the IoT Edge controller.
24 VDC power is supplied by the controller to the attached I/O modules via the internal bus.

CTR M2M Controller series   **PAC** PAC series   **EG** Edge series

Digital Input and Output Modules

Model	Input	Output	Power Consumption	Connectors	Controller series
CPS-DIO-0808L	8-ch Opto-isolated (Compatible with current sink output)	8-ch Opto-isolated open-collector (Current sink type)	50mA (Max.)	Screw terminal block (3.81mm/0.15" pitch)	CTR PAC EG
CPS-DIO-0808BL (Built-in 12VDC power)			120mA (Max.)		
CPS-DIO-0808RL	8-ch Opto-isolated (Compatible with current source output)	8-ch Opto-isolated (Current source type)	100mA (Max.)		
CPS-DI-16L	16-ch Opto-isolated (Compatible with current sink output)	—	100mA (Max.)		
CPS-DI-16RL	16-ch Opto-isolated (Compatible with current source output)	—	100mA (Max.)		
CPS-DO-16L	—	16-ch Opto-isolated open-collector (Current sink type)	100mA (Max.)		
CPS-DO-16RL	—	16-ch Opto-isolated (Current source type)	100mA (Max.)		

Analog Input and Output Modules

Model	Input	Output	Power Consumption	Connectors	Controller series
CPS-AI-1608LI	8-ch differential input, 16-bit resolution, ±10V Bus isolated	—	100mA (Max.)	Screw terminal block (3.81mm/0.15" pitch)	CTR PAC EG
CPS-AI-1608ALI	8-ch differential input, 16-bit resolution, 0-20mA Bus isolated	—	100mA (Max.)		
CPS-AO-1604VLI	—	4-ch voltage output, 16-bit resolution, ±10V Bus isolated	200mA (Max.)		
CPS-AO-1604LI	—	4-ch current output, 16-bit resolution, 0-20mA Bus isolated	200mA (Max.)		

Counter Modules

Model	Input	Output	Power Consumption	Connectors	Controller series
CPS-CNT-3202I	Phase A/Up 1x2ch Phase B/Down 1x2ch Phase Z/CLR 1x2ch General input 1x2ch Optocoupler isolated. Isolation between channels	Match signal output 1x2ch (Opto-isolated open-collector output)	100mA (Max.)	Screw terminal block (3.81mm/0.15" pitch)	CTR PAC EG

Relay Modules

Model	Input	Output	Power Consumption	Connectors	Controller series
CPS-RRY-4PCC	—	4-ch Relay contact output (1 pair of Form c contacts)	100mA (Max.)	Screw terminal block (5.08mm/0.20" pitch)	CTR PAC EG

Sensor Module

Model	Supported sensor / wiring method	No. of CH / Isolation	Power Consumption	Connectors	Controller series
CPS-SSI-4P	Pt100 / Three-wire or four-wire	4-ch / Bus isolated	50mA (Max.)	Screw terminal block (3.81mm/0.15" pitch)	CTR PAC

Serial Communication Modules

Model	Transmission Scheme	No. of CH / Isolation	Power Consumption	Connectors	Controller series
CPS-COM-1PC	RS-232C Asynchronous serial transmission	1-ch / Bus isolated	90mA (Max.)	9-pin D-SUB connector (s)	CTR PAC EG
CPS-COM-2PC		2-ch / Bus isolated Isolation between channels	110mA (Max.)		
CPS-COM-1PD	RS-422A/RS-485 Asynchronous serial transmission (Full duplex / half duplex)	1-ch / Bus isolated	110mA (Max.)	Screw terminal block (3.81mm/0.15" pitch)	
CPS-COM-2PD		2-ch / Bus isolated Isolation between channels	150mA (Max.)		

Options

Product Name	Model	Input	Output	Physical Dimensions	Mount Method	Support Products
Power Supplies	CPS-PWD-15AW12-01	85 to 264VAC	12VDC、 1.3A (Max.)	39(W)x80(D)x79(H)mm (1.54"x3.15"x3.11") (does not include protrusions)	Mountable to a 35mm/1.38" DIN rail	Integrated type controllers
	CPS-PWD-30AW24-01		24VDC、 1.3A (Max.)	22.5(W)x75(D)x90(H)mm (0.89"x2.95"x3.54") (does not include protrusions)		Configurable type controllers
	CPS-PWD-90AW24-01		24VDC、 3.8A (Max.)	50(W)x90(D)x90(H)mm (1.97"x3.54"x3.54") (does not include protrusions)		

*A DC cable and a 3-pin I/O connector are included.
*AC power cable is not included. An optional AC power cable is available from Contec (IPC-ACCODE3).

Product Name	Model	Rating	Cable Length	Terminals	Support Products
AC Power Cable	IPC-ACCODE3	125VAC 7A	2m	3-pole round terminal	Power supplies

Product Name	Model	Frequency Band	Cable Length	Antenna Gain	Physical Dimensions	Support Products
Roof Top Antenna	CPS-ANT-R3-01	800 MHz band 920 MHz band 2.1 GHz band	3m	800 MHz band: 3.88dBi 920 MHz band: 3.02 dBi 2.1 GHz band: 3.76 dBi (Don't include cable loss)	42(W)x42(D)x93(H)mm (1.65"x1.65"x3.66") (Not including protrusions and cable)	920 MHz models 3G WAN models

Product Name	Model	Cable Length	Specification	Support Products
Connection Cable for FANUC CNC	CPS-CAB-S01-1	1m	20-pin to 9-pin conversion cable (Software flow control, one touch lock type)	OPC UA server built-in modules
	CPS-CAB-S01-3	3m		
	CPS-CAB-S01-5	5m		
Connection Cable for Mitsubishi Electric CNC	CPS-CAB-S02-1	1m	20-pin to 9-pin x 2 conversion cable (Software flow control, one touch lock type)	OPC UA server built-in modules

Product Name	Model	Number	Support Products
Magnet (for mounting)	CPS-MAG01-4	4	Integrated Type Modules

Industrial Switching HUB

100BASE-TX, 8-port Type, Wide Temperature Range

#### SH-8008F

RoHS Compliant   VCCI   UL   FCC   CE

- Operating temperature from -20 to 60°C (-4 to 140°F)
- Supports 8 ports with 100BASE-TX
- Power supply redundant, power supply reverse wiring countermeasure circuit built-in
- Mountable on the 35mm DIN Rail
- Compact Size (40(W) x 60(D) x 90(H) mm) / (1.57(W) x 2.36(D) x 3.54(H) inch)

100BASE-TX, 5-port Type, Wide Temperature Range

CPS-HBL-8005F

RoHS Compliant   VCCI   UL   FCC   CE

- Operating temperature from -20 to 60°C (-4 to 140°F)
- Supports 5 ports with 100BASE-TX
- Power supply redundant, power supply reverse wiring countermeasure circuit built-in
- Mountable on the 35mm DIN Rail
- Compact Size (25.2(W) x 94.7(D) x 124.8(H) mm) / (0.99(W) x 3.73(D) x 4.91(H) inch)
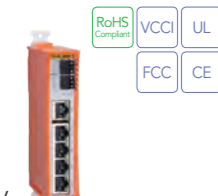
A power supply must be provided separately. We offer an AC adapter (model: POA201-10-2) (sold separately). Please check our website for details.

I/O Modules and Options

An innovative IoT solution for measuring motor insulation deterioration during operation

Three-phase Motor Insulation Deterioration Monitoring Module + ZCT Sensor

Model	The Measured Circuit	No. of measured circuit	Inner diameter of ZCT	Measurement voltage range	Measurement leakage current range (Resolution: 0.001 mA)	Measured insulation resistance range	Controller series
CPS-MM-LC	Overall equipment measurement (power supply mode) / Inverter output section measurement (inverter mode) AC servo amplifier output measurement (inverter mode)	1ch	Φ25mm (Φ0.98")	Phase voltage 10 VAC or more, 600 VAC or less	Overall equipment measurement: 0 to less than 1A Inverter output section measurement: 0 to less than 100 mA AC servo amplifier output measurement: 0 to less than 100 mA	Less than 1,000MΩ *	CTR

* Supports inverters and AC servo amplifiers that supply low-voltage, three-phase power.   * The guaranteed accuracy range is less than 10 MΩ
* DC servo motor, and equipment that use single-phase power supply are not supported. Please contact us for large diameter ZCT of 25Φmm or more.

Modes-IO ®   This module also features "Modes-IO" patented technology from Tanashin Denki Co., Ltd. that can be used for measuring leakage current resistance component (I0r) from operating motors with high precision.

Eliminates the need to stop equipment for inspections

This module measures leakage current resistance components (I0r) from operating motors with high precision. It changes the maintenance work to constant monitoring and contribute to the improvement of the equipment operation rate.

Shipped with a ZCT (Φ25) sensor for up to 30kW low-voltage, three-phase motors and AC servo motors.

This module supports three-phase delta connections and three-phase Y connections. It can be applied to a wide range of devices such as pumps, compressors, A/C fans, metalworking machines, and transport equipment.

Supports devices that acts without using a PC. Supports cloud service.

This module supports M2M controllers with built-in IoT functions such as data collection, web monitoring, and cloud linking. It can also be operated without a PC.

Flexible systems can be constructed by using in combination with the various functions of M2M controller CPU modules.

Image of connected with a M2M controller

■ Monitoring display example using CONPROSYS HMI

Threshold values can be changed temporarily.

Displays the insulation resistance values of the measurement results.

Displays the judgements of the threshold.

CONPROSYS HMI makes it possible to view equipment information on a Web browser without using a cloud server or similar device. This monitoring display example can be downloaded free-of-charge from the "Script sample programs" page of our company's website. Target sample software: "Sample software for three-phase motor insulation deterioration monitoring module"

Hourly insulation resistance graph display for the day

■ Example of System Configuration

● Detects insulation deterioration on the inverter output side, where measurements are known to be difficult
● Two measurement modes (power supply mode, inverter mode) for various measurement targets

■ Wiring

Cloud System (CDS2) / CONPROSYS / Internet / M2M Controller with the Insulation Deterioration Measuring Module / Equipment maintenance management / Power Supply / Inverter AC servo pump / ZCT / Low-voltage three-phase motor AC Servo Motor
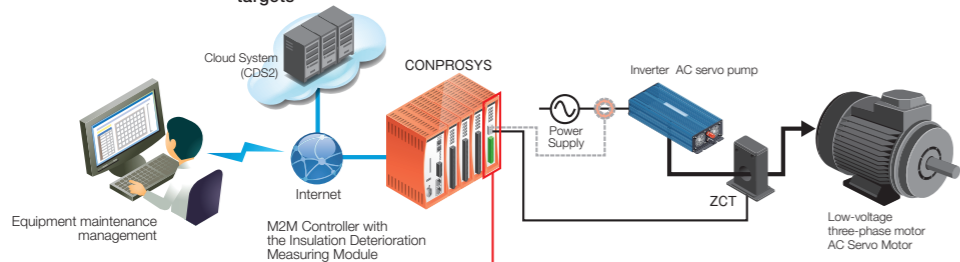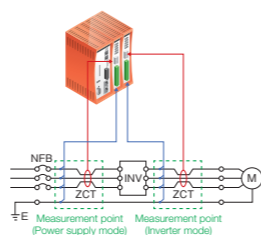
Enter into the IoT Era with a Real Time Controller

PAC series

IEC61131-3 standard CODESYS programming. Rich functionality to build an open system.

IEC 61131-3 standard Programming System **CODESYS**   Ladder, SFC, Function block, Structured text, etc.

PAC series

Field Network   EtherCAT / Modbus
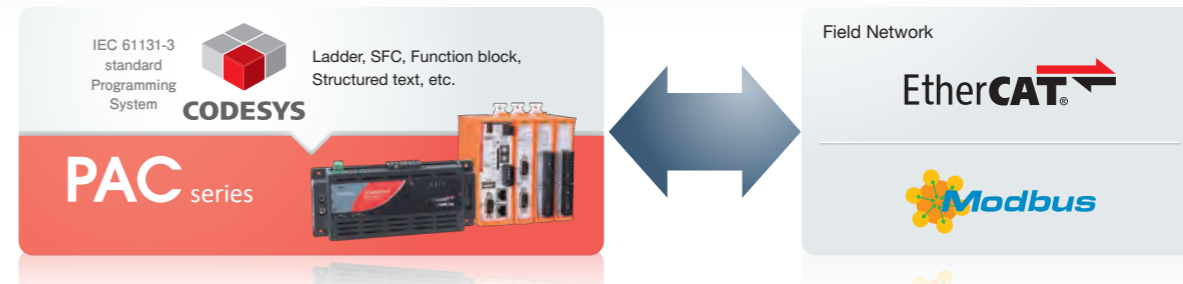
● Web monitoring function using built-in CONPROSYS HMI

CONPROSYS PAC series includes a web server function and web screen creation software. Monitoring screens can be developed in a user friendly web browser environment. Devices can be monitored through a web browser without the use of a cloud server. No programming experience required.

● Fieldbus master function

The built-in customized CODESYS Runtime engine supports EtherCAT / Modbus TCP master functions. In the CODESYS integrated development environment, fieldbus I/O can be directly assigned to variables in the same manner as the built-in I/O of a PAC integrated controller and the attached I/O of a PAC configurable controller.

EtherCAT / Modbus   Servomotor Sensor Actuator Switch

● Built-in OPC UA server for SCADA/MES/EPR linking

The built-in OPC UA server provides the ability to embed the CONPROSYS. PAC series controller into a host SCADA system or other applications that support OPC UA protocol.

Lineup

Integrated Type

EtherCAT model CPS-PC341EC-1-9201

Modbus model CPS-PC341MB-ADSC1-9201

*Key features are the same as the integrated type M2M controller seroes. Refer to page 10 for details.
*Check the datasheets of each model for its interface specification from Contec Web site.

Configurable Type

EtherCAT model CPS-PCS341EC-DS1-1201

Example of a controller with three I/O modules

Modbus model CPS-PCS341MB-DS1-1201

Example of a controller with three I/O modules

*Key features are the same as the configurable type M2M controller series. Refer to page 10 for details.

EtherCAT Slave Unit   CPS-ECS341-1-011

● EtherCAT slave unit
EtherCAT features allow the I/O modules to be controlled from a distance. Up to 16 I/O modules can be stacked to one slave unit.

● Daisy chain connection
Each slave unit is equipped with an input port and an output port. Up to 65,535 slave units can be connected to one master. An MDP standard supported master controller will automatically recognize and register the I/O modules that attached on this EtherCAT slave unit.

