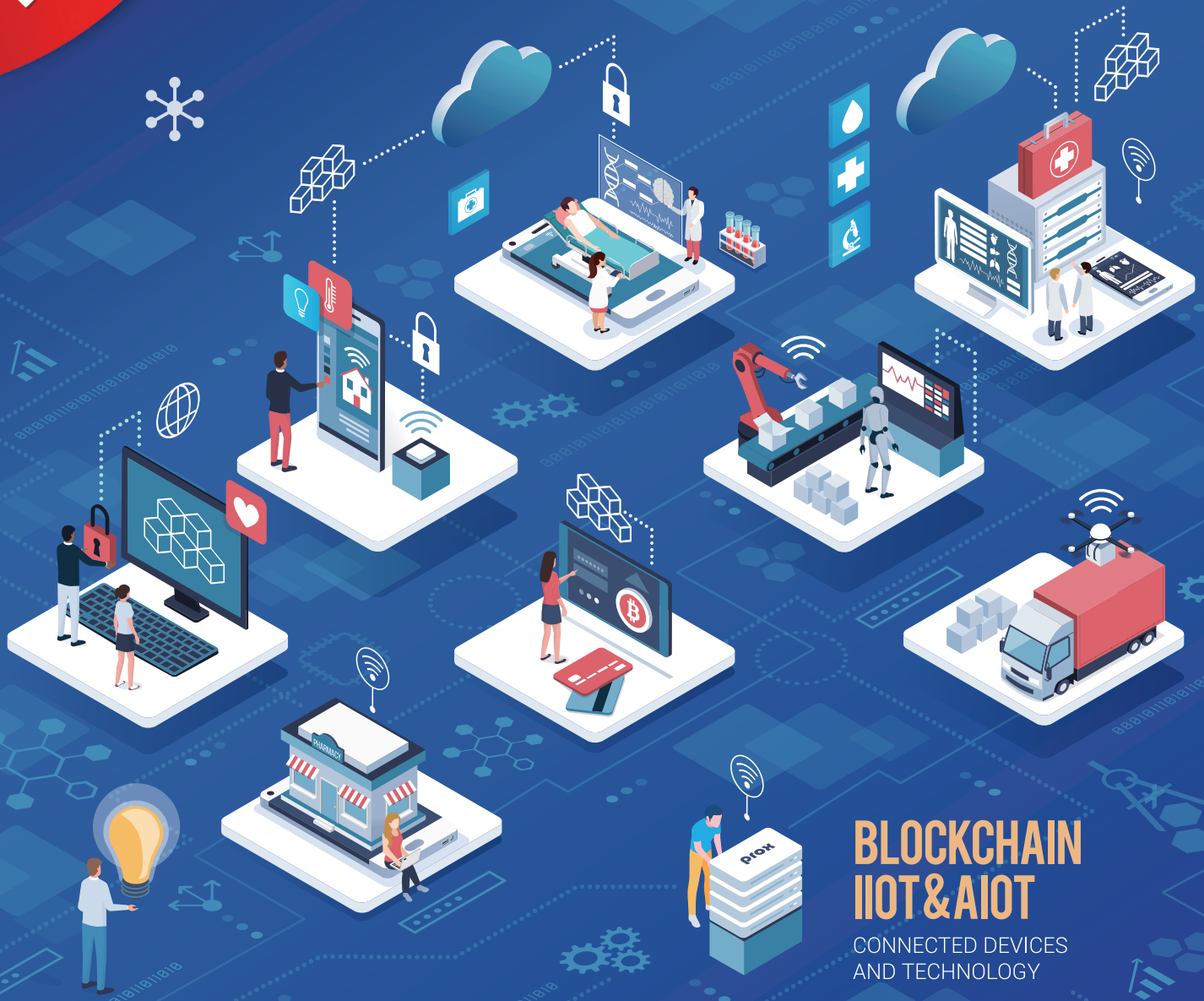


NEW



BLOCKCHAIN IIOT & AIOT

CONNECTED DEVICES AND TECHNOLOGY

POS & IPC | 2023 SELECTION GUIDE

POS

- POS Terminal
- KIOSK
- Tablet
- Peripheral

IPC

- Industrial CPU Board
- Wall & Rack Mount System
- Applied Computer
- Panel PC

- Full IP66/IP69K Panel PC
- Industrial Monitor
- IIoT Edge Controller
- Remote I/O Module
- EtherCAT Slave I/O Module



