FA-PC
VPC Series
VPC-1700 Series

* Specifications, color and design of the products are subject to change without notice.

This product is a BTO industrial computer that is equipped with an 8th generation Intel® Core™ processor series.
The Intel® Q370 chipset with DDR4 memory (8GB - 32GB) provides advanced computing and graphical performance.
This product features a variety of interfaces such as one each port of DVI-I, HDMI, DisplayPort, four USB3.2 Gen1 (USB3.0) ports (rear:4), four USB2.0 ports (front:2, rear:2), four serial ports (RS-232C/422A/485×1, RS-232C×3), and three 1000BASE-T ports, which can be used in a wide range of embedded applications such as general-purpose PC OS-based controllers and information terminals.
Two types of expansion slots are provided: PCI slots x 3, or PCI-Express(x1) slot x1 and PCI slots x 2.

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Features

Intel® Core™ processor series Coffee Lake Supported
This product contains a power-saving, high performance 8th generation Intel® Core™ processor and provides advanced computing and graphical performance without consuming massive power. Taking up CPU embedded type can contribute to longer-term product availability.

High-performance graphics with CPU embedded type
Full HD video can be smoothly played with the Intel® HD Graphics 630/610.
Furthermore, the product can support full HD outputs from three screens of the DVI-I, DisplayPort, and HDMI.

Mirroring (RAID1) supported
Mirroring (hardware or software option) can be configured to suit the application and ensure the system to be redundant.

Removable storage adopted
The front-accessible 3.5 inch SATA storage supports mirroring and other RAID functions.

Expand your peripherals with various interfaces
Interfaces including DVI-I, HDMI, DisplayPort, 1000BASE-T x 3, USB3.2 Gen1 (USB3.0) x 4, USB2.0 x 4, serial port (RS-232C/RS-422A/RS-485 x 1, RS-232C x 3), and audio are provided.

The selection of expansion slots from PCI-Express(×1), or PCI board.
Expansion slots can be selected from PCI slots×3, or PCI-Express (x1) slot ×1 and PCI slots ×2.
The maximum size of the board that can be set is 176(L) x 106(H)[mm].

The identical dimensions enable easy replacement with the VPC-1600 series
In order to replace the system with ease, this product has the same physical dimensions as the VPC-1600 series.