BUS

*Common features are same as configurable type M2M controller series. Refer to P56 for details.
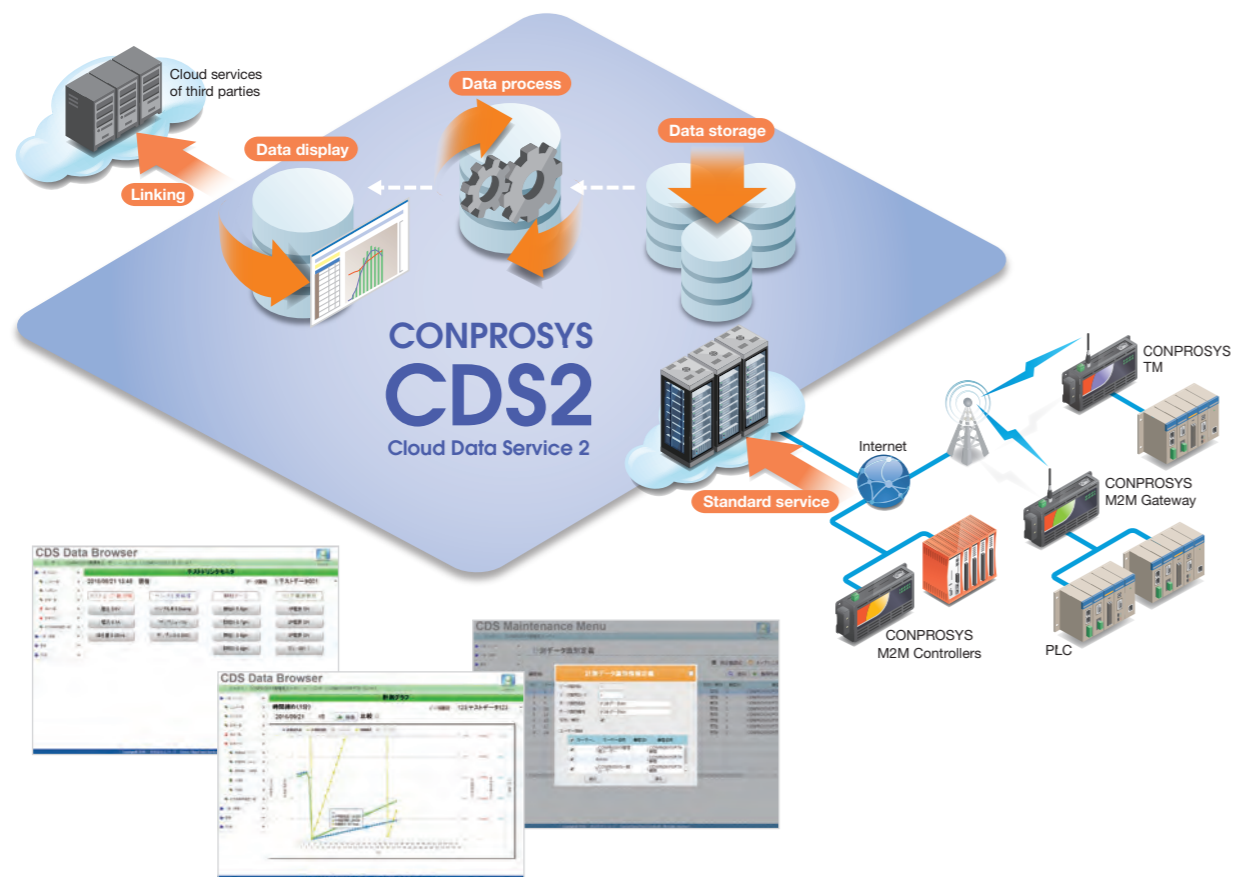
IoT Cloud Services Evolve Data Utilization
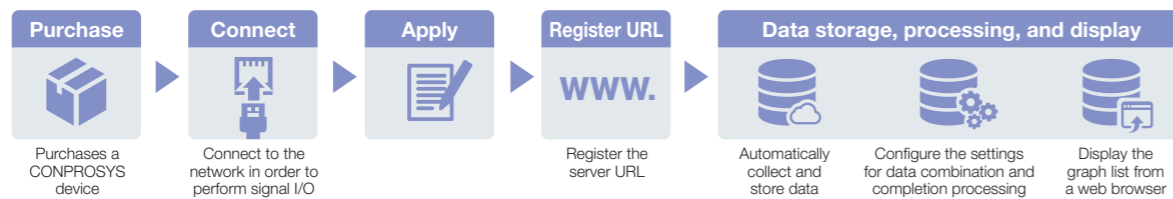## | CONPROSYS CDS2 (Cloud Data Service 2)
(This service is only for the Japan market)

Stores collected data of M2M Controllers and M2M Gateways. The stored data can be viewed and downloaded from a web browser.
Contec provides a cloud service that can link with external servers to support our customers from a startup IoT system to large-scale systems.

| Data Storage and Visualization with Simple Settings | User Management such as Limiting Viewing Ranges | Possible to Display Information of Multiple Devices on a Single Graph |

Cloud services of third parties

Data process
Data display
Data storage
Linking
Standard service

CONPROSYS
CDS2
Cloud Data Service 2

Internet

CONPROSYS TM
CONPROSYS M2M Gateway
CONPROSYS M2M Controllers
PLC

● Provided at a low price and with a simple plan

● Easily implement IoT cloud services
The collected data can easily be transmitted to and stored on cloud servers.

Purchase	Connect	Apply	Register URL	Data storage, processing, and display
			WWW.	
Purchases a CONPROSYS device	Connect to the network in order to perform signal I/O		Register the server URL	Automatically collect and store data / Configure the settings for data combination and completion processing / Display the graph list from a web browser

● A fully functional trial version is now available!

Web HMI/SCADA Software
| CONPROSYS HMI System (CHS)
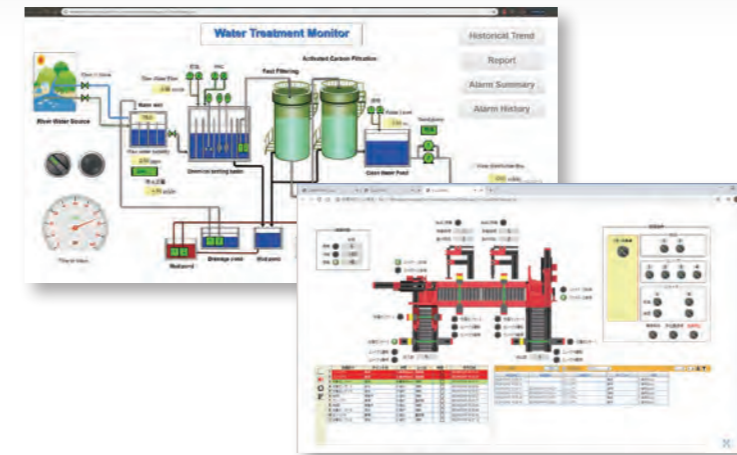
✔ Real SCADA realized by Web system
✔ Support CONPROSYS IoT Devices
✔ Support MQTT (Built-in broker)
✔ Easy online purchase

MyCommerce®
A **Digital River** Company

Develop & Runtime environments are based on web server
At the user end, the user needs not to install any special software, only uses a browser (chrome or firefox) to connect to the server, then he/she can configure the system.

Drawing the process flow chart by Drag & Drop, just like operating on PowerPoint
Provides nearly 60 visualization components, quick draw rich expressive monitor screen.

Water Level
Drag & Drop !
Click to link !
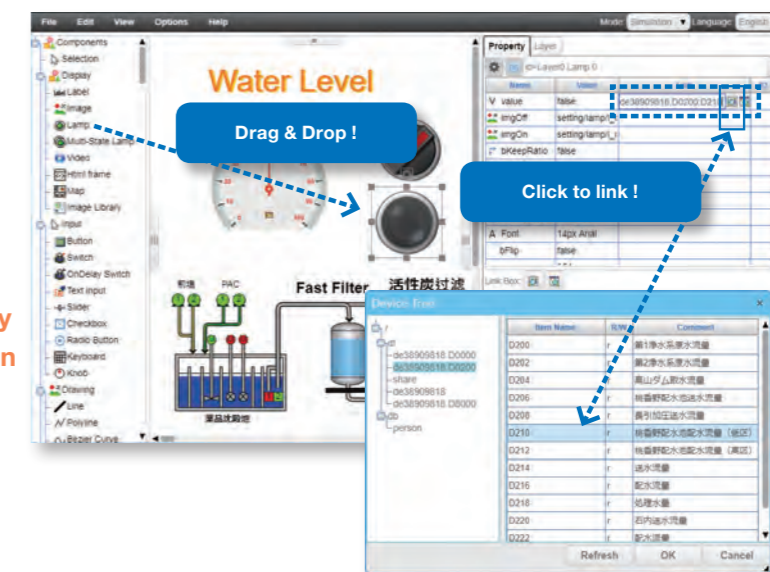
CHS is also available on the AWS / Azure cloud service. Please consult.

Applications

Environment and Energy

Factory

Social Infrastructure

Buildings and Facilities
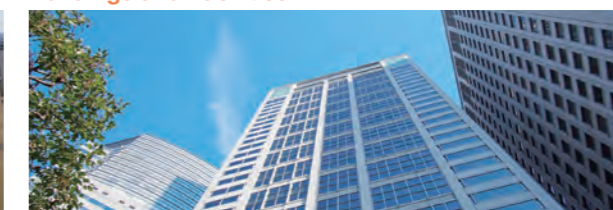
Easily Realize Cooperation with Part ner Solutions

▌Software

I/O interface expansion modules of the configurable type controllers and the IoT Edge controller.

CONPROSYS and Partner Solutions

HULFT IoT

FUJITSU

thingworx®

Microsoft Azure
Azure Event Hubs & Stream Analytics

Azure Event Hubs — Azure Stream Analytics — PowerBI

Cloud services of third parties

SD

Direct transmission via SD card for communication with partner solutions

Linking

Interacting with Azure's diversity (direct data transmission)

Direct transmission by way of the "Microsoft Azure IoT Hubcommunication function" of CONPROSYS VTC

CONPROSYS
CDS2
Cloud Data Service 2

CONPROSYS M2M Gateway

Standard services

Internet

PLC

Microsoft Azure IoT Hub Communication Function

● **CONPROSYS VTC can be used to implement Azure IoT devices quickly**

By VTC (Visual Task Control) which is a task programming function standardly built-in CONPROSYS, data can be directly transmitted to Azure. There is no need to develop an application for communicating with Azure.

Send Azure Iot
File00

● **Specifications for communication with the Azure IoT Hub**

Item	Specification
Number of connected Azure IoT Hubs	1 (One device can connect to only one Azure IoT Hub.)
Communication protocol	HTTPS (AMQP and MQTT are not supported.)
Azure IoT Hub security	Authentication with security token
Transmission method	Execut the "Send Azure IoT" process task
Transmission interval	Optional (when the "Send Azure IoT" task is executed)
ransmission data format	JSON format (The specified file is converted to JSON format and transmitted.)

Item	Specification
Transmission timeout period	30 seconds
Reception method	Automatic execution of the received data processing when transmission is executed
Reception interval	Synchronized with the transmission interval
Received data processing	substitute the data into the TAG or STAG of the process task has assigned.
Reception data format	JSON format (TAG and STAG specification and substitute value)
TAGs that can be used for reception data	"TAG00" to "TAG99" and "STAG00" to "STAG99"

SD Cards for Communication with Partner Solutions

The optional SD card makes it possible for the built-in functions of CONPROSYS to communicate directly with the partner solution. By inserting the SD card in a CONPROSYS controller, the IoT settings of the related company are added to the maintenance menu of the CONPROSYS controller.

Name	Model	Interface	Memory capacity	Dimensions
SD card for communication with HULFT IoT	CPS-SD-HUL-01	SD Memory card Informace	1,800MB	24.0 (W) × 32.0 (D) × 2.1 (H)
SD card for communication with FUJITSU IoT	CPS-SD-FUJ-01			

CONPROSYS +

For HULFT IoT | SD | HULFT IoT Agent → Saison Information Systems **HULFT IoT**

For FUJITSU IoT | SD | Communication Program → **FUJITSU Cloud Service for OSS**

For Thing Worx IoT [1] | SD | Communication Program → thingworx®
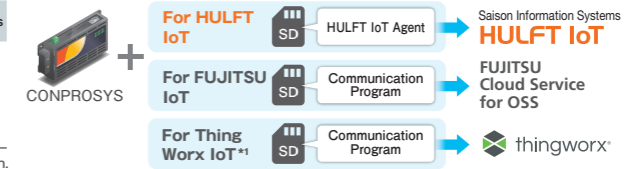
*1 SD cards for ThingWorx IoT are provided via Hitachi High-Tech Solutions Corporation.
*These option SD cards work with the firmware version 3.0.0 or later of the CONPROSYS controllers.

Examples of Using VTC for Partner Solutions

Sample task scripts now available! Free of Charge

Sample task scripts for linking with partner solutions can be downloaded from the "Script sample programs" page of our company's website.

CONPROSYS VTC Script sample programs

Sample Task 1 — Acquisition & indication of data using PATLITE Corporation AirGRID signal towers

Acquires lighting data sent from AirGRID series receivers via Ethernet connection.

・Create task script to read messages from receivers
・Create monitoring screens

Monitor the status of indicator lights by utilizing the monitoring function from a web browser

Ethernet Communication

WDR-L-Z2 Receiver

WD-LR-Z2 Transmitter

・Wired LAN connections between WDR-L-Z2 receiver, M2M controller and PC
・Read messages sent from the receiver when the signal tower indication changes
・Acquire the lighting status of each color and display on the M2M controller monitoring screen

Sample Task 2 — Connection with the TOF laser sensor of KEYENCE

Connects with the laser sensor (LR-TB5000), perform processes of "Sensor light emission On/Off control," "Current value display," and "Upper/lower limit monitoring."
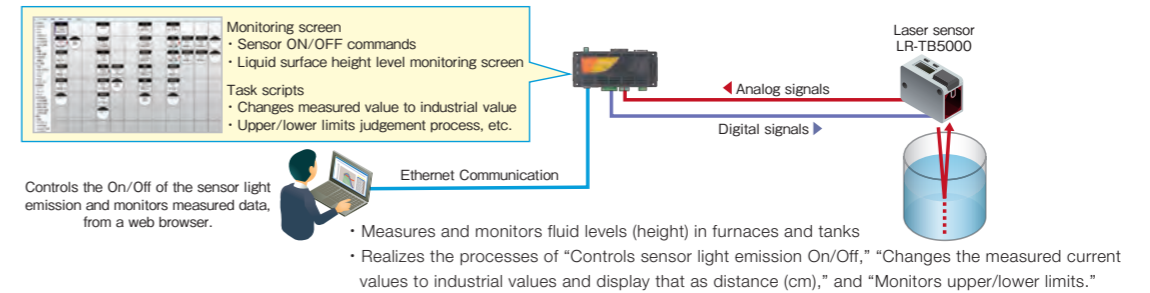
Monitoring screen
・Sensor ON/OFF commands
・Liquid surface height level monitoring screen
Task scripts
・Changes measured value to industrial value
・Upper/lower limits judgement process, etc.