Protech Website

NEW

2023 POS & IPC SELECTION GUIDE



www.protech.com.tw

Founded in 1980, Protech Systems is the leading company in the industrial PC industry, bringing intelligent and high-quality products for industrial IoT and AIoT applications with our own brand 「PROX」. Committed to innovation, we provide a comprehensive product portfolio with ground-breaking technology, including industrial board, embedded system, panel PC, remote I/O module, EtherCAT slave module, rugged tablet, POS, Kiosk, and integrated solutions. Our goal is to bring smart power to the IoT world and accelerate industrial efficiency and transformation. "Honesty, Aggressiveness, Stable Growth" are our business philosophy, "Technology, Innovation, Excellence, Sustainability" are our core values, we believe that only "Top Quality, Optimal Function, Best Service" will bring significant progress together with our customers and partners.



Protech Systems Co., Ltd.
No. 24, Lane 365, Yang Kuang Street,
Nei Hu District, Taipei 114, Taiwan, R.O.C.
TEL: +886-2-8751-1111
FAX: +886-2-8751-1199
E-mail:sales@protech.com.tw
<https://www.protech.com.tw>



Liu-Du Technology Park
No.7, Gongjian N. Rd., Qidu Dist.,
Keelung City 206, Taiwan, R.O.C.
TEL: +886-2-2452-9999
FAX: +886-2-2452-8777
E-mail:sales@protech.com.tw
<https://www.protech.com.tw>



Protech Japan Co., Ltd.
OSK Bldg, 6F, 6-25-14, Minami-ohi
Shinagawa-ku, Tokyo, 140-0013
TEL: +81-3-5753-8411
FAX: +81-3-3763-9282
E-mail:marketing@protech-j.com
<http://www.protech-j.com>



Protech Technologies Inc.
950 Fee Ana St., Suite B
Placentia, CA 92870
TEL: +1-714-996-7200
FAX: +1-714-996-7300
E-mail:sales@protech-usa.net
<http://www.protech-usa.net>



PROX SYSTEMS Germany GmbH
Weststrasse 20a, 40721 Hilden
Düsseldorf, Germany
TEL: +49 (0) 2103-41898-0
FAX: +49 (0) 2103-41898-10
E-mail:sales@prox-systems.eu
<http://www.prox-systems.eu>



PROX SYSTEMS SPAIN S.L.
C/ Albasanz 14 Bis, 2ºD
28037 Madrid, Spain
TEL: (+34) 917648559
Mobile: (+34) 661214507
E-mail:sales.spain@prox-systems.com
<http://www.prox-systems.com>



BLOCKCHAIN IIOT & AIOT

CONNECTED DEVICES
AND TECHNOLOGY



Protech Website

Table of Contents



Chapter 1

POS Terminal

2 Payment POS Selection Guide



- 2 **PA-R120**
Desktop Non-Cash Self-Payment POS



- 2 **PA-J600E**
Multi-Functional Kiosk

3 All in One Selection Guide



- 3 **PA-A310**
Highly Integrated Fanless All in One 10.1" POS Terminal



- 3 **PA-A900**
Highly Integrated Fanless All in One 15.6" POS Terminal



- 3 **PA-A901**
Highly Integrated and High Performance 15.6" All in One POS Terminal

4 Standalone Selection Guide



- 4 **PA-6222** 
12.1" Waterproof Bezel-Free Touch POS Terminal



- 4 **PA-J501** *NEW*
15.6" Fanless Slim POS Terminal



- 4 **PA-J500** *NEW*
15.6" Slim POS Terminal



- 4 **PA-5880**
High Performance 15" POS Terminal



- 4 **PA-J581** *NEW*
15" Fanless Slim POS Terminal



- 5 **PA-J580**
15" Fanless Slim POS Terminal



- 5 **PA-J670**
15" Fanless Slim POS Terminal



- 5 **PA-6980**
High Performance 15" POS Terminal



- 5 **PA-6225** 
15" Waterproof Bezel-Free Touch POS Terminal



- 5 **PA-5685** 
15.6" Intel® Kaby Lake-U Series POS Terminal



- 5 **PA-J600**
21.5" Fanless Slim POS Terminal

Table of Contents



Chapter 2

KIOSK





7 KIOSK Selection Guide

- 7 **KS-M331** *NEW*
Multi-Function Kiosk
- 7 **KS-M332** *NEW*
Multi-Functional Kiosk
- 7 **KS-M333** *NEW*
Multi-Functional Kiosk
- 8 **KS-M320**
Multi-Functional Kiosk
- 8 **KS-M220** 
Multi-Functional Kiosk
- 9 **KF-P230**
Multi-Functional Kiosk
- 9 **KF-P231** *NEW*
Multi-Function Kiosk