Specification

Function specification

Item			Description
CPU [Selection]			Intel® Celeron® G4900T Processor 2.9GHz Intel® Core™ i5 8500T Processor 2.1GHz Intel® Core™ i7 8700T Processor 2.4GHz
Chip set			Intel® Q370
BIOS			BIOS (mfd. by AMI)
Memory [Selection]			Max 32GB, 288pin U-DIMM Socket x 4, DDR4-2666 SDRAM 8GB: 8GB DDR4 U-DIMM 2666MHz x 1 16GB: 8GB DDR4 U-DIMM 2666MHz x 2 32GB: 8GB DDR4 U-DIMM 2666MHz x 4
Graphic			
	Controller		Intel® HD Graphics 610 (Celeron® type) Intel® HD Graphics 630 (Core™ i5, Core™ i7 type)
	System resolution	HDMI	800 x 600, 1,024 x 768, 1,152 x 864, 1,280 x 600, 1,280 x 720, 1,280 x 768, 1,280 x 800, 1,280 x 960, 1,280 x 1,024, 1360 x 768, 1,366 x 768, 1,400 x 1,050, 1,440 x 900, 1,600 x 900, 1,600 x 1,200, 1,680 x 1,050, 1,920 x 1,080, 1,920 x 1,440, 2,048 x 1,152, 2,048 x 1,536, 2,560 x 1,600, 2,560 x 1,920, 2,560 x 2,048, 3,840 x 2,160 (16,770,000 colors)
		Display Port	800 x 600, 1,024 x 768, 1,152 x 864, 1,280 x 600, 1,280 x 720, 1,280 x 768, 1,280 x 800, 1,280 x 960, 1,280 x 1,024, 1,360 x 768, 1,366 x 768, 1,400 x 1,050, 1,440 x 900, 1,600 x 900, 1,600 x 1,200, 1,680 x 1,050, 1,920 x 1,080, 1,920 x 1,440, 2,048 x 1,152, 2,048 x 1,536, 2,560 x 1,600, 2,560 x 1,920, 2,560 x 2,048, 3,840 x 2,160 (16,770,000 colors)
		DVI-I	800 x 600, 1,024 x 768, 1,152 x 864, 1,280 x 600, 1,280 x 720, 1,280 x 768, 1,280 x 800, 1,280 x 960, 1,280 x 1,024, 1,360 x 768, 1,366 x 768, 1,400 x 1,050, 1,440 x 900, 1,600 x 900, 1,600 x 1,200, 1,680 x 1,050, 1,920 x 1,080 (16,770,000 colors)
Storage [Selection]			- Removable drive, SATA III 3.5-inch x 2 SATA III 3.5-inch HDD 2TB (Max. 2pcs) SATA III 3.5-inch HDD 4TB (Max. 2pcs) SATA III 2.5-inch SSD 256GB (Max. 2pcs) Hardware RAID (Mirroring) / Software RAID (Mirroring) - Shadow bay, SATA III 2.5-inch x 1 *1 SATA III 2.5-inch SSD 256GB (Max. 1pc)
Optical drive [Selection] *1			DVD Super Multi drive
Interface	Display		DVI-I x 1, HDMI x 1, DisplayPort x 1, Supports three displays (HDMI and DisplayPort: 4K output, DVI: 1080p)
	USB		A-TYPE connector Front : USB2.0 x 2 ports, Inside : USB2.0 x 2, Rear : USB3.2 Gen1 x 4 ports, USB2.0 x 2 ports
	Audio		HD Audio compliant, 3.5φ stereo mini jack, Realtek ALC892 controller, LINE OUT x 1, LINE IN x 1, MIC IN x 1
	Serial		9-pin D-SUB connector(male) x 4 (RS-232C/422A/485 x 1, RS-232C x 3) Baud rate : 50 - 115,200bps
	LAN		3 ports (RJ-45 connector) LAN A, B : Intel I211-AT controller, LAN C : Intel I219-LM controller 1000BASE-T/100BASE-TX/10BASE-T, Wake On LAN
	Digital I/O		Front: LED outputs x 2, Rear: outputs x 2, inputs x 4
Expansion slot [Selection]			- PCI slot x 3 Usable board dimension: Max. 176mm(L) x 106mm(H) - PCI Express(x1) slot x 1, PCI slot x 2 Usable board dimension: Max. 176mm(L) x 106mm(H)
Hardware monitoring			Monitoring CPU temperature, board temperature, power voltage
Watch Dog Timer			Software programmable, 255 level (1sec - 255 sec),

Item	Description
	Causes a reset upon time-out.
Security (TPM)	TCG TPM2.0
RTC/CMOS	Lithium backup battery life : 7 years or longer The real-time clock is accurate within ±3 minutes (at 25℃) per month,
Power Management	Power management setup via BIOS, Power On by Ring / Wake On LAN
Supportable OS *1 [Selection]	Windows 10 IoT Enterprise 2019 LTSC 64bit (Japanese / English / Chinese / Korean)
Power supply	250W FlexATX power supply (50/60Hz Input auto switching)
Rated input voltage	100 - 240VAC
Range of input voltage	90 - 264VAC
Power consumption (Max.)	100 - 240VAC, 2.4 - 1.0A

External device power supply capacity	- Without expansion slots:
	USB I/F +5V: Total 5.6A
	- PCI slot x 3:
	USB I/F +5V: 5.6A
	  PCI slot
	  Total
	  +3.3V: 6A, +5V: 6A,
	  +12V: 1.5A
	  Capacity per slot
	  +3.3V: 2A, +5V: 2A,
	  +12V: 0.5A
	- PCI-Express(x1) slot x 1, PCI slot x 2:
	USB I/F +5V: Total 5.6A
	PCI slot
	Total
	  +3.3V: 2A, +5V: 2A,
	  +12V: 0.5A
	- PCI-Express(x1) slot:
	  +3.3V: 3A, +12V: 0.5A