Controls the On/Off of the sensor light emission and monitors measured data, from a web browser.

Ethernet Communication

Laser sensor LR-TB5000

◀ Analog signals

Digital signals ▶

・Measures and monitors fluid levels (height) in furnaces and tanks
・Realizes the processes of "Controls sensor light emission On/Off," "Changes the measured current values to industrial values and display that as distance (cm)," and "Monitors upper/lower limits."

For Using Various CONPROSYS Co ntrollers for Other Usages
| Software Development Kits

These Software Development Kits are available free-of-charge for using a variety of CONPROSYS controllers.

CONPROSYS Linux SDK   `Free of Charge`

**This is a software development tool used to create programs when using the CONPROSYS hardware as a Linux controller.**   → Download from Contec website

Supported products	M2M Controller series (Integrated type, configurable type) M2M Gateway series
Operating environment — Host PC for development (cross development environment only)	Linux distribution: Ubuntu 14.04 (64-bit version)/Ubuntu 16.04 (64-bit version) 40 GB or more free space required The user must have administrator rights that enable the execution of the sudo command.

● Provides two software development environments

The CONPROSYS Linux SDK provides two SDKs: a cross development environment that uses the host computer and a self-development environment that is executed on the CONPROSYS hardware.

■ Cross development on the host PC

Ubuntu 14.04/16.04 — Build — SD — Serial Monitor — CONPROSYS — LAN
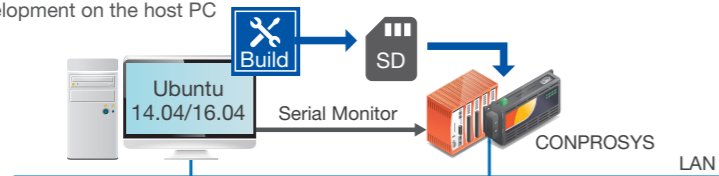
* An ISO image file for writing media with media writing software is available.
* Use writing software when creating a DVD-R or other installation media.

■ Self-development on the CONPROSYS

SD — Ubuntu 14.04 — Windows PC — Serial Monitor — Build — CONPROSYS — LAN
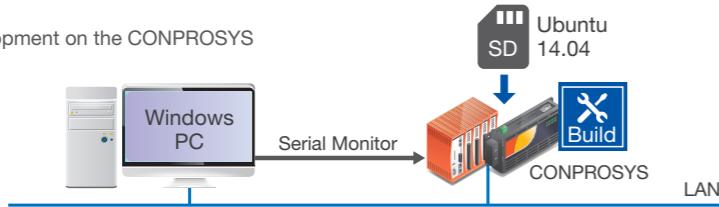
* Only Ubuntu 14.04 is supported for the self - development environment.

In the self-development environment, the CONPROSYS is equipped with a web server, so connecting to the CONPROSYS from a web browser on a PC or a similar device makes it possible to view the network settings and the system status.

[Web Setup screen images]

Web Setup top menu

The screen used to configure network settings
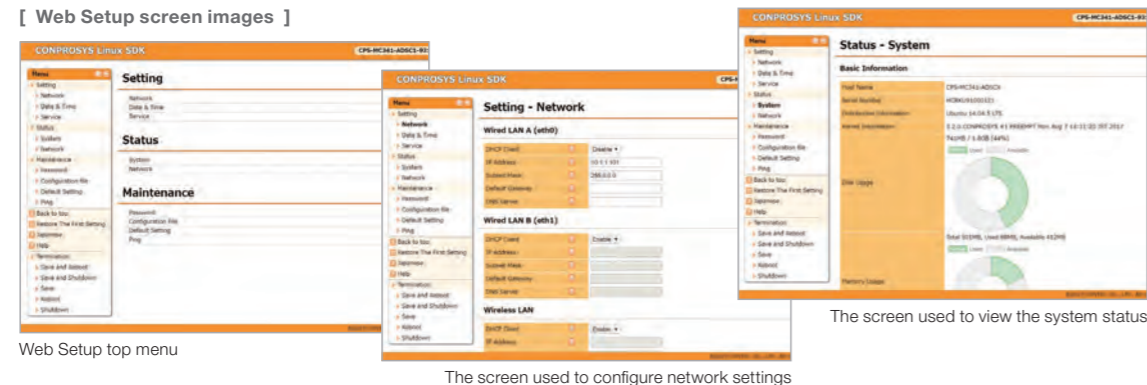
The screen used to view the system status

CONPROSYS Expansion SDK   `Free of Charge`

This is a software development tool that can be used to add programs to the wide range of CONPROSYS functions just using an SD card.   → Download from Contec website

Supported products	M2M Controller series (Integrated type, configurable type) M2M Gateway series

In order to use this product, the firmware of the main unit must be compatible. Please confirm compatible firmware on our website.

[Key Features]
- Using CONPROSYS Linux SDK, it is possible to add custom programs built using cross-development on the host PC.
- Data linkage with HMI and VTC is possible using internal variables (TAG) from custom programs.
- There are two types, including one program that executes when during start up and another that is invoked on VTC.

[Image of adding custom programs]

Ubuntu 14.04/16.04 — Build — Custom Program
Cross development on the host PC
Copy to SD card — SD — Write to memory during startup
SD Card of FAT32 format
Executed during startup
Custom program (executed on VTC)   Custom program (executed during start up)
Read/Write   Read/Write
Run from VTC   Internal variables (TAG)
VTC   HMI
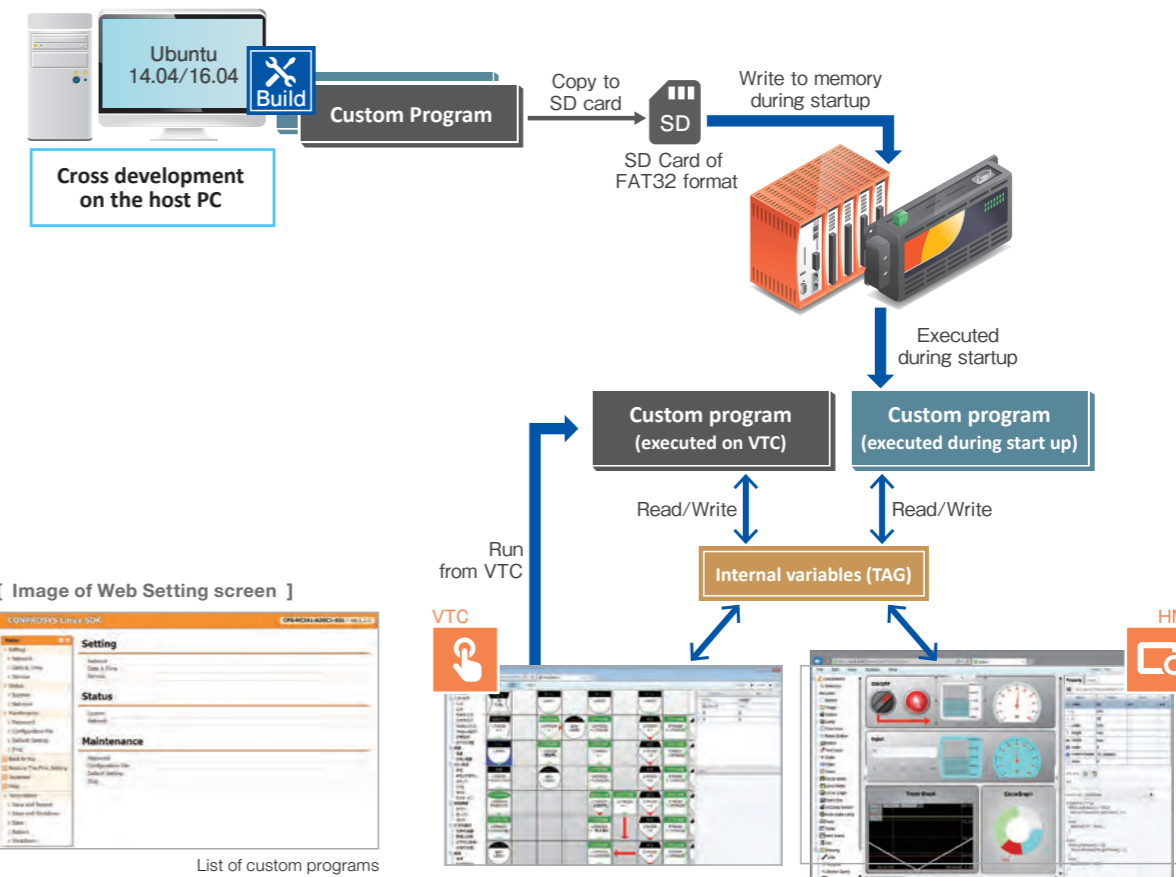
[Image of Web Setting screen]

List of custom programs

● SLC (Single Level Cell) NAND flash memory SD card that is ideally for industrial applications

Name of Product	Model	Details
SD Memory Card	SD-4GB-A	SD Card 4GB

Industrial IoT

Industrial IoT

Embedded Windows PC for Internet Connections
IoT Edge Controller series

McAfee Whitelist Solution Installed

[Key Features of IoT Edge Controller]

● Windows 10 IoT Enterprise
● Intel® Quad-core Apollo Lake SoC
● Three Intel® Gigabit LAN Ports
● Operation Temperature Rage:
　-20 to 60℃(-4 to 140° F)
● DIN rail mounting

※ A image connected with three optional I/O modules

McAfee Together is power.

Model	CPS-BXC200-NA01P03	CPS-BXC200-W10M01P03	CPS-BXC200-NA02P05	CPS-BXC200-W10M02P05
CPU	Intel®Atom®Processor x7-E3950　(1.6GHz)			
Memory	4GB (204pinSO-DIMM) ,PC3-12800 (DDR3L-1600) ECC		8GB (204pinSO-DIMM) ,PC3-12800 (DDR3L-1600) ECC	
Storage*1	32GB		64GB	
OS	N/A	Windows 10 IoT Enterprise LTSB 2016 64bit JP / EN / CN / KO + McAfee Whitelist security software	N/A	Windows 10 IoT Enterprise LTSB 2016 64bit JP / EN / CN / KO + McAfee Whitelist security software
BIOS	BIOS (mfd. by AMI)			
Security (TPM)	TCG TPM2.0			
Graphic controller	Intel HD Graphics 505 (built in CPU)			
System resolution	Display Port:3840 x 2160 @ 60Hz; Analog RGB: 1920 x 1200 @ 60Hz			
Display ports	DisplayPort x 1, Analog RGB x1 (15-pinHD-SUB connector)			
M.2 card slot	1 slot, M.2 2242, SATAIII. An M.2 card(pSLC) has been installed.			
Cfast card slot	1 slot, CFast card Type I, bootable			
LAN*2	Intel I210IT controller 1000BASE-T/100BASE-TX/10BASE-T x 3 ports (RJ-45 connectors) (supports Wake On LAN)			
USB	USB 3.0 compliant x 3 ports (TYPE-A connectors)			
Serial I/F	RS-232C x 1 port, 9pin D-SUB connector (male), Baud rate: 50 to 115,200bps			
Watchdog timer (WDT)	Software programmable, 1sec - 255sec (Reset or shutdown the controller when the set time counted).			
General-purpose I/O	Isolated input x 2ch (One of the inputs can be used for remote reset or remote power on.) Isolated output x 1ch (It can be used either as a G/P output or as the WDT time-up output)			
Hardware monitoring	Monitors CPU temperature and power supply voltage.			
RTC/CMOS	Life of the lithium battery for backup is 10 years or longer. The RTC accuracy is ±3 min (at 25°C) per month (CPU built-in RTC).			
Power management	Power management setup via BIOS. Power on by Ring / Wake On LAN function. Supports PC98/PC99 ACPI Power management.			
Stack bus for I/O modules	Supports up to 8 CONPROSYS I/O modules. (The total current consumption of the modules should be less than 3.3A)			
RAS	1 port (3.81mm pitch 6-pin)			
Rated input voltage	24VDC (input voltage range: 24V±10%)			
Power consumption (Max)	24V 1.5A (without USB I/F and stacked I/O module); 24V 4.8A (with USB I/F and I/O modules)			
External device power supply capacity	CFast card slot: 3.3V 0.5A (500mA x 1), USB3.0 I/F: 5V 2.7A (900mA x 3), Stack bus I/F: 24V 3.3A			
Dimensions(mm / inch)	76 / 2.99（W）×94 / 3.70（D）×124.8 / 5.06（H）(No projection included)			
Weight	1.1kg / 2.43lb			
Installation method	Mounting on the 35mm DIN rail			
Operating / Storage ambient temperature	-20 to 60°C (-4 to 140°F)　(-20 to 55°C (-4 to 131°F) when using 1000BASE-T)*3 / -20 to 60°C (-4 to 140°F)			
Ambient humidity	10 to 90%RH (No condensation)			
Floating dust particles	Not to be excessive			
Line-noise resistance	Line noise	AC Line/±2kV*4, Signal Line /±1kV (IEC61000-4-4 Level 3, EN61000-4-4 Level 3)		
	Static electricity resistance	Touch /±4kV (IEC61000-4-2 Level 2, EN61000-4-2 Level 2), Air /±8kV (IEC61000-4-2 Level 3, EN61000-4-2 Level 3)		
Vibration resistance	Sweep resistance	10 to 57Hz /semi-amplitude vibration 0.15mm, 57 to 150Hz/2.0G 40minutes each in X, Y, and Z directions (JIS C60068-2-6 compliant, IEC60068-2-6 compliant)		
Shock resistance	15G half-sine shock for 11ms in X, Y, and Z directions (JIS C 60068-2-6 compliant, IEC 60068-2-6 compliant)			
Grounding	Class D grounding (previous class 3 grounding), SG-FG/ non-conduction			
Standard	VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive)			

*1：The capacity of memory is a value when 1GB is calculated by 1 billion bytes. The capacity that can be recognized from OS might be displayed fewer than an actual value.
*2：Pay attention to the ambient temperature when operating 1000BASE-T.
*3：Consider ambient temperature derating.
*4：When you use an optional power product (CPS-PWD-90AW24-01).