Chapter 3


Tablet

11 Rugged Tablet Selection Guide

- 11 **MH-0616** *NEW*

- 11 **MH-T01T** *NEW*


12 Industrial Tablet Selection Guide

- 12 **MH-5752** 

- 12 **MH-5102** 

- 12 **MH-5108**


Chapter 4

Peripheral

14 Peripheral Selection Guide

- 14 **PA-V560**

Support 15" & 15.6" POS Terminal / Self-Service Kiosk
- 14 **MP-4815** Customer Display 

The industry's thinnest highly integrated module design support POS system
- 14 **MP-4815** Stand-alone Display 

The highly integrated display support different stands with the most modules
- 14 **MP-4815** Wall Mount Display 

The highly integrated display support IPC system with speaker integrated and two wall-mount kits
- 14 **MP-4003** Customer Display

High quality vacuum fluorescent customer display
- 15 **MP-1150** Mobile Printer

2" BT Mobile Thermal Printer
- 15 **MP-1060** Printer for Kitchen Display

Printer

Table of Contents



Chapter 5

Industrial CPU Board

17 Industrial CPU Board Selection Guide



- 17 **BA-2602**
ATX Intel® 9th / 8th Gen. Core™ i7 / i5 / i3 / Pentium® / Celeron® / Xeon® E-2200 / E-2100 CPU (≤65W)



- 17 **BA-2601**
ATX Intel® 8th Gen. Core™ i7 / i5 / i3 / Pentium® / Celeron® / Xeon® E-2100 CPU



- 17 **BA-2501**
ATX Intel® 7th / 6th Gen. Core™ i7 / i5 / i3 / Pentium® / Celeron® / Xeon® E3-1200 v6 / v5 CPU



- 17 **BU-B015** *NEW*
Micro-ATX Intel® 10th Gen. Core™ i9 / i7 / i5 / i3 / Pentium® / Celeron® / Xeon® W-1200 CPU



- 17 **BU-2509**
MicroATX Intel® 7th / 6th Gen. Core™ i7 / i5 / i3 / Pentium® / Celeron® / Xeon® E3-1200 v6 / v5 CPU



- 18 **BM-D025** *NEW*
Mini-ITX Intel® 10th Gen. Xeon® / Core™ i9 / i7 / i5 / i3 / Pentium® / Celeron® CPU



- 18 **BM-2505**
Mini-ITX Intel® 7th / 6th Gen. Core™ i7 / i5 / i3 / Pentium® / Celeron® CPU



- 18 **BM-2503**
Mini-ITX Intel® 7th / 6th Gen. Core™ i7 / i5 / i3 / Pentium® / Celeron® CPU



- 18 **BM-2502**
Mini-ITX Intel® 7th / 6th Gen. Core™ i7 / i5 / i3 / Pentium® / Celeron® CPU



- 18 **BM-0982**
Thin Mini-ITX Intel® Pentium® N4200 / Celeron® N3350 Embedded SoC

19 Embedded Boards Selection Guide



- 19 **BE-U236** *NEW*
3.5" Intel® 12th Gen. Core™ i7 / i5 / i3 / Celeron® SoC SBC



- 19 **BE-0996**
3.5" Intel® Kaby Lake-U Core™ i5 / i3 SoC SBC



- 19 **BE-U830** *NEW*
EPIC CPU Board with Intel® Elkhart Lake Atom® / Pentium® / Celeron® SoC CPU



- 19 **BE-0986**
3.5" SBC Intel® Celeron® / Pentium® / Atom® SoC / HDMI / 12V, 19V and 24V



- 19 **BE-0981**
3.5" SBC with Intel® Atom® x5/ x7/ Celeron® / Pentium® SoC, DC-in 12V

20 Daughter Boards Selection Guide



- 20 **BR-U830-D4**
PCIe (x4) to 4 port GbE LAN, PCIe Card



- 20 **SR-5700**
PCIe (x1) to 2Power 12V USB / 1 Power 24V USB / 1Cash Drawer, PCIe Card



- 20 **BR-U830-D2 (pair w/ BR-U830-D1)**
PCIe (x1) to 2 port GbE LAN (option PoE PSE), Kits of mini-PCIe Card & LAN Card