Physical dimensions (mm)	115(W) x 410(D) x 310(H) (No protrusions)
Weight *2	About 8.0kg (Excluding attachment fittings)

*1 The shadow bay and optical drive are exclusive.
*2 The weight (which does not include accessories) may vary depending on the product configuration.
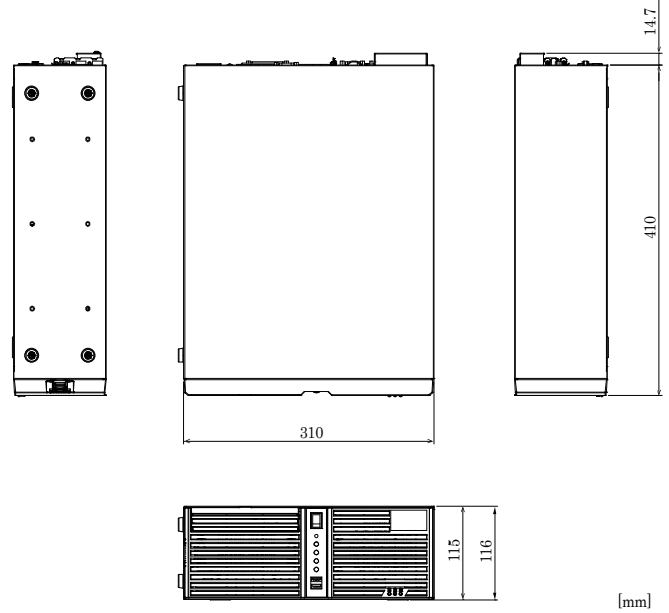
Ambient specification

Item	Description
Operating ambient temperature	5 - 40℃
Non-operating ambient temperature	-20 - +60℃
Operating ambient humidity	20 - 80%RH (No condensation)
Non-operating ambient humidity	20 - 80%RH (No condensation)
Floating dust particles	Not to be excessive
Corrosive gases	None
Line-noise resistance	Line noise	AC line / ±2kV, Signal line / ±1kV (IEC61000-4-4 Level 3, EN61000-4-4 Level 3)
	Static electricity resistance	Contact discharge / ±4kV (IEC61000-4-2 Level 2, EN61000-4-2 Level 2) Atmospheric discharge / ±8kV (IEC61000-4-2 Level 3, EN61000-4-2 Level 3)
Vibration resistance	Sweep resistance	10 - 57Hz / semi-amplitude : 0.035 mm, 57 - 150Hz / 0.5G 40 min. each in x, y, and z directions (JIS C60068-2-6 compliant, IEC60068-2-6 compliant)
Shock resistance		10G, half-sine shock for 11 ms in x, y, and z directions (JIS C60068-2-27-compliant, IEC60068-2-27-compliant)
Grounding		Class D grounding, SG-FG / continuity
Standard		VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive)

Option Mirror card specification

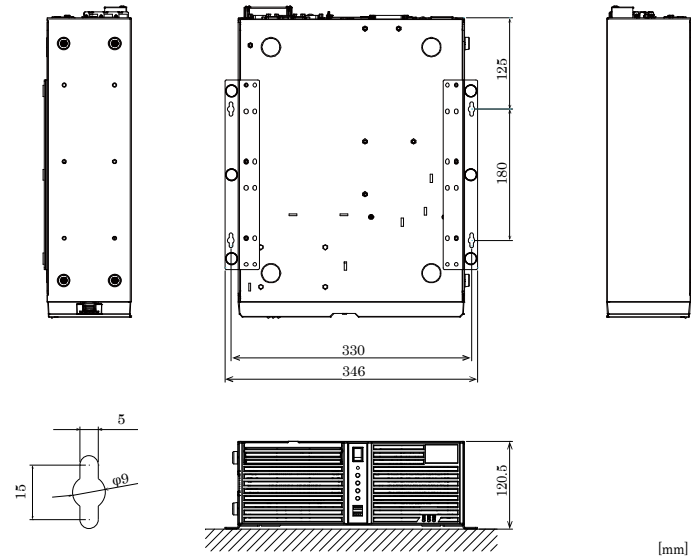| Item	Description
Model Name	SVRC-C600SA
Number of connected drives	2
RAID level	1
Storage capacity	Max. 4TB
Cache memory size	1MB
Host interface	Serial ATA 3.0
Transfer mode	6.0Gb/s, 3.0Gb/s (Auto or fixed into 3.0Gb/s)
Max transfer speed	6.0Gb/s (Theoretical value)
Drive interface	Serial ATA 3.0
Transfer mode	6.0Gb/s, 3.0Gb/s (Auto or fixed into 3.0Gb/s)
Max transfer speed	6.0Gb/s (Theoretical value)
Power voltage range	4.75VDC - 5VDC
Current consumption	Max. 1.5A
Physical dimensions (mm)	96.0(W)×98.2(D)
Weight	About 51g