There are over 20 types of CONPROSYS I/O modules that can be stack connected with the controllers. (Refer pages 59 to 60 for I/O modules lineup.)
These modules are driven by the similar API software as the one used for CONTEC PCI cards & USB units. It is possible of highly compatibility at the application level.
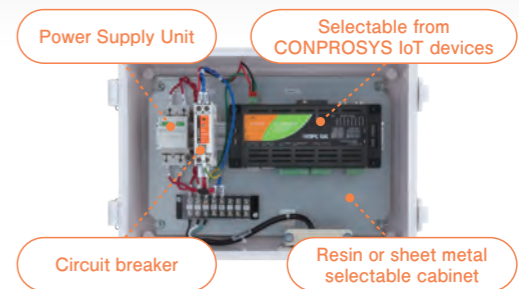
Solution Products From Contec Komaki Plant
CONPROSYS Alpha series

A box shaped unit with all the necessary functions for onsite installation

IoT BOX
This product features all the equipment necessary for data collection, including IoT device, power supply, circuit breaker, and optional communication antenna, all selected by the customer and pre mounted in a cabinet.

Power Supply Unit

Selectable from CONPROSYS IoT devices

Circuit breaker

Resin or sheet metal selectable cabinet

Model	Description
CPSA-CSU	CONPROSYS Alpha IoT BOX IoT system equipment of plastic type or metal type cabinet

Swiftly resolves long-standing factory issues!
Easy-Installation Package

Antistatic Electricity Check System
Operators employing insufficient static electricity countermeasures can be detected by checking the performance of antistatic shoes and wrist straps. Results (date and time and measured values) can be saved as CSV files for each test subject and can be used as evidence.

＊Image is for illustration purposes.

Model	Description
CPSA-SEC100	CONPROSYS Alpha Antistatic Electricity Check System

Swiftly resolves long-standing factory issues!
Easy-Installation Package

Torque Driver Check System
Torque drivers with inappropriate settings can be detected by judging whether settings are within the suitable range.
CONTEC has packaged the hardware and software mechanisms for managing measurement results as electronic data.

＊Image is for illustration purposes.

Model	Description
CPSA-TRD100	CONPROSYS Alpha Torque Driver Check System

Edge Computing

Embedded Computers

Fanless Embedded Computers

Embedded Computers

Industrial Motherboards

Industrial Computers

Automation Computers

Custom Computers

All-in-One Computers

Panel Mount Computers

M2M / IoT

Industrial IoT

CONPROSYS Series

Remote I/O

CONPROSYS nano Series

Wireless I/O

IO-Link

Data Acquisition(DAQ), Measurement and Control

Analog I/O

Digital I/O

Counters

Motion Controllers

Serial Communications

GPIB Communications

Software

Cables

Communication, Industrial LAN and Wireless

Network Products

Solutions and Services

Case Studies

Corporate Network

Remote I/O System for IoT

❙CONPROSYS nano series

GOOD DESIGN AWARD 2018

Remote I/O devices for digitizing interspersed local devices.
CONPROSYS nano is easy to use and excellent cost performance, which accelerates digital transformation of industrial systems.

**Compatible with 35 mm DIN rail
Easy to insert and remove an I/O module**

Best value remote I/O

Remote I/O equipment that does not compromise ease of use and narrowed down to necessary functions. Modular design realizes lean configuration with minimum required I/Os.

I/O Modules

Programmable with IEC 61131-3 PLC languages

**Coupler unit
Programmable Remote I/O**

CODESYS runtime that supports the IEC61131-3 PLC languages has been built-in. It is possible to write a control program developed in a CODESYS development environment into the unit.

CODESYS

Supports Windows PC, Linux PC, or Modbus device
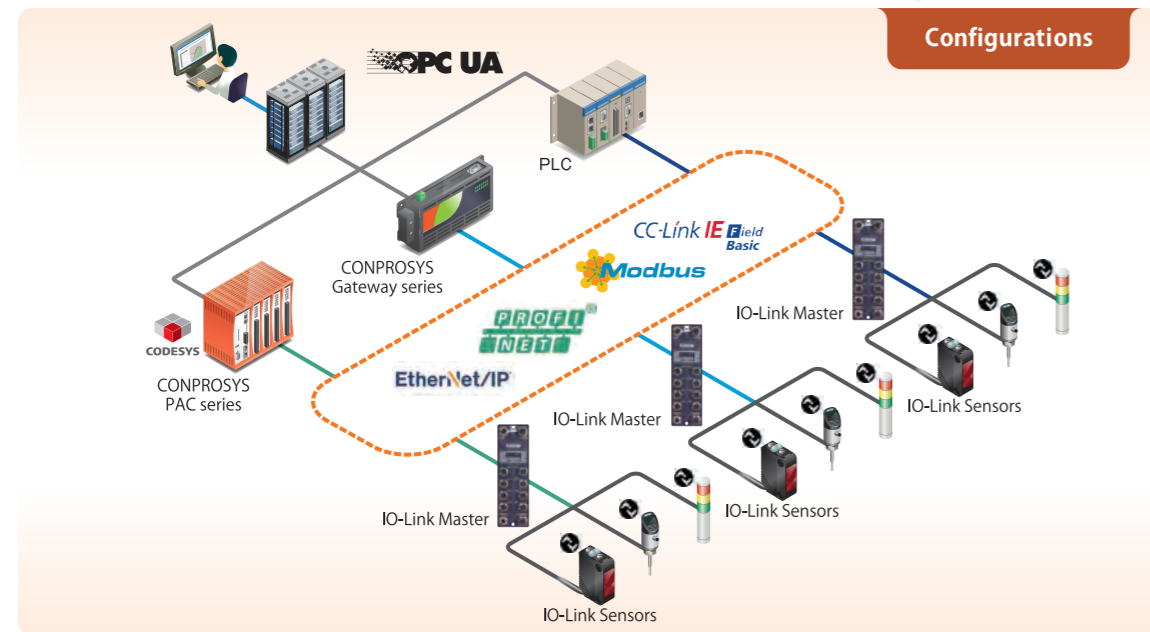
**Coupler unit
Remote I/O**

It can be used as a remote I/O device of equipment with Modbus master function such as Windows PC, Linux PC*, and PLC.

Coupler Unit

Remote I/O 4-slot

Model	Function	Power Supply	Dimension	Installation Method	Operating Temperature
CPSN-MCB271-S1-041	Windows/Linux driver control Modbus-TCP slave	12 to 24VDC	110(W) x 74.8(D) x (95(H)(mm) (4.33"(W)x2.94"(D)x3.74"(H))	35 mm DIN rail Screw	-20 to 60°C (-4 to 140°F)*1
CPSN-MCB271-S1-041	Windows/Linux driver control Modbus-TCP slave 2x LAN (HUB function)	12 to 24VDC	110(W) x 74.8(D) x (95(H)(mm) (4.33"(W)x2.94"(D)x3.74"(H))	35 mm DIN rail Screw	-20 to 60°C (-4 to 140°F)*1

Programmable Remote I/O 4-slot

Model	Function	Power Supply	Dimension	Installation Method	Operating Temperature
CPSN-PCB271-S1-041	IEC 61131-3 compliant programming Modbus-TCP master / slave	12 to 24VDC	110(W) x 74.8(D) x (95(H)(mm) (4.33"(W)x2.94"(D)x3.74"(H))	35 mm DIN rail Screw	-20 to 60°C (-4 to 140°F)*1

*1 In case the unit is wall mounted by left 90° or right 90°, or placed flatly, the range is -20 to 55°C (-4 to 131°F).

I/O Modules

Digital Input and Output Modules

Model	Input	Output	Power Consumption	Connector
CPSN-DI-08L	8ch Opto-coupler isolated input Supports current sink (negative logic) or source (positive logic) output	–	3.3VDC 50mA (Max.)	Screw terminal block (3.81mm/0.15" pitch 10 pins)
CPSN-DI-08BL (Built-in 12V DC power supply)	8ch Opto-coupler isolated input Supports current sink output (negative logic)	–	5VDC 110mA (Max.) 3.3VDC 50mA (Max.)	
CPSN-DO-08L	–	8ch Opto-coupler isolated open collector output Current sink type (negative logic)	3.3VDC 90mA (Max.)	
CPSN-DO-08BL (Built-in 12V DC power supply)	–	8ch Opto-coupler isolated open collector output Current sink type (negative logic)	5VDC 130mA (Max.) 3.3VDC 90mA (Max.)	
CPSN-DO-08RL	–	8ch Opto-coupler isolated output (Current source output)(positive logic)	3.3DCV 80mA (Max.)	
CPSN-DO-08BRL (Built-in 12V DC Power supply)	–	8ch Opto-coupler isolated output (Current source output)(positive logic)	5VDC 150mA (Max.) 3.3VDC 80mA (Max.)	
CPSN-DI-16BCL (External 12 to 24VDC power supply/ Built-in12V DC power supply)	16ch Opto-coupler isolated input (Supports current sink(negative logic) or source (positive logic) output) with simple counter function	–	5VDC 150mA (Max.) 3.3VDC 100mA (Max.)	MIL connector (20pin)

I/O Modules

Analog Input Module

Model	Input Format*1	No. of Input Channels	Input Voltage*1	Input Current*1*2	Power Consumption	Connector
CPSN-AI-1208LI *1 *2	Single-end input or differential input	8ch (single-end input) 4ch (differential input)	±10V, ±5V, ±2.5V, 0 to 10V, 12bit, (Bus isolated)	±20mA 12bit, (Bus isolated)	5VDC 210mA (Max.) 3.3VDC 10mA (Max.)	Screw terminal block (3.81mm/0.15" pitch 10 pins)
CPSN-AI-2408LI *2			±10V, ±5V, ±2.5V, 0 to 10V, 0 to 5V 24-bit, bus isolation	±20mA, 0 to 20mA, 24-bit, bus isolation	5VDC 140mA (Max.) 3.3VDC 60mA (Max.)	

*1 All input channels are assigned for the same input format and input range. *2 Current input is only for differential input.

Serial Communication Module

Model	Transmission Scheme	No. of CH/ Isolation	Power Consumption	Connector
CPSN-COM-1PD	Asynchronous serial transmission (Full duplex / Half duplex)	1ch / Bus isolated	5VDC 250mA (Max.) 3.3VDC 20mA (Max.)	Screw terminal block (3.81mm/0.15" pitch 10 pins)

Sensor Module

Model	Input Format	No. of CH/ Isolation	Supported Sensors	Power Consumption	Connector
CPSN-SSI-04C	Differential input	4ch, bus isolation	Thermocouple J,K,E,N,R,S,T	5VDC 150mA (Max.) 3.3VDC 50mA (Max.)	Screw terminal block (3.81mm/0.15" pitch 10 pins)

● Benefits of CONPROSYS nano series

Flexible Modular type Remote I/O

Present	CONPROSYS nano

Digital IO
Analog Input
Analog Output
Serial

Efficient Simple

● More I/O units need to be added.
● Network nodes increase system cost and make programing more complicated.

● Possible to add only required number of I/O channels.
● Consolidation of nodes lead to cost reduction. Easy programing.

Highly efficient programmable Remote I/O

Present	CONPROSYS nano

Remote I/O
Remote I/O

High reliable & Efficient

● I/O control can be stopped due to communication failure.
● Master CPU load and communication traffic are heavy.

● Possible to continue to control I/O even in communication failure.
● Both master CPU load and communication traffic are low.

● System Configuration Examples Utilizing CONPROSYS nano series
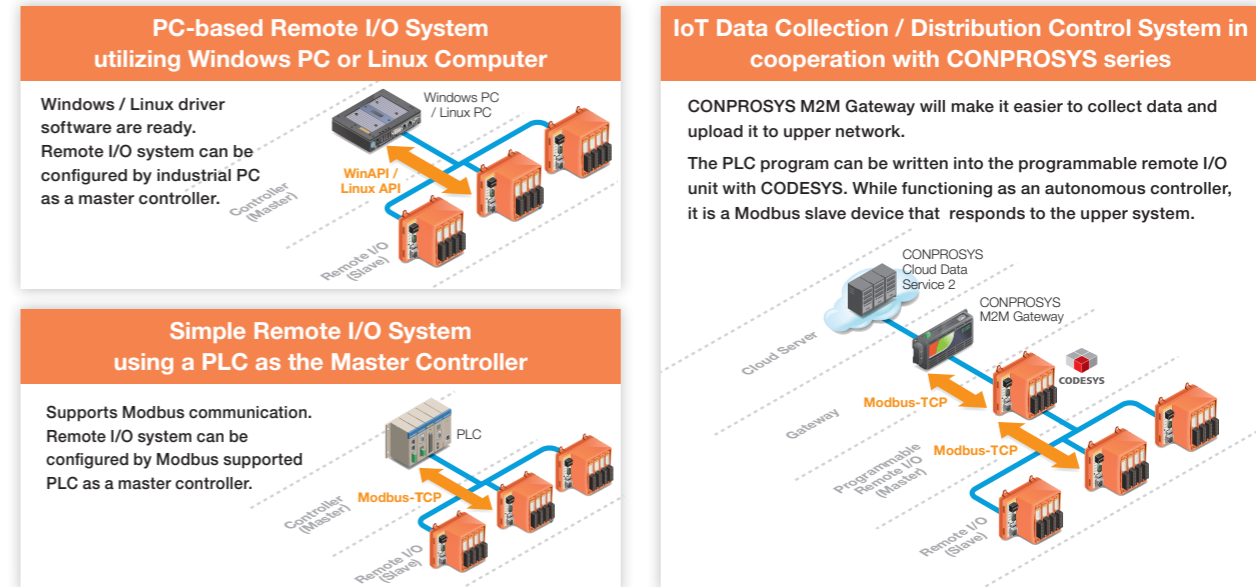
PC-based Remote I/O System utilizing Windows PC or Linux Computer

Windows / Linux driver software are ready.
Remote I/O system can be configured by industrial PC as a master controller.

Windows PC / Linux PC
WinAPI / Linux API
Controller (Master)
Remote I/O (Slave)

Simple Remote I/O System using a PLC as the Master Controller

Supports Modbus communication.
Remote I/O system can be configured by Modbus supported PLC as a master controller.

PLC
Modbus-TCP
Controller (Master)
Remote I/O (Slave)

IoT Data Collection / Distribution Control System in cooperation with CONPROSYS series

CONPROSYS M2M Gateway will make it easier to collect data and upload it to upper network.

The PLC program can be written into the programmable remote I/O unit with CODESYS. While functioning as an autonomous controller, it is a Modbus slave device that responds to the upper system.

