Panel Computer
PT-970 A/B Series

This product is the "All-in-One" type PC, which has a10.1-inch size (WXGA 1280×800) LCD touch screen integrated.

Since only selected interfaces such as 1000BASE-T, USB 2.0, and Audio are provided, the product can be installed in a smaller space comparing to our earlier panel integrated computers.

Embedded-type CPU has been adopted. The use of readily available parts ensures the product to be applied easily. In addition, the use of 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 in the document.
* The information in the data sheets is as of June, 2022.

Features

- **Selectable touch-screen types**
The CONTEC offers two types of touch-screen, resistive-film or capacitive to satisfy our customer's needs .

- **The compact design features flexibility in installation**
With minimum interfaces such as USB2.0×1, LAN×1, and Audio×1, the compact size PC, (259(W)×23(D)×169(H), features flexibility in installation.

- **Contributing to running cost reduction and energy efficiency**
Adopting the low-power platform of Intel® Atom(TM) Processor E3845 achieves lower power consumption while still ensuring sufficient performance.

- **Fan-less design that reduces maintenance and inspection work**
This product's spindle-less design eliminates CPU fan, and relieves the concern about dust or foreign matter to get into the product. The using parts that degrade over time is minimized to facilitate maintenance.

- **VESA standard support**
Conforming to the VESA standard (75×75), the product can be set on the various types of arms or stands.

Packing List

Product...1
Power Connector Set (Connector... 1, Contact... 2, Returner... 1)
Spacer...4
Hollow Spacer...4
Product Guide...1
IPC Precaution List...1
Warranty Certificate ...1
Serial Number Label ...1
Royalty consent contract. *1 ...1
Recovery disk *1...1

*1　　Only packed in the product with the OS installed model.

Specification

Function Specifications

Item		Description	
		PT-970W10WA	PT-970W10WB
CPU		Intel Atom® Processor E3845 1.91GHz	
BIOS		BIOS (mfd. by AMI)	
Memory		4GB, PC3-10600(DDR3L 1333) ECC, On Board	
Graphic		Intel® HD Graphics (built-in CPU)	
LCD type	LCD type	10.1-inch TFT color LCD, WXGA (1280 x 800)	
	Backlight	LED method, The ON/OFF software can control.	
Touch panel	Resolution	WXGA (1280×800)	
	Detection method	Resistive-film analog type	Capacitive type
	Connection	Internal serial port	Internal USB port
Audio		HD Audio compliant, LINE OUT x 1 3.5φ stereo minijack, Full-scale output level 1.2Vrms (Typ.)	
LAN		Intel I210IT controller 1000BASE-T/100BASE-TX/10BASE-T RJ-45 connector x 1 (supports Wake On LAN)	
USB		Type-A controller USB 2.0-compliant x 1 port	
SATA		M.2 32GB (MLC) built-in *1	
Security (TPM)		TCG TPM2.0	
Hardware monitoring		Monitoring CPU temperature, board temperature, power voltage	
Watchdog timer		Software programmable ,255 level (1sec - 255sec) Time up allows reset	
RTC/CMOS		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).	
Power Management		Power management setup via BIOS Power On by Ring/Wake On LAN Supports ACPI Power management	
Rated input voltage		5VDC	
Range of input voltage		5VDC±5%	
Power consumption (Max.)		4.2A	4.4A
External device power supply capacity		USB2.0 I/F : +5V : 0.5A × 1	
Physical dimensions (mm)		254(W) x 22(D) x 166(H) (Not including protrusions)	259(W) x 23(D) x 169(H) (Not including protrusions)
Weight		650g approx.	700g approx.

*1　　It is already built in the product.　　The capacity that can be recognized from OS might be displayed fewer than an actual value.

Environment Requirements

Item		Description
Operating ambient temperature		0 - +40℃ *2
Non-operating ambient temperature		-10 - +50℃
Operating ambient humidity		10 - 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	0 - 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)
Shock resistance		10G half-sine shock for 11ms in X, Y, and Z directions (JIS C 60068-2-27 –compliant, IEC 60068-2-27 -compliant)
Standard		VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive), UKCA
Grounding		Class D grounding

*2   Derating occurs due to the way of installation. For more details on this, refer to "Installation Requirements".

