

## PANEL-PC, Fanless Atom E3845, 12 - 24VDC input PT-XXXA-120 Series



\* The photo is PT-F10SA-120.

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

### Features

- Contributing to running cost reduction and energy efficiency  
Adopting the low-power platform of Intel® Atom™ Processor E3845 achieves lower power consumption while still ensuring sufficient performance.
  - Fanless design that reduces maintenance and inspection work  
This product employs a CFast card for storage and the spindle-less design eliminates CPU fan. It relieves the concern about dust or foreign matter to get into the product. Furthermore, using the parts that degrade over time is minimized to reduce maintenance load.
  - Remote power management function to reduce operation tasks  
It supports system start-up externally via network (Wake On LAN) and modem (Power On by Ring). It encourages significant labor saving in operation.
  - High definition supported DVI external display output  
This product has the up to 1920 x 1080 pixels DVI external display output as standard feature. A standalone two-display application which, for example, displays the screen on a big LCD TV separately from the main LCD, can be built.
  - A wide range of power supplies (10.8 - 31.2VDC) supported  
As the product supports a wide range of power (10.8 - 31.2VDC), it can be used in a variety of power environments.
  - Major types of peripherals are supported with rich interfaces  
It has a variety of extended interface such as DVI-D x 1, LAN x 2, USB3.2 Gen1 (USB3.0) x 1, USB2.0 x 3, serial x 2 \*.
- It has two slot-in type of CFast card slots, providing the ability to separate data from the operating system, as well as the convenience of being able to use one slot for system startup and the other for maintenance or for taking home system logs or collected data.

\* The 7-inch model has one serial port.

### Supported OS

- Windows Embedded Standard 7 32bit

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This product is a fan-less PANEL computer that is equipped with an Intel® Atom™ processor E3845 1.91GHz. Along with the compact 7-inch LCD model, the 10.4-inch and the 12.1-inch LCD models are also offered to suit the user's needs. Various extendable interfaces such as DVI-I, LAN, USB3.2 Gen1 (USB3.0), USB2.0, and Serial are provided. It employs a CFast card for storage and is fan-less to ensure a totally spindle-less design that simplifies maintenance.

This product's safety has been certified to meet the UL standard for Europe and the U.S.

Embedded-type CPU has been adopted. The use of readily available parts ensures the product to be applied easily. In addition, CONTEC-customized BIOS allows support to be provided at the BIOS level.

\* The contents in this document are subject to change without notice.

\* Visit the CONTEC website to check the latest details.

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\* The information in the data sheets is as of September 2021.

### Specifications

#### Functional Specifications

Item		Description
Frame type		PT-M07WA : Bezel PT-F10SA, PT-F12SA : Open frame
Assembly type		Panel mounted
CPU		Intel® Atom™ Processor E3845 1.91GHz
BIOS		BIOS (mfd. by AMI)
Memory		4GB (204-pin SO-DIMM x 1), PC3L-10600 DDR3L 1333 ECC
Graphics Controller		Intel® HD Graphics (CPU integrated)
LCD type	LCD	PT-M07WA : 7-inch TFT color LCD, WVGA (800 x 480) PT-F10SA : 10.4-inch TFT color LCD, XGA (1,024 x 768) PT-F12SA : 12.1-inch TFT color LCD, XGA (1,024 x 768)
	Backlight	LED method, The ON/OFF can be controlled by software command.
Touch-screen *1	Resolution	PT-M07WA : 4,096 x 4,096 (emulated in 800 x 480 mode) PT-F10SA, PT-F12SA : 4,096 x 4,096 (emulated in 1,024 x 768 mode)
	Detection method	Four-wire resistive film analog method
	Connection	Internal serial port
System resolution	1 port (29-pin DVI-I connector)	
	DVI-D *2	640 x 480, 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, 1,680 x 1,050, 1,920 x 1,080 (16,770,000 colors)
	Analog RGB	640 x 480, 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, 1,680 x 1,050, 1,920 x 1,080, 1,920 x 1,200 (16,770,000 colors)
Audio		HD Audio compliant, LINE OUT x 1 LINE OUT : 3.5φ stereo minijack Full-scale output level 1.2Vrms (Typ.)
CFast Card slot		2 slots, CFast CARD Type I, bootable
LAN		RJ-45 connector x 2 Intel I210IT controller 1000BASE-T/100BASE-TX/10BASE-T, supports Wake On LAN
USB		USB 3.2 Gen1 (USB3.0)-compliant x 1 port (Type-A connector) USB 2.0-compliant x 3 ports (Type-A connector)
Serial		PT-M07WA : RS-232C 1 port (9-pin D-SUB connector [male]) PT-F10SA, PT-F12SA : RS-232C 2 ports (9-pin D-SUB connector [male]) RS-232C 2 ports (pin header) Baud rate: 50 - 115,200bps
Hardware monitoring		Monitoring CPU temperature, board temperature, power voltage
Watchdog timer (WDT)		Software programmable, 255 level (1sec - 255sec) Time up allows reset shutdown.
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 Management		Power management setup via BIOS Power On by Ring/Wake On LAN Supports ACPI Power management
Power supply	Rated input voltage	12 - 24VDC *3