CONPROSYS Cloud Data Service 2
CONPROSYS M2M Gateway
Cloud Server
Gateway
Modbus-TCP
Modbus-TCP
CODESYS
Programmable Remote I/O (Master)
Remote I/O (Slave)

Sub-1GHz band Wireless
Wireless I/O series   *for US / EU / China*

Wirelessly communicate input voltage signals or input/output digital signals from terminals up to 1 km apart.

[Key Features]
- Highly reliable mesh communication
- Supports Sub-1GHz band wireless with excellent transmission distance
- Driver library for Windows (available) and Linux (available soon)

GW1-ETH-WQ-US
Gateway terminal
(master)
for computer

AI-1004LY-WQ-US
Analog input terminal
(slave)
10-bit, 4ch, ±10V

DIO-0404LY-WQ-US
Digital I/O Terminal
(slave)
isolated input 4ch, output 4ch

Application Example of Wireless I/O Series
Implementation image at water treatment plant

Benefits of the System

Ideal for monitoring targets scattered in a wide area
Because the superior inlong distance wireless communication feature, it is suitable for installation on monitored objects scattered in a wide area.

Highly reliability prevents data loss
If a communication failure occurs between a certain slave terminal and the master gateway, the system mesh communication function will make this slave terminal communicate with the master gateway via another slave terminal.

Easy to mount
By using the optional bracket, the robust and compact terminal can be mounted on a DIN rail.

Network Topology

Wireless remote I/O system of a Windows PC controller

Long distance communication up to about 1 km
Sub-1GHz band wireless with excellent wraparound characteristic

Master   LAN   Slave   Slave   Slave   Slave   Computer

Wireless remote I/O system of a Windows PC controller

Mesh Communication
Even if communication is interrupted, automatically search for another route and continue communication
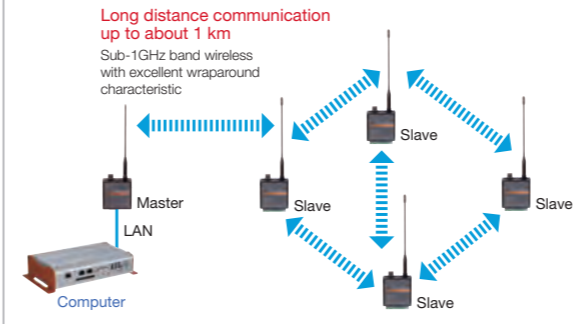
Master   LAN   Slave   Slave   Slave   Slave   Computer
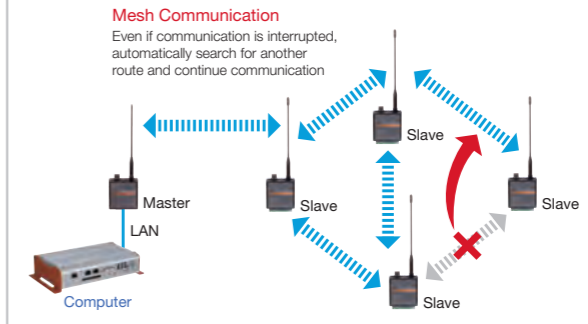
Applications and Solutions

- Airport luggage conveyor control system
- Distributed signal monitoring system in factory with wide site
- Temperature monitoring system for a wide warehouse where layouts of stored products are changed frequently
- Monitoring system which can use Sub-1GHz band wireless to ensure of the communication channels if there is too much WiFi (2.4 GHz) wireless signal sources
- Tank level monitoring system

Product Lineup

Product name	Model	Region / Standard	Functions
Sub-1GHz band Wireless Ethernet Gateway	GW1-ETH-WQ-EU, -CN	EU / CE	• Wireless I/O master terminal • Ethernet - Sub-1GHz wireless communication conversion
	GW1-ETH-WQ-US	US / FCC	
Sub-1GHz band Wireless Isolated Digital I/O Terminal	DIO-0404LY-WQ-EU	EU / CE	• Wireless I/O slave terminal • Photocoupler isolated inputs: 4 • Photocoupler isolated open-collector outputs: 4
	DIO-0404LY-WQ-US	US / FCC	
Sub-1GHz band Wireless 4-channel Analog Input Terminal	AI-1004LY-WQ-EU	EU / CE	• Wireless I/O slave terminal • 10-bit, 4-channel, ±10V analog input
	AI-1004LY-WQ-US	US / FCC	
Mounting Bracket	BRK-WQ-Y	-	• Bracket for DIN rail mounting
AC Adapter	POA201-10-2	CE, FCC, UL/c-UL, PSE	• Input: 90 to 264 VAC, output: 12 VDC 1A

* The photographs used in this paper are GW1-ETH-WQ-US, AI-1004LY-WQ-US, or DIO-0404LY-WQ-US respectively.
* There are also Sub-1GHz band wireless products for Japan market.

Main Features of the Wireless I/O Series

- Highly reliable Mesh communication, AES-encrypted data communication
- Supports ambient temperatures from -20°C to 60°C
- Compact design (62.0(W) x 64.0(D) x 24.0(H)mm, No projection and antenna included)
- Can be installed on a DIN rail with the optional DIN rail mounting bracket
- Driver available for Windows (free download from CONTEC website) and Linux (available soon)
- A gateway (master) can connect with up to 128 I/O terminals (slave)

Models Usable in Overseas Markets

US Model
Sub-1GHz band 902 to 928MHz
RoHS compliant

EU Model
Sub-1GHz band 863 to 870MHz
RoHS compliant

China Model
Sub-1GHz band 868 to 868.6MHz
RoHS compliant

Compatible with IEC 61131-9 compliant sensors and actuators

❙ CONPROSYS IO-Link Master

Utilize existing field network on site.
Easily connected with IO-Link sensors!

[**Key Features**]

- Supports multiple Field Bus Protocols
- 8-channel Independent IO-Link Ports
- IP67 dust-proof, drip-proof design
- Easy to set via web browser

Configurations

PLC

CONPROSYS Gateway series

CONPROSYS PAC series

IO-Link Master

IO-Link Master

IO-Link Master

IO-Link Sensors

IO-Link Sensors

IO-Link Sensors

Advantage of IO-Link

IO-Link is a global standard communication protocol to connect with sensors / actuators, defined as IEC 61131-9. It is expected as an open network standard at the sensor level that contributes to reducing manufacturing downtime.

POINT 1
Possible to connect sensors from various manufacturers only with one cable

POINT 2
Possible to capture diagnosis information such as cable disconnections or device operating status

POINT 3
Enables error free device replacement, and quick restart

POINT 4
High compatibility with field networks

Ordering Information

CPSL-08P1EN
CONPROSYS IO-Link Master (IO-Link port (Class A) 8ch, 2x LAN port)

Specifications

Item		Specifications
LAN	Transmission standard	100BASE-TX
	Data rate	10/100Mbps
	The number of ports	2
	Connector	M12(D-coded, Female, 4-pin)
	LED	ACT(Orange), LINK(Green)
IO-Link	Transmission scheme	IO-Link protocol (Ver.1.0/Ver.1.1)
	The number of ports	8
	Connector	M12(A-coded, Female, 5-pin)*1
	Communication speed	COM1: 4.8kbp, COM2: 38.4kbps, COM3: 230.4kbps
	Port class	Type A
	Rated voltage	24VDC (typ.)
	Max. load current	200mA/port *2
	Isolation specification	Non-isolated
	LED	A(Orange),ST(Green/Red), B(Orange)
IO-Link (in SIO(DI) mode)	Input type	Current source output (PNP output) support
	Rated voltage	24VDC (typ.)
	Input current	5mA (typ.)
	ON/OFF voltage	15VDC min. / 5VDC max. *3
IO-Link (in SIO(DI) mode)	Output type	Push-pull output *3
	Rated voltage	24VDC (typ.)
	Output current	200mA/port *2
	Output registance	3Ω max.
IO-Link (Digital inputs for pin 2)	Input type	Current source output (PNP output) support
	Rated voltage	24VDC (typ.)
	Input current	2mA (typ.)
	ON/OFF voltage	15VDC min. / 5VDC max. *3
LED		ST(Green/Red), BF/NS/ERR(Green/Red), SF/MS/RUN(Green/Red), SYS(Green, Orange)
Switch		Mode setting switch, Address setting selection switch, Address setting switch×2, Protocol setting switch

Item		Specifications
Power input *4*5	Rate input voltage (current)	US : 24VDC (1.8A),
		UA : 24VDC (0.1A)
	Max. input current	US : 12A,
		UA : 12A
	Input voltage range	US : 20.4 to 26.4VDC,
		UA : 20.4 to 26.4VDC
	Device current comsumption	US : 0.2A(Max.),
		UA : 0.1A(Max.)
	Connector	M12(L-coded, Male, 5(4+FE)pin)
Power output *4	Output voltage *6	US : US input voltage (Max.),
		UA : UA input voltage (Max.)
	Max. output current *7	US : 12A,
		UA : 12A
	Connector	M12(L-coded, female, 5(4+FE)pin)
Physical dimensions (mm/ inch)		69.0/2.72(W)×225.0/8.86(D)×18.0/0.71(H) (No projection included)
Weight		600g/1.32lb
Protective function		IP67 *8
Installation method		Installation with screws *9

*1 Connector pin 5 is left unconnected.
*2 The total current of the C/Q, L+ line in all ports should be less than 1.6A.
*3 Data 0 corresponds to Low level and Data 1 corresponds to High level.
*4 Use power cable within 3meters.
*5 UA power is unavailable with this product. It is not necessary to supply power to UA when you only use the device on its own.
*6 The voltage input to the power input terminal is output as it is, but if the current from the output terminal is large, a voltage drop may occur due to the internal resistance.
*7 The total current from the power output current, device consumption current, and output current to the IO-Link port should be supplied to the power supply input terminal.
*8 Do not use this product immersed in water.
*9 The commercial screws are required individually.

Data Acquisition, Measurement and Control

Offering Multi-Faceted I/O Product Lineup to Meet Your Needs

Contec's extensive I/O product line offers more than 400 custom designed, developed & manufactured boards. Utilized the fields of manufacturing, measurement and control; these products are essential for testing, automated examination instrumentation, and research and development.
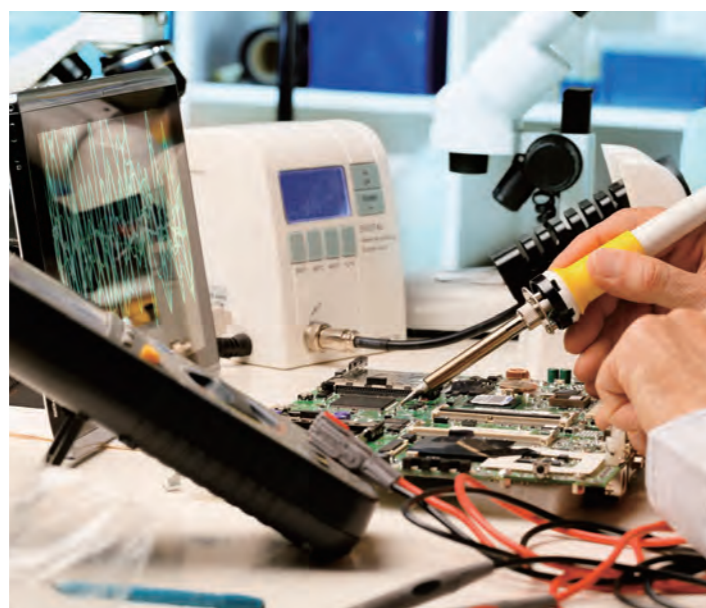
USB **USB Module**

This product features "USB (Universal Serial Bus),"
a serial bus standard to connect peripheral devices to computer.
Various functions can be added to PC with USB connector port.

PCI Express **PCI Express Card**

This product features serial transfer bus architecture "PCI Express," which is successor of PCI bus. Various functions can be added to PC with PCI Express bus expansion slot.

PCI **PCI Card**
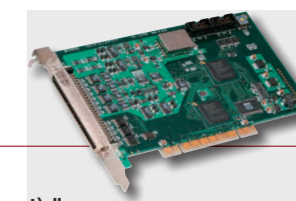
This product features "PCI (Peripheral Component Interconnect)," an industry standard bus architecture that communicates through PC and peripherals. Various functions can be added to PC with PCI bus expansion slot.

Analog I/O

Interface modules that convert analog signals into digital data.

The ability to convert analog signals to data (digital signals) and feed them to a computer allows the user to measure external events.

Conversely, converting computer data to analog signals for output allows the user to control external devices.