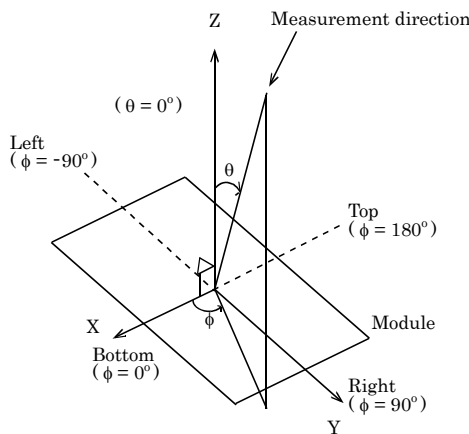## Display Optical Specifications

Parameter	Condition			Min.	Typ.
Visual angle (vertical)	CR ≥ 10	φ = 180°	Display. Monochrome	80deg	85deg
		φ = 0°		80deg	85deg
Visual angle (horizontal)		φ = +90°		80deg	85deg
		Φ = -90°		80deg	85deg
Surface brightness (at center)	Display in white			255cd/m2	300cd/m2

*   "Surface brightness" represents a numerical value per display. The expected brightness through a touch screen is about 80% lower than the above value.

$$\text{Contrast ratio (CR)} = \frac{\text{Brightness at screen center with white displayed}}{\text{Brightness at screen center with black displayed}}$$

Visual Range Definition

Caution
The above optical specification data shows optical characteristics of the liquid crystal in the display; the data does not represent the actual view on the display or its viewing angles.

List of Options

Stand
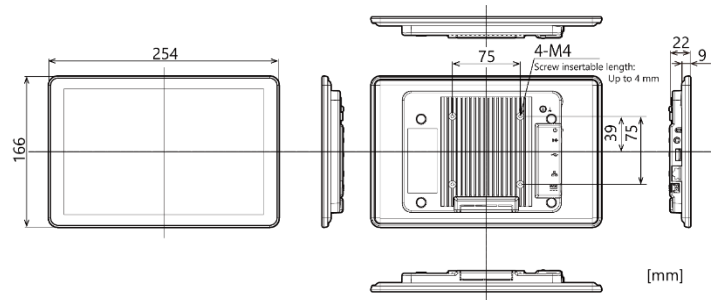IPC-SND-03   Desk stand

CAUTION
If a product other than our optional one is used, the normal operation may be impaired or the functions may be limited.
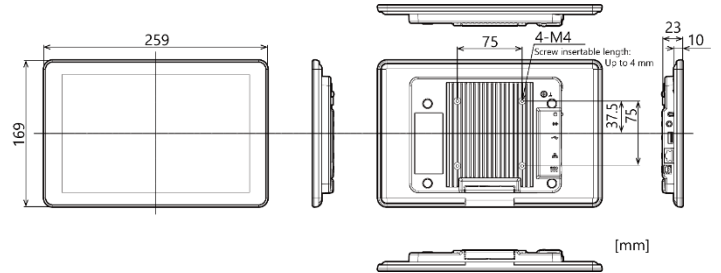
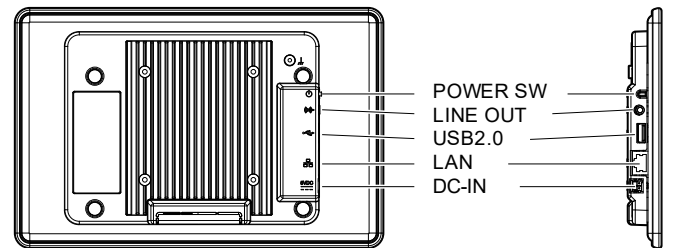*   Visit the CONTEC website for the latest optional products.

Physical Dimension

PT-970W10WA

[mm]

PT-970W10WB

[mm]

Nomenclature of Product Components

POWER SW
LINE OUT
USB2.0
LAN
DC-IN

Component Function

Name	Function
POWER-SW	Power switch
LINE OUT	Line out, (3.5φ stereo minijack) x 1
USB2.0	USB2.0 port, TYPE-A connector x 1
LAN	Ethernet 1000BASE-T/100BASE-TX/10BASE-T, RJ-45 Connector
DC-IN	DC5V power input connector

Product Lineup

Model	Memory	Storage	Touch Screen	OS
PT-970W10WA-DC5-790000	4GB	32GB	Resistive-film	None
PT-970W10WA-DC5-791724				Windows 10 IoT Enterprise 2016 LTSB 64bit (Japanese / English / Chinese / Korean)
PT-970W10WB-DC5-790000			Capacitive	None
PT-970W10WB-DC5-791724				Windows 10 IoT Enterprise 2016 LTSB 64bit (Japanese / English / Chinese / Korean)