Item	Description	
Input voltage range	Current consumption	PT-M07WA: 12V 2.6A, 24V 1.4A(Max) PT-F10SA: 12V 3.1A, 24V 1.7A(Max) PT-F12SA: 12V 3.6A, 24V 1.8A(Max)
	External device power supply capacity	CFast card slot: +3.3V 1.0A (500mA x 2 per slot) USB3.2 Gen1 (USB3.0) I/F: +5V 0.9A (900mA x 1 per port) USB2.0 I/F: +5V 1.5A (500mA x 3 per port)
	Drip-proofing and dust-proofing	PT-M07WA: IP65 standard (Front panel) PT-F10SA/PT-F12SA: -
Cutting dimensions of the screen (mm)	PT-M07WA: 197(W) x 141(H) PT-F10SA: 225.2(W) x 176.5(H) PT-F12SA: 265.5(W) x 206(H)	
Physical dimensions (mm)	PT-M07WA: 214(W) x 55(D) x 158(H) PT-F10SA: 233.5(W) x 48.4(D) x 220(H) PT-F12SA: 302(W) x 48.4(D) x 260(H) (Not including the attachment fittings or protrusions)	
Weight	PT-M07WA: 1.6kg (approx) PT-F10SA: 2.0kg (approx) PT-F12SA: 2.5kg (approx) (Not including the attachment fittings)	

- \*1 Linearity:  $\pm 2.0\%$  max. The operating life is 10 million continuous keying (with touch screen inputs).  
 \*2 The DVI display will be shown on the screen after you start Windows.  
 \*3 Use a power cable shorter than 3m.

#### Environment Requirements

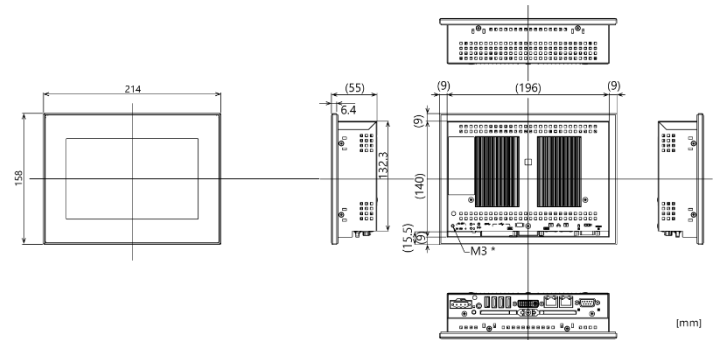
Item	Description	
Operating Temperature	0 - 55°C	
Storage Temperature	-10 - +60°C	
Humidity	5 - 85%RH (No condensation)	
Floating dust particles	Not to be excessive	
Corrosive gases	None	
Line-noise resistance	Line noise	AC Line / $\pm 2$ kV, Signal line / $\pm 1$ kV (IEC61000-4-4 Level 3, EN61000-4-4 Level 3)
	Static electricity resistance	Contact discharge / $\pm 4$ kV (IEC61000-4-2 Level 2, EN61000-4-2 Level 2) Air discharge / $\pm 8$ kV (IEC61000-4-2 Level 3, EN61000-4-2 Level 3)
Vibration resistance (The product alone)	Sweep resistance	10 - 57Hz/semi-amplitude vibration 0.075mm, 57 - 150Hz/1.0G 40minutes each in X, Y, and Z directions (JIS C60068-2-6-compliant, IEC60068-2-6-compliant)
Impact resistance	10G half-sine shock for 11ms in X, Y, and Z directions (JIS C 60068-2-27-compliant, IEC 60068-2-27-compliant)	
Grounding	Class D grounding, SG-FG / continuity	
Standard	VCCI Class A, CE Marking (EMC Directive Class A, RoHS Directive), UL/c-UL (UL61010-1)	

#### Packing List

- Product...1  
 The Attachment Fittings...4  
 Power Connector...1  
 CFast Card Removal Prevention Fitting...1  
 Product Guide...1  
 UL Guide...1  
 IPC Precaution List...1  
 Warranty Certificate...1  
 Serial Number Label...1