USB / PCI Express (page 79)

	Analog Input			Analog Output			Digital I/O	Counter			Model
USB	16 bit	32 ch	2 μsec/ch	16 bit	2 ch	10 μsec	8 ch	2 ch		On-board Memory	AIO-163202FX-USB
	12 bit	8 ch	5 μsec/ch	12 bit	2 ch	12 μsec	Bi-directional 16 ch	1 ch		On-board Memory	AIO-120802LN-USB
		16 ch	2 μsec/ch							On-board Memory	AIO-121602LN-USB
	16 bit	64 ch	10 μsec/ch					1 ch		On-board Memory	AI-1664LAX-USB
				16 bit	4 ch	10 μsec				On-board Memory	AO-1604LX-USB
					2 ch					On-board Memory	AIO-160802GY-USB
			4 μsec/ch				4 ch			On-board Memory	AI-1608GY-USB
				16 bit	2 ch	10 μsec				On-board Memory	AIO-160802AY-USB
	16 bit	8 ch	10 μsec/ch							On-board Memory	AI-1608AY-USB
									Bus Isolated	On-board Memory	AI-1608VIN-USB
									Bus Isolated	On-board Memory	AI-1608AIN-USB
			20 μsec/ch			10 μsec			Bus Isolated	On-board Memory	AO-1604VIN-USB
				16 bit	4 ch	20 μsec			Bus Isolated	On-board Memory	AO-1604AIN-USB
PCI Express		32 ch	2 μsec/ch		2 ch		8 ch	2 ch	Bus Isolated	On-board Memory	AIO-163202F-PE
		16 ch	1 μsec/ch	16 bit	1 ch	10 μsec				On-board Memory	AIO-161601UE3-PE
	16 bit									On-board Memory	AIO-161601E3-PE
		8 ch	10 μsec/ch		2 ch			1 ch	Bus Isolated	On-board Memory	AIO-160802LI-PE
									Bus Isolated	On-board Memory	AI-1616LI-PE
	12 bit	16 ch		12 bit	1 ch	6 μsec				On-board Memory	AIO-121601E3-PE
			1 μsec/ch				4 ch			On-board Memory	AIO-121601UE3-PE
				16 bit	4 ch	10 μsec			Bus Isolated	On-board Memory	AO-1604LI-PE
		8 ch			2 ch					On-board Memory	AIO-160802L-LPE
	16 bit	16 ch	10 μsec/ch							On-board Memory	AI-1616L-LPE
		64 ch						1 ch		On-board Memory	AI-1664LA-LPE
	Low Profile				4 ch					On-board Memory	AO-1604L-LPE
				16 bit	16 ch	10 μsec				On-board Memory	AO-1616L-LPE
					8 ch					On-board Memory	AO-1608L-LPE

PCI (page 80)

	Analog Input			Analog Output			Digital I/O	Counter			Model
PCI	10 bit	2 ch	10 nsec							On-board Memory	DIG-100M1002-PCI
		32 ch	2 μsec/ch		2 ch	10 μsec	8 ch	2 ch	Bus Master	On-board Memory	ADA16-32/2(PCI)F
	16 bit	16 ch	10 μsec/ch	16 bit	1 ch		4 ch			On-board Memory	AD16-16(PCI)EV
			1 μsec/ch							On-board Memory	AD16-16U(PCI)EV
		4 ch	20 μsec/ch						Individual Isolated		AI-1604CI2-PCI
			100 nsec						Bus Master	On-board Memory	AI-1204Z-PCI
		16 ch	1 μsec/ch	12 bit	1 ch	6 μsec				On-board Memory	AD12-16U(PCI)EV
	12 bit						4 ch			On-board Memory	AD12-16(PCI)EV
			10 μsec/ch							On-board Memory	AD12-16(PCI)
		64 ch								On-board Memory	AD12-64(PCI)
		16 ch	20 μsec/ch						Bus Isolated	On-board Memory	AI-1216I2-PCI
	5 1/2 digit	2 ch	0.67 msec							On-board Memory	DMM-552-PCI
				12 bit	16 ch	10 μsec					DA12-16(PCI)
					8 ch						DA12-8(PCI)
					4 ch						DA12-4(PCI)
				16 bit	4 ch	20 μsec			Individual Isolated		AO-1604CI3-PCI
		8 ch			2 ch	10 μsec				On-board Memory	ADA16-8/2(LPCI)L
									Bus Isolated	On-board Memory	ADAI16-8/2(LPCI)L
	16 bit	64 ch	10 μsec/ch							On-board Memory	AD16-64(LPCI)LA
		16 ch					4 ch	1 ch		On-board Memory	AD16-16(LPCI)L
	Low Profile								Bus Isolated	On-board Memory	ADI16-16(LPCI)L
				16 bit	16 ch	10 μsec				On-board Memory	DA16-16(LPCI)L
					8 ch					On-board Memory	DA16-8(LPCI)L
					4 ch					On-board Memory	DA16-4(LPCI)L
									Bus Isolated	On-board Memory	DAI16-4(LPCI)L

Digital I/O

Interface boards that provide computers with digital signal I/O functions.

They monitor the status (ON/OFF) of relays, operating switches and measurement devices as well as controlling (ON/OFF) lamps, 7-segment display units and relays. These boards can also be used as an interface for conducting digital communication with controllers such as PLC or microcomputers.

I/O Channels

Input	Maximum number of input channels (bits)
nnn	nnn = 8, 16, 32, 64 or 128

Output	Maximum number of output channels (bits)
mmm	mmm = 8, 16, 32, 64 or 128

USB / PCI Express

					Model
USB	12 to 24 VDC	Optocoupler isolation	I/O	Digital Filter	DIO-0808LY-USB
				Digital Filter	DIO-nnmmLX-USB
				Built-in Power / Digital Filter / Interrupt input edge selection	DIO-1616BX-USB
	24 to 48 VDC		I/O	High Voltage / Digital Filter	DIO-1616HN-USB
	Input 12 to 24 VDC, Output to 120 VAC/DC	Relay contact		Non Polarity / Digital Filter / Interrupt input edge selection	DIO-1616RYX-USB
	to 125 VDC, to 30 VDC		Output	High Voltage	RRY-16CX-USB
	Input 12 to 24 VDC, Output 240 VAC/28 VDC	Optocoupler Isolation and Relay Contact	I/O	Digital Filter	DIO-0808RN-USB
	5 VDC-TTL	Non-Isolated	Input		DI-16TY-USB
			Output		DO-16TY-USB
			I/O		DIO-0808TY-USB
			Bi-direct	Digital Filter	DIO-48DX-USB
	3.3 VDC-LVTTL				DIO-24DY-USB
PCI Express	12 to 24 VDC	Optocoupler Isolation	Input	Digital Filter / Interrupt input edge selection	DI-nnnL-PE
				Built-in Power / Digital Filter / Interrupt input edge selection	DI-32B-PE
			Output		DO-mmmL-PE
				Built-in Power	DO-32B-PE
			I/O	Hi-Speed Optocoupler / Digital Filter / Interrupt input edge selection	DIO-3232F-PE
				Built-in Power / Digital Filter / Interrupt input edge selection	DIO-nnmmB-PE
				Digital Filter / Interrupt input edge selection	DIO-nnmmL-PE
				Negative Common / Digital Filter / Interrupt input edge selection	DIO-nnmmRL-PE

PCI Express / PCI

					Model
PCI Express	Low Profile / 12 to 24 VDC	Optocoupler Isolation	I/O	Digital Filter / Interrupt input edge selection	DIO-1616L-LPE
				Built-in Power / Digital Filter / Interrupt input edge selection	DIO-1616B-LPE
	24 to 48 VDC			High Voltage / Digital Filter / Interrupt input edge selection	DIO-nnmmH-PE
	to 125 VAC, to 30 VDC	Relay Contact	Output	High Voltage	RRY-16C-PE
	to 100 VAC/DC			High Voltage	RRY-32-PE
	Input 12 to 48 VDC, Output to 120 VAC/DC	Optocoupler Isolation and Relay Contact	I/O	Non Polarity / Digital Filter / Interrupt input edge selection	DIO-1616RY-PE
		Optocoupler isolation		Built-in Power / Digital Filter / Interrupt input edge selection	DIO-1616TB-PE
	5 VDC-TTL			Digital Filter / Interrupt input edge selection	DIO-nnmmT-PE
		Non-Isolated	Bi-direct	Digital Filter	DIO-48D-PE
			Input	Digital Filter	DI-32T-PE
			Output		DO-32T-PE
			I/O	Digital Filter / Interrupt input edge selection	DIO-1616T-LPE
	3.3 VDC-LVTTL		Bi-direct	Digital Filter / Interrupt input edge selection	DIO-48D-LPE
	Low Profile			Digital Filter / Interrupt input edge selection	DIO-96D-LPE
		Signal Pattern Detection and Generator		Bus Master	DIO-32DM3-PE
PCI	12 to 24 VDC	Optocoupler isolation	Input	Digital Filter / Interrupt input edge selection	PI-nnnL(PCI)H
				Built-in Power / Digital Filter / Interrupt input edge selection	PI-32B(PCI)H
			Output		PO-mmmL(PCI)H
				Built-in Power	PO-32B(PCI)H
			I/O	Digital Filter / Interrupt input edge selection	PIO-nn/mmL(PCI)H
				Built-in Power / Digital Filter / Interrupt input edge selection	PIO-nn/mmB(PCI)H
	24 to 48 VDC			High Voltage / Digital Filter / Interrupt input edge selection	PIO-32/32H(PCI)H
	12 to 24 VDC			Hi-Speed Optocoupler / Digital Filter / Interrupt input edge selection	PIO-32/32F(PCI)H
				Negative Common / Digital Filter / Interrupt input edge selection	PIO-nn/mmRL(PCI)H
	to 125 VAC to 30 VDC	Relay Contact	Output	High Voltage / Non Polarity	RRY-16C(PCI)H
	to 100 VAC/DC			High Voltage / Non Polarity	RRY-32(PCI)H
	Input 12 to 48 VDC Output to 120 VAC/DC	Optocoupler Isolation and Relay Contact	I/O	Non Polarity / Digital Filter / Interrupt input edge selection	PIO-16/16RY(PCI)
		Optocoupler isolation	I/O	Built-in Power / Digital Filter / Interrupt input edge selection	PIO-16/16TB(PCI)H
	5 VDC-TTL	Non-Isolated		Digital Filter / Interrupt input edge selection	DIO-6464T2-PCI

Digital I/O

						Model
PCI	Low Profile	5 VDC-TTL	Non-Isolated	I/O	Digital Filter / Interrupt input edge selection	**PIO-nn/mmT(PCI)H**
				Bi-direct	Digital Filter / Interrupt input edge selection	**DIO-48D2-PCI**
			Signal Pattern Detection and Generator		Bus Master	**PIO-32DM(PCI)**
		12 to 24 VDC	Optocoupler isolation	I/O	Digital Filter / Interrupt input edge selection	**PIO-16/16L(LPCI)H**
				Built-in Power	Digital Filter / Interrupt input edge selection	**PIO-16/16B(LPCI)H**
					Digital Filter / Interrupt input edge selection	**PIO-16/16T(LPCI)H**
		5 VDC-TTL	Non-Isolated		Digital Filter / Interrupt input edge selection	**PIO-48D(LPCI)H**
			Bi-direct		Digital Filter / Interrupt input edge selection	

Counters

These cards communicate pulse train input and pulse number count functions to the PC.

They calculate addition and/or subtraction of count values onboard and read out current count values when needed. They can connect to incremental rotary encoders, linear gauges, pulse output type flowmeters or power meters.

						Model
USB		32-bit Up/Down Counter	Isolated input	4 ch	500 kHz	**CNT-3204IN-USB**
PCI Express		32-bit Up/Down Counter	TTL input / Differential input	8 ch	10 MHz	Bus Master	**CNT-3208M-PE**
	Low Profile		LVTTL input	4 ch		Bus Master	**CNT-3204MT-LPE**
PCI		24-bit Up/Down Counter	TTL input / Isolated input	4 ch	TTL input: 1 MHz / Isolated input: 500 kHz		**CNT24-4(PCI)H**
			TTL input / Differential input		1 MHz		**CNT24-4D(PCI)H**
		32-bit Up/Down Counter		8 ch	10 MHz	Bus Master	**CNT32-8M(PCI)**
	Low Profile		LVTTL input	4 ch		Bus Master	**CNT32-4MT(LPCI)**

Motion Controllers

Enables PC controlled output of pulse train according to a specified pulse number and frequency.

Can automatically output control pulse which corresponds to operation parameters such as target position, speed and acceleration/deceleration rate. Limit input functions [required for positioning control] are also provided. For use with pulse-input type stepping motors or servo motors.

							Model
PCI Express		4 Axes	0.3 to 9.8 Mpps	Counter 4 ch		Limit Switch Input / Synchronization control	**SMC-4DL-PE**
		8 Axes		Counter 8 ch		Limit Switch Input / Synchronization control	**SMC-8DL-PE**
PCI		4 Axes	0.1 to 6.5 Mpps	Counter 4 ch	Frame Data Store	Limit Switch Input / Synchronization control *1	**SMC-4DF2-PCI**
		8 Axes		Counter 8 ch	Frame Data Store	Limit Switch Input / Synchronization control *1	**SMC-8DF2-PCI**
		4 Axes	0.3 to 9.8 Mpps	Counter 4 ch		Limit Switch Input / Synchronization control	**SMC-4DL-PCI**
		8 Axes		Counter 8 ch		Limit Switch Input / Synchronization control	**SMC-8DL-PCI**

*1: Compatible with both SMC-4DF-PCI and SMC-8DF2-PCI type cards.

Serial Communications

Provides PC with RS-232C/422A/485 serial communication ports.

Used as a communication interface with measurement devices, barcode readers, industrial AV equipment, UPS, printers and modems which are equipped with RS-232C/422A/485 serial communication ports.

					Model
USB	RS-232C	1 ch	300 to 921,600 bps	Individual Isolated Surge Protection	**COM-1(USB)H**
				Individual Isolated Surge Protection	**COM-1P(USB)H**
		4 ch			**COM-4CX-USB**
					COM-4CN-USB
	RS-422A / RS-485	1 ch		Individual Isolated Surge Protection	**COM-1PD(USB)H**
		4 ch		Individual Isolated Surge Protection	**COM-4PDHN-USB**
PCI Express	RS-232C	2 ch	2 to 921,600 bps		**COM-2C-PE**
		4 ch			**COM-4C-PE**
		8 ch			**COM-8C-PE**
		2 ch		Individual Isolated Surge Protection	**COM-2PC-PE**
		4 ch		Individual Isolated Surge Protection	**COM-4PC-PE**
	RS-422A / RS-485	2 ch		Individual Isolated Surge Protection	**COM-2PD-PE**
		4 ch		Individual Isolated Surge Protection	**COM-4PD-PE**
	Low Profile	RS-232C	1 ch		**COM-1C-LPE**
			2 ch		**COM-2C-LPE**
			4 ch		**COM-4C-LPE**
			8 ch		**COM-8C-LPE**
		RS-422A / RS-485	1 ch	30 to 921,600 bps	Individual Isolated Surge Protection	**COM-1PDH-LPE**
			2 ch		Individual Isolated Surge Protection	**COM-2PD-LPE**
PCI	RS-232C	2 ch	2 to 921,600 bps		**COM-2(PCI)H**
				Individual Isolated Surge Protection	**COM-2P(PCI)H**
		4 ch			**COM-4(PCI)H**
				Individual Isolated Surge Protection	**COM-4P(PCI)H**
		8 ch			**COM-8(PCI)H**
	RS-422A / RS-485	2 ch		Individual Isolated Surge Protection	**COM-2PD(PCI)H**
		4 ch		Individual Isolated Surge Protection	**COM-4PD(PCI)H**
	RS-232C	2 ch	15 to 230,400 bps		**COM-2CL-PCI**
		4 ch			**COM-4CL-PCI**
	RS-422A / RS-485	2 ch			**COM-2DL-PCI**
		4 ch			**COM-4DL-PCI**
	Low Profile	RS-232C	1 ch	2 to 921,600 bps	**COM-1(LPCI)H**
			2 ch		**COM-2(LPCI)H**
			4 ch		**COM-4(LPCI)H**
			8 ch		**COM-8C-LPCI**

▌Serial Communications

						Model
PCI		Low Profile	RS-422A / RS-485	1 ch	2 to 921,600 bps	Individual Isolated Surge Protection	COM-1PD(LPCI)H
				2 ch		Individual Isolated Surge Protection	COM-2PD(LPCI)H
Media Converter			RS-232C	1 ch	300 to 921,600 bps	Wire LAN Convert	RP-COM(FIT)H
						Wire LAN Convert	RP-COM(FIT)H-AF

▌GPIB Communications

Provide PCs with GPIB-compliant communication port(s).
These can be used as the communication interface for measurement devices equipped with GPIB communication ports as well as various other controllers.