Physical Dimensions

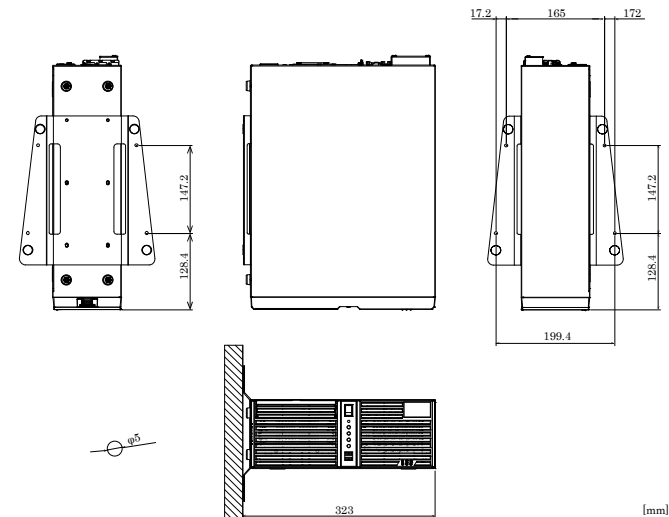### VPC-1700 (Horizontal putting)

*   116mm is the height including the protrusion for attaching rubber feet.

VPC-1700 (At installation the wall mount stand)

VPC-1700 (At installation the vertical stand)

Replacement Parts for Maintenance

Hard disk

HDD-2TS-3	2.5 inch SATA HDD 2TB
HDD-2TS-3R	2.5 inch SATA HDD 2TB (RAID support)
HDD-4TS-3	3.5 inch SATA HDD 4TB
HDD-4TS-3R	3.5 inch SATA HDD 4TB (RAID support)

SSD

SSD-256GS-2T	2.5 inch SATA SSD 256G 3D TLC
SSD-256GS-2TR	2.5 inch SATA SSD 256G 3D TLC
	(RAID support)

CAUTION

If a product other than our replacement parts one is used, the normal operation may be impaired or the functions may be limited.

*   Visit the CONTEC website for the latest optional products.

Packing List

- Product [VPC-1700 Series] …1
- Bracket for Horizontal Orientation …2
- Vertical stand …1 *1
- AC Cable (125VAC, 3P type) …1
- DVI-analog RGB conversion adapter …1
- I/O Terminal Connector …2
- Cable Tie …8
- Rubber feet …4
- Countersunk Screw (#6-32 x 5) …1 set
- Pan-head Screw (M3 x 6) …6
- Truss-head Screw (M4 x 6) …12
- Keyboard …1 *1
- Mouse …1 *1
- Nameplate …1
- Product Guide …1
- Warranty Certificate …1
- Serial Number Label …1
- Recovery Disk/Driver Disk …1 *2

*1 This may not be included depending on the product configuration.
*2 The recovery disk is included for the product with an OS installing type. The driver disk is included for the product without an OS.