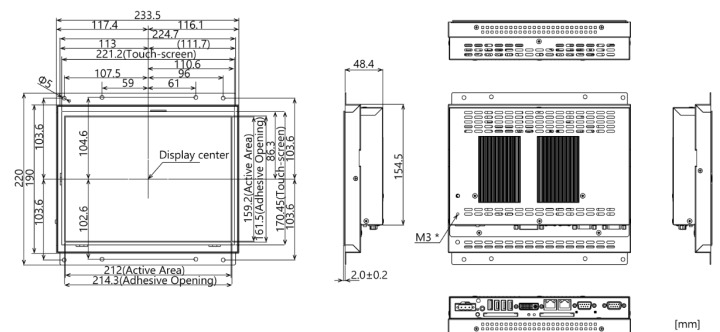
#### Physical Dimensions

##### PT-M07WA-120 [7inch model]



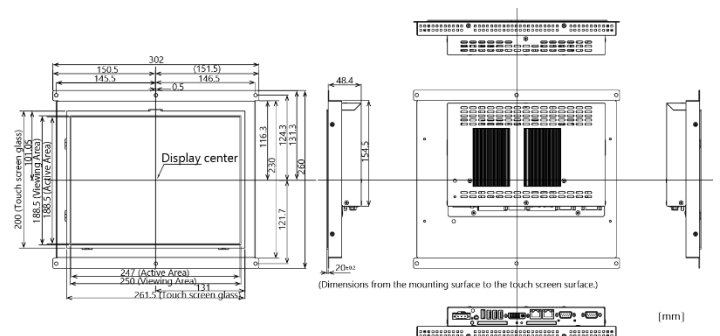
\* Keep the penetration length from the housing surface to the end of the M3 screw 9mm or less.  
 Using longer screws can damage the internal components.

##### PT-F10SA-120 [10.4inch model]



\* Keep the penetration length from the housing surface to the end of the M3 screw 9mm or less.  
 Using longer screws can damage the internal components.

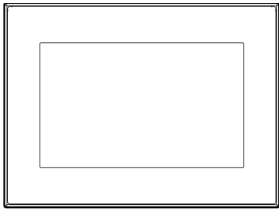
##### PT-F12SA-120 [12.1inch model]



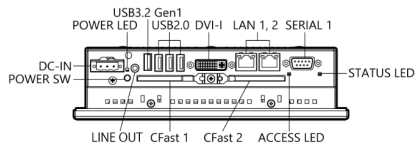
#### Component Name

### PT-M07WA-120 [7inch model]

Front

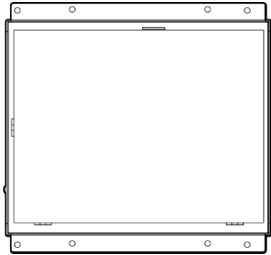


Bottom of the display

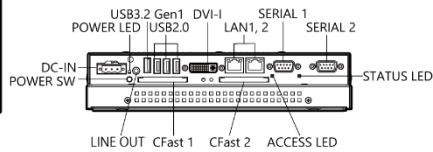


### PT-F10SA-120 [10.4inch model]

Front

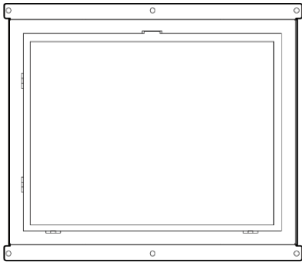


Bottom of the display

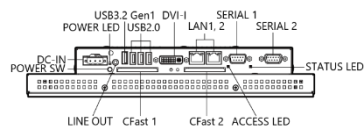


### PT-F12SA-120 [12.1inch model]

Front



Bottom of the display



Name	Function
<b>Bottom of the display</b>	
POWER SW	PC Power switch
POWER LED	Power ON display LED
ACCESS LED	SATA access display LED
STATUS LED	Status LED
DC-IN	DC power input
LINE OUT	LINE OUT (3.5Φ PHONE JACK)
LAN 1	Ethernet 1000BASE-T/100BASE-TX/10BASE-T RJ-45 connector
LAN 2	Ethernet 1000BASE-T/100BASE-TX/10BASE-T RJ-45 connector
USB3.2 Gen1	USB 3.2 Gen1 (USB3.0) port connector x 1
USB2.0	USB 2.0 port connector x 3
SERIAL 1	Serial port A connector (9-pin D-SUB, male)
SERIAL 2	Serial port B connector (9-pin D-SUB, male) *1
DVI-I	Display (29-pin, female)
CFast 1	CFast card slot (SATA connection)
CFast 2	CFast card slot (SATA connection)

\*1 10.4-inch and 12.1-inch models only.

## Product Lineups

Model	LCD size / Resolution	Memory	Storage	OS
PT-M07WA-120-J103NA	7-inch WVGA (800 x 480)	4GB	None	None
PT-F10SA-120-J103NA	10.4-inch XGA (1,024 x 768)	4GB	None	None
PT-F12SA-120-J103NA	12.1-inch XGA (1,024 x 768)	4GB	None	None