						Model
USB			1.5 Mbyte/sec			GPIB-FL2-USB
PCI Express		Low Profile	1.5 Mbyte/sec	Timer	Bus Master	Bus Analyzer	GPIB-F-LPE
				Timer	Bus Master		GPIB-FL-LPE
PCI			1.5 Mbyte/sec	Timer	Bus Master	Bus Analyzer	GP-IB(PCI)F
				Timer	Bus Master		GP-IB(PCI)FL
		Low Profile		Timer	Bus Master	Bus Analyzer	GP-IB(LPCI)F
				Timer	Bus Master		GP-IB(LPCI)FL

▌Software

We provide all kinds of middleware for program development efficiency. In addition, all kinds of software are available such as various measurement application programs that can be used as genuine PC data loggers or electronic measuring devices from the first day.

API Programming Using Windows / Linux

Driver Library
API-PAC(W32)

The library software that provides CONTEC's measurement control device commands using OS-standard API. High-speed application software can be created that makes use of device characteristics in all kinds of programming languages including Visual Basic, Visual C and gcc.

Development and Runtime are license-free.
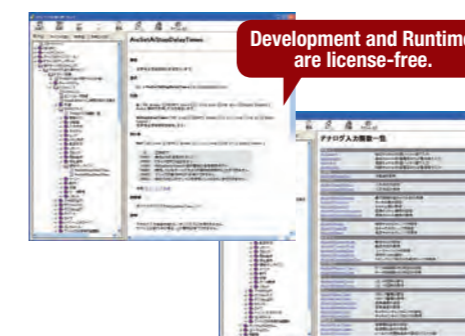
Standard Bundled Software

Data Acquisition with LabVIEW

LabVIEW-compliant Data Acquisition Library
DAQfast

CONTEC's devices are LabVIEW compatible. Usable in the same way as LabVIEW standard data collection VI using the dedicated library DAQfast plug-in.
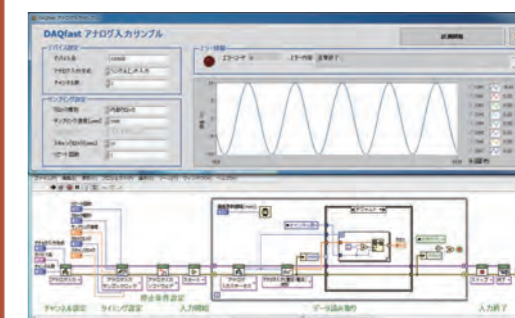
Free download from Contec website

Graph Observation & Data Collection Tool

Data Logging Software
C-LOGGER

This is data logging software that is compatible with CONTEC analog input devices. C-LOGGER provides true data collection and monitoring function, such collected signal data graph drawing, zoom observation, file saving, and dynamic transfer to Excel (spreadsheet program). No additional programming is required.
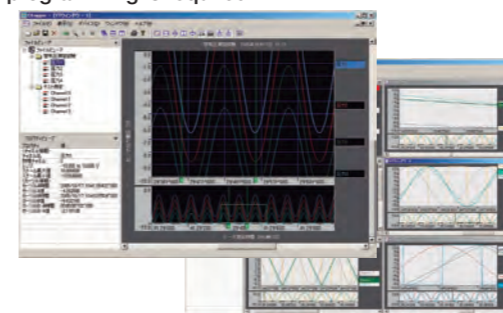
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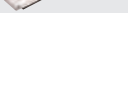
▌ Cables

Cable with different connectors are designed to connect our interface cards and units to external world.
Note 1: Each cable connects one connector of the board/unit. For the board/unit with two connectors, two cables are required.
Note 2: A longer cable will have a larger resistance, customer needs to select a suitable length of cable. Normally a three meters or longer cable is not suitable to connect external analog signals to the analog I/O boards. It is user's responsibility to select a connecting cable for the application system.

Connector Type	Cable Type	Cable Length	Model
Two Side Connectors 100-pin Connector	Shield Cable	0.5m/1.64ft	PCB100PS-0.5
		1.5m/4.92ft	PCB100PS-1.5
		3.0m/9.84ft	PCB100PS-3
		5.0m/19.1ft	PCB100PS-5
96-pin Connector		0.5m/1.64ft	PCB96PS-0.5P
		1.5m/4.92ft	PCB96PS-1.5P
		3.0m/9.84ft	PCB96PS-3P
		5.0m/19.1ft	PCB96PS-5P
	Flat Cable	1.5m/4.92ft	PCB96P-1.5
		3.0m/9.84ft	PCB96P-3
		5.0m/19.1ft	PCB96P-5
68-pin Connector	Shield Cable	0.5m/1.64ft	PCB68PS-0.5P
		1.5m/4.92ft	PCB68PS-1.5P
		3.0m/9.84ft	PCB68PS-3P
50-pin Connector		0.5m/1.64ft	PCB50PS-0.5P
		1.5m/4.92ft	PCB50PS-1.5P
		3.0m/9.84ft	PCB50PS-3P
		5.0m/19.1ft	PCB50PS-5P
Single Side Connector 100-pin Connector	Flat Cable	1.5m/4.92ft	PCA100P-1.5
		3.0m/9.84ft	PCA100P-3
96-pin Connector	Shield Cable	0.5m/1.64ft	PCA96PS-0.5P
		1.5m/4.92ft	PCA96PS-1.5P
		3.0m/9.84ft	PCA96PS-3P
		5.0m/19.1ft	PCA96PS-5P
	Flat Cable	1.5m/4.92ft	PCA96P-1.5
		3.0m/9.84ft	PCA96P-3
		5.0m/19.1ft	PCA96P-5
68-pin Connector	Shield Cable	0.5m/1.64ft	PCA68PS-0.5P
		1.5m/4.92ft	PCA68PS-1.5P

Connector Type	Cable Type	Cable Length	Model
Single Side Connector 50-pin Connector	Shield Cable	0.5m/1.64ft	PCA50PS-0.5P
		1.5m/4.92ft	PCA50PS-1.5P
		3.0m/9.84ft	PCA50PS-3P

Connector Type	Distributed Connectors	Cable Type	Cable Length	Model
Fan-Out Cables 100-pin Connector	Two 37-pin D-SUB Connectors	Shield Cable	1.5m/4.92ft	PCB100WS-1.5
			3.0m/9.84ft	PCB100WS-3
			5.0m/19.1ft	PCB100WS-5
96-pin Connector			1.5m/4.92ft	PCB96WS-1.5P
			3.0m/9.84ft	PCB96WS-3P
			5.0m/19.1ft	PCB96WS-5P

* These fan-out type cables convert a 100-pin connector or 96-pin connector of a digital I/O board to two 37-pin D-SUB connectors and the pin assignment is the same as our 37-pin D-SUB connector type digital I/O boards.

Connector Type	No. of Distributed Connectors	Cable Type	Cable Length	Model
Fan-Out Cables 78-pin Connector	Eight 9-pin Connectors	Shield Cable	1m/3.28ft	PCE78/9PS
68-pin Connector				PCE68-9PS
44-pin Connector	Two 9-pin Connectors		0.25m/0.82ft	PCE44/9P2S
	Four 9-pin Connectors			PCE44/9P4S
37-pin Connector				PCE37/9PS

* These fan-out cables convert a 78/68/44/37-pin connector of a serials communication board to RS-232C standard 9-pin D-SUB connectors

▌ Screw Terminal Blocks

The spring-up type terminal blocks help users to wire the external devices to Contec PCI Express / PCI bus interface boards through the connecting cables. The blocks equipped 3mm / 0.12' spring-up type screws and are 35mm /1.38' DIN-rail mountable.

Spring-up type screw mechanism An internal spring retains the terminal screw by lifting it up when it is loosened and removed from the screw hole. This allows efficient wiring and prevents accidental dropping of terminal screw.
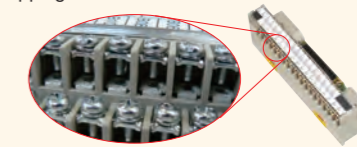
Connector Type	Spec. of Screw Terminal	No. of Terminals	Model
Wiring Blocks 100-pin Connector	M3 screw terminal	100	EPD-100A
96-pin Connector		96	EPD-96A
68-pin Connector		68	EPD-68A
50-pin Connector		50	EPD-50A
37-pin Connector		37	EPD-37A

Communication Industrial LAN and Wireless

Providing Custom Communication Products that Deliver High Reliability and Superior Functionality

Contec's network products allow our customers to provide safe and convenient communication network environments in locations where security is a necessity (offices, schools, factories and logistics systems). Our expertise and strength in the design and development of industrial products allows us to ensure high reliability and functionality of our network products and meet our customer's every customization requirements.

Worldwide communication standard

EU — CE

China — SRRC

Korea — KC

India — WPC

Japan — VCCI

Canada — IC

United States of America — FC

Taiwan

Thailand — NBTC

Singapore — IMDA

Forklift

Dialyzer
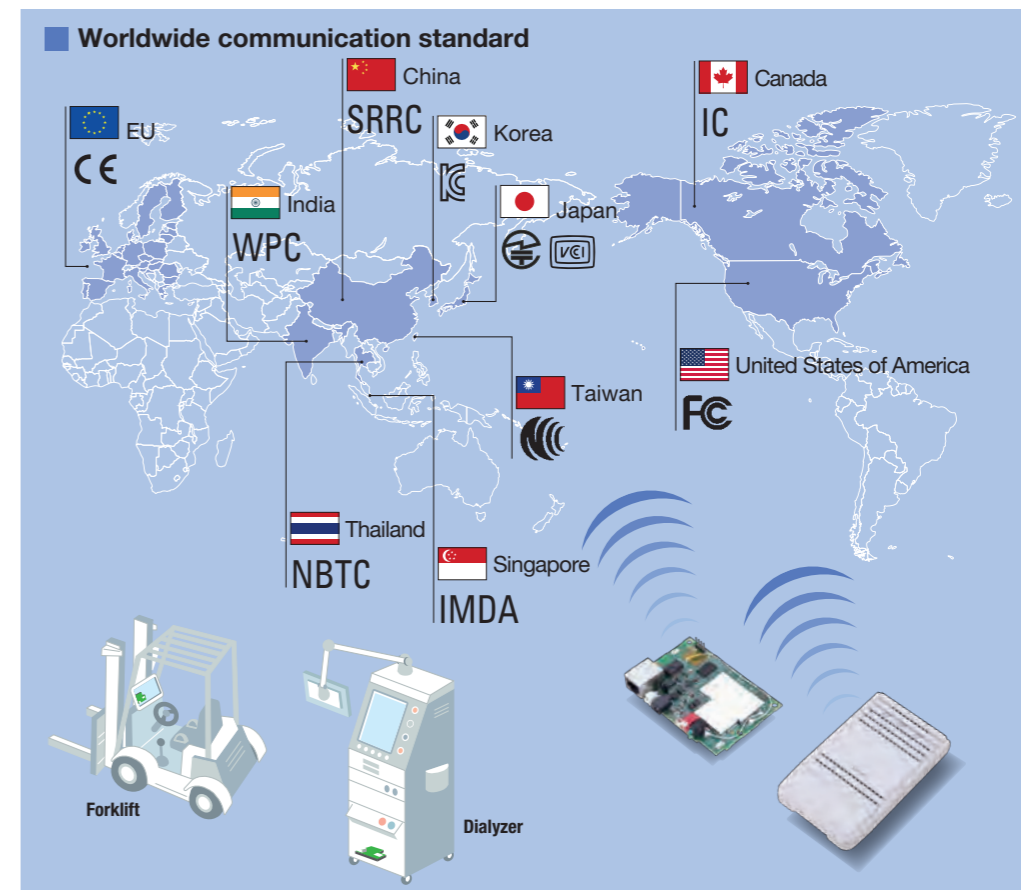
Embedded Type WiFi Modules	Japan	FXE3000
	USA, Canada, India, Singapore	FXE3000-US
	EU(R&TTE directive), Thailand	FXE3000-EU
	Korea	FXE3000-KR
	Taiwan	FXE3000-TW
	China	FXS3000-CN
Office Type Wi-Fi Modules	Japan	FXA3000
	USA, Canada, India, Singapore	FXA3000-US
	EU(R&TTE directive), Thailand	FXA3000-EU
	Korea	FXA3000-KR
	Taiwan	FXA3000-TW
Embedded Type HUB Modules	10M/100M Switch type HUB Operating Temp. -20 to 60°C	SH-9008H-FIT
		SH-8008F (8-port)
		CPS-HBL-8005F (5-port)

Solutions and Services

Combining Our Four Core Technologies, Software and Services to Create Your Unique Solution

Contec provides M2M/IoT-related products leveraged by our three core technology resources—Embedded Computers, Measurement and Control, and Network—for a variety of fields, from factory automation to social infrastructure, renewable energy and E-agriculture.