Supported OS

-    Windows 10 IoT Enterprise 2019 LTSC 64bit
     (Japanese / English / Chinese / Korean)

Differences between the VPC-1700 and the VPC-1600

	VPC-1700	VPC-1600
CPU	Intel® Celeron® G4900T / Core™ i5 8500T / Core™ i7 8700T	Intel® Celeron® G1820TE 2.2GHz / Core™ i5 4570TE 2.7GHz
Chipset	Intel® Q370	Intel® Q87
Memory	32GB max. 288pin DDR4 SDRAM U-DIMM socket × 4	16GB max. 240pin DDR3 SDRAM U-DIMM socket × 4
Parallel port	None	1port 25pinD-SUB connector (Female)
Extended slot	PCI slot x 3, or PCI Express(x1) slot x 1 and PCI slot x 2	PCI slot x 3
Security (TPM)	TCG TPM2.0	Not supported
OS	Windows 10 IoT Enterprise 2019 LTSC 64bit (Japanese/English/Chinese/Korean)	Windows 7 Professional for Embedded Systems 32bit Japanese Windows 7 Professional for Embedded Systems 64bit Japanese Windows 7 Ultimate for Embedded Systems 32bit (Japanese/English/Chinese) Windows 7 Ultimate for Embedded Systems 64bit (Japanese/English/Chinese/Korean) Windows Embedded 8.1 Industry Pro 64bit Japanese Windows 10 IoT Enterprise LTSB 2016 64bit (Japanese/English/Chinese/Korean)

BTO Custom Model (BTO Menu)

CPU	Celeron® G4900T	Core™ i5 8500T	Core™ i7 8700T	

Memory	8GB	16GB	32GB	

Storage1 *1	None	2TB HDD	4TB HDD	256GB SSD

Storage2 *2	None	2TB HDD	4TB HDD	256GB SSD

Optics System Drive or Storage (Shadow bay)	None	DVD Super Multi Drive	2.5inch SSD 256GB 3D TLC	

RAID	None	Hardware RAID (RAID 1)	Software RAID (RAID 1)	

OS	None	Windows 10 IoT Enterprise 2019 LTSC 64bit (Japanese / English / Chinese / Korean)		

Extended slot	None	PCI x 3	PCI Express (x1) slot x 1, PCI slot x 2	

Stand	Horizontal installation bracket	Horizontal installation bracket plus Vertical stand		

Option [Keyboard & Mouse]	None	Japanese 109 keyboard	Japanese 109 keyboard + Optical mouse	Optical mouse
	English 104 keyboard	English 104 Keyboard + Optical mouse		

Option [OS installation destination] *2	None	Storage 1	Shadow bay	

Option [Partition] *2	Without a partition	With a partition		

Option [maintenance service] *3	None	Two-year maintenance service package	Three-year maintenance service package	

*1   With 2TB HDD / 4TB HDD / 256GB SSD x2, software RAID and hardware RAID can be supported.
*2   Only available with the OS installed model
*3   This service is only available in Japan.

Standard Model

Model Name	CPU	Memory	Storage1	Storage2	DVD	RAID	OS	Expansion slot
VPC-1700-BS2810A0101W1000 *1 *2 *3	Celeron® G4900T	8GB	2TB HDD	none	Optical drive	none	Win10 IoT 2019	3 x PCI
VPC-1700-BS3810A0101W1000 *1 *2 *3	Core™ i5 8500T	8GB	2TB HDD	none	Optical drive	none	Win10 IoT 2019	3 x PCI
VPC-1700-BS3811AH101W1000 *1 *2 *3	Core™ i5 8500T	8GB	2TB HDD	2TB HDD	Optical drive	Hardware RAID (RAID1)	Win10 IoT 2019	3 x PCI

*1 The stand (Bracket for Horizontal Orientation) is included in the package.
*2 Keyboard/mouse selection is "None".
*3 Partition Selecting Service, Easy Assembly Service, and On-site Maintenance Services are "None".
Win10 IoT 2019 : Windows 10 IoT Enterprise 2019

* The contents in this document are subject to change without notice.
* Visit the CONTEC website to check the latest details.
* Visit the CONTEC website to check the latest OS.
* The information in the data sheets is as of June 2021