Environment and Energy Conservation

Remote Power Monitoring and Control

Digital Signage

Total Energy

Distribution Center

Sorting rack
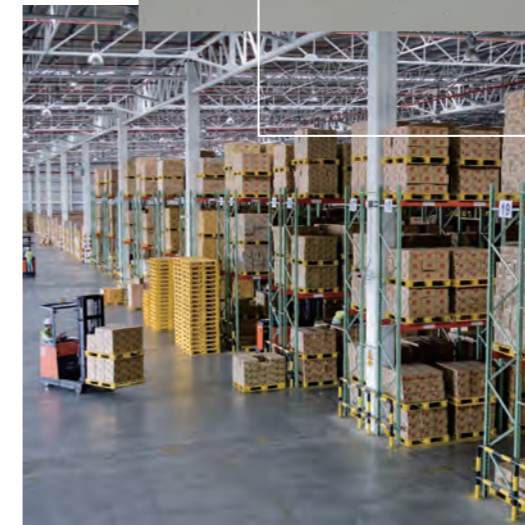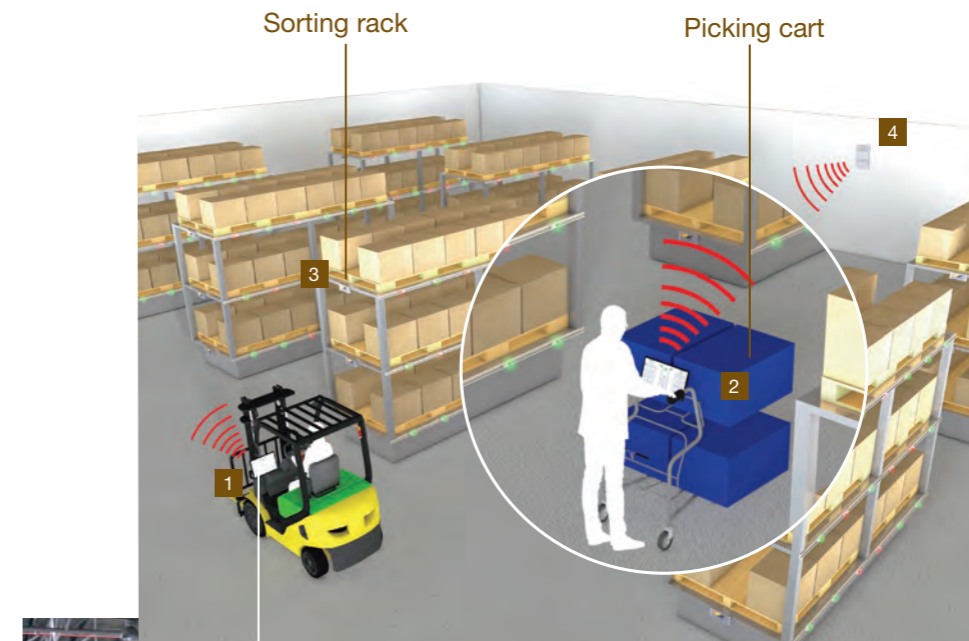
Picking cart

Forklift terminal

▍ Forklift terminal
▍ Picking cart
▍ Sorting rack
▍ Location management
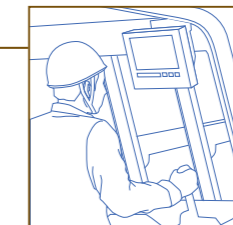
Forklift terminal
Panel Computer

Picking cart
Panel Computer

Sorting rack
M2M Controller

Location management
Wireless LAN Access Point

Plant Factory

Cloud server

Control server

5

3
4
2
1
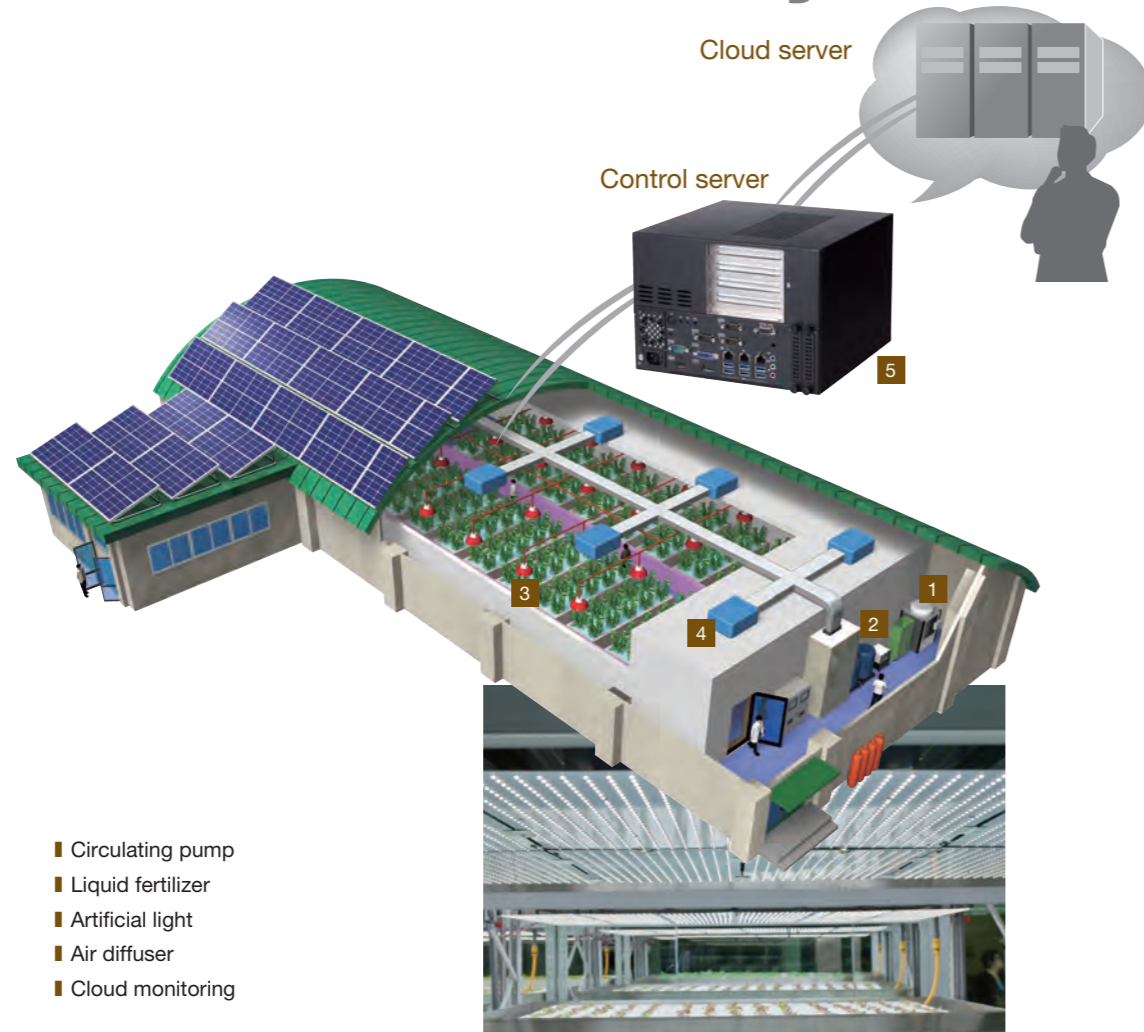
❚ Circulating pump
❚ Liquid fertilizer
❚ Artificial light
❚ Air diffuser
❚ Cloud monitoring

Circulating pump
BOX Computer

1

Liquid fertilizer
BOX Computer

2

Artificial light
M2M Controller

3

Air diffuser
M2M Controller

4

Control server
Industrial Computer

5

Railway

Monitoring display

3

2

1

Information display   Wi-Fi service
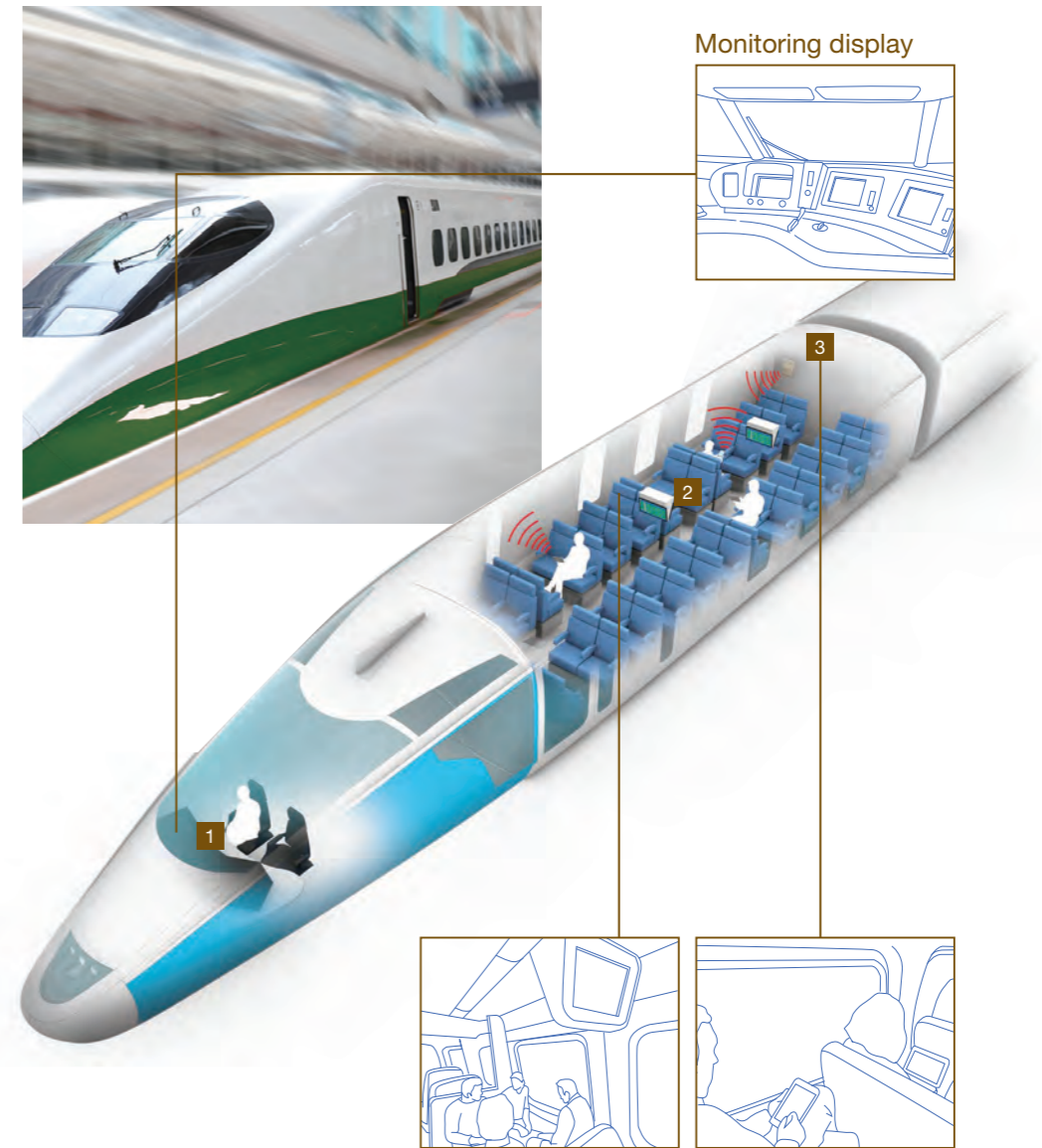
❚ Monitoring display
❚ Information display
❚ Wi-Fi service

Monitoring display
Panel Computer

1

Information display
BOX Computer

2

Wi-Fi service
Wireless LAN Access Point

3

Building

Smart energy

1

Building automation

2

3 4

▎ Building automation
▎ Smart energy

Energy monitoring

M2M Controller

1

Air conditoning/ Lighting control

Programmable Automation Controller

2

Demand controller

Panel Computer

3

Control server

Industrial Computer

4

Restaurant

1

2

1

3

1

2
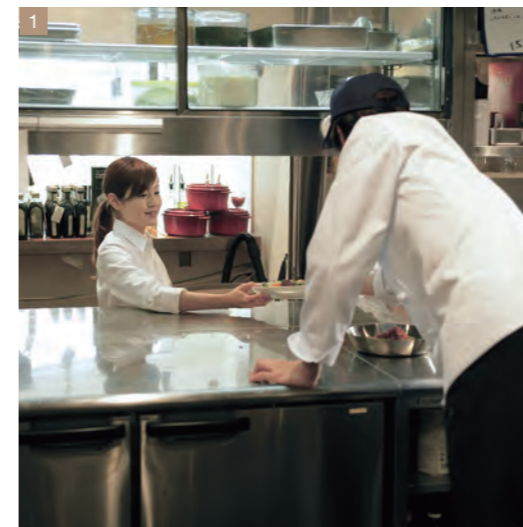
▎ Digital signage
▎ POS terminal
▎ Kitchen display

Digital signage

Signage Player

1

POS terminal

Embedded Wireless LAN Access Point

2

Kitchen display

Panel Computer

3

Airport

Tire Shop

Alignment tester

Digital signage

Wheel balancer

▮ Security check
▮ Digital signage
▮ Baggage claim
▮ Wi-Fi service

Equipment controller
Industrial Computer

1

Measurement control
DAQ, Measurement & Control

2

Digital signage
Signage Player

3

Carousel controller
BOX Computer

4

Wi-Fi service
Wireless LAN Access Point

5

Wheel balancer
Panel Computer

1

Wheel balancer
BOX Computer

2

▮ Wheel balancer
▮ Alignment tester
▮ Digital signage

Alignment tester
Industrial Computer

3

Alignment tester
DAQ, Measurement & Control

4

Digital signage
Signage Player

5

MEMO

CONTEC AMERICAS INC.

Technology Innovators Delivering Creative and Highly Reliable Solutions

Contec Americas Inc. is an electronics manufacturer and systems integrator with a wide portfolio of embedded computers, Single Board Computers (SBCs) and display solutions. We add value through our world-class engineering, unsurpassed quality, life cycle management, Value Analysis/Value Engineering (VAVE), logistics and post-production services. We are a strategic partner supporting customers around the world in segments such as medical and life sciences, robotics, security, industrial automation, IoT, energy and aerospace.

High Performance Server Series

Long life, high performance 1U, 2U, and 4U servers based on a common platform and the same proprietary Contec motherboard for ultimate scalability and support.

COMPUTING PLATFORMS

Purpose-built embedded computing solutions designed to improve quality and reduce cost.

Rack Mounts & Servers	Small Form Factor
Towers & Workstations	Custom Embedded Solutions

Displays, All-in-Ones (AIOs) and Tablets

Highly reliable, advanced display, All-in-One, and Panel PC solutions customers requiring long-life or custom display solutions.

Medical and Industrial Grade	
U.S.-Based Clean Room for Display Integration	
Rugged Tablets	OEM Display Kits
Touch Enabled	Custom Solutions

Markets

Medical

Industrial & IoT

Military

Aerospace

https://www.contec.com/us/

Taking Contec Quality Global

Contec's global presence consists of multiple R&D, Manufacturing, Sales & Procurement locations that strategically placed around the world. The Contec network allows us to instantly meet our customer's needs with quality products and solutions.

● Offices ● Distributor

Finland
Netherlands
United Kingdom   Poland
Germany
France   Italy
South Korea
China   Japan
India   Taiwan
Thailand
Malaysia   Singapore
Indonesia
U.S.A.

Japan

CONTEC CO., LTD. HEADQUATERS / FACTORY

R&D	Procurement
Manufacturing	Sales

Netherlands

CONTEC CO., LTD. AMSTERDAM BRANCH

Sales

U.S.A.

CONTEC AMERICAS INC.

R&D	Procurement
Manufacturing	Sales

China

CONTEC (SHANGHAI) CO., LTD.

R&D	Procurement
Manufacturing	Sales

Taiwan

TAIWAN CONTEC CO., LTD.

R&D	Procurement
Manufacturing	Sales

Singapore

SINGAPORE CONTEC PTE. LTD.

Sales