- 20 **BR-U830-D3 (pair w/ BR-U830-D1)**
PCIe (x1) to 2 port GbE LAN (w/ PoE PD), Kits of mini-PCIe Card & LAN Card



- 20 **SR-6150**
Speaker Add on Card for Standard mini-PCIe Slot



- 21 **BR-8080**
DP / eDP to LVDS Daughter Board



- 21 **BR-4010**
TPM Module w/ LPC Interface



- 21 **BR-6061**
LPC to 4 COM Ports Daughter Board

Table of Contents



Chapter 6

Wall & Rack Mount System

23 Wall & Rack Mount System Selection Guide



- 23 **BS-0996**
Fanless 1U Rack Mount PC with Intel® Kaby Lake-U
Core™ i5 / i3 CPU



- 23 **BS-0981**
Fanless 1U Rack Mount PC with Intel® Celeron® N3350



- 23 **BC-K201**
Industrial Rack Mount System



- 23 **BC-2602**
Industrial Rack Mount System with Intel® 9th / 8th
Gen. Core™ i7 / i5 / i3 / Pentium® / Celeron® / Xeon®
E-2200 / E-2100 CPU (≤65W)



- 23 **BS-W025**
Industrial Wall Mount System

Chapter 7

Applied Computer

25 Applied Computer Selection Guide

Embedded PC High End



- 25 **SE-N108** *NEW*
Intel® 12th Gen. Core™ i7 / i5 / i3 / Celeron® Processor
Compact and Fanless Embedded PC



- 25 **SE-N207**
Intel® 8th Gen. Core™ i7 / i5 / i3 / Celeron® Processor
Compact and Fanless Embedded PC



- 25 **BS-E099**
High Performance Intel® Kaby Lake-U Fanless
Embedded PC



- 25 **SE-8400** 
Intel® 7th / 6th Gen. Core™ Fanless and High
Performance Embedded PC

Embedded PC Entry



- 25 **BS-U830** *NEW*
Fanless Embedded PC Intel® Celeron® / Atom®
SoC Processor



- 25 **SE-8134**
Intel® Atom® / Pentium® / Celeron® Processor
Compact and Fanless Embedded PC



- 25 **BS-E098**
Fanless Embedded PC 12V / DP
Intel® Atom® / Pentium® / Celeron® Processor



- 25 **BS-E097**
Fanless Embedded PC 12V / 24V / HDMI
Intel® Atom® / Pentium® / Celeron® Processor

Box PC



- 26 **SA-N718**
Intel® 10th Gen. Core™ i9 / i7 / i5 / i3 / Pentium® /
Celeron® Processor Book Size PC

Vehicle PC




- 27 **IV-Z318** 
Intel® 11th Gen. Core™ i7 / i5 / i3 Processor Compact
and Fanless In-Vehicle Embedded PC

Table of Contents



Chapter 8

Panel PC

29 Panel PC Selection Guide



- 29 **SP-S214**
Intel® 7th Gen. Core™ High Performance
21.5" True-Flat Panel PC with Fan



- 29 **SP-S216**
Intel® 7th / 6th Gen. Core™ Fanless and High
Performance 21.5" Stainless Steel Panel PC



- 29 **SP-S211**
Intel® Celeron® Processor Fanless and Low Power
21.5" Stainless Steel Panel PC



- 29 **SP-6269**
Intel® 7th / 6th Gen. Core™ Fanless and High
Performance 19" Panel PC



- 29 **SP-6159**
Intel® Atom® / Pentium® / Celeron® Processor
Fanless and Low Power 19" Panel PC



- 30 **SP-S174**
Intel® 7th Gen. Core™ High Performance
17" True-Flat Panel PC with Fan



- 30 **SP-7167**
Intel® 7th / 6th Gen. Core™ Fanless and High
Performance 17" Flat Panel PC



- 30 **SP-6567**
Intel® 7th / 6th Gen. Core™ Fanless and High
Performance 17" Flat Panel PC



- 31 **SP-7157**
Intel® Atom® / Pentium® / Celeron® Processor
Fanless and Low Power 17" Flat Panel PC



- 31 **SP-6557**
Intel® Atom® / Pentium® / Celeron® Processor
Fanless and Low Power 17" Panel PC



- 31 **SP-7256**
Intel® Pentium® N4200 / Celeron® N3350 / J3455 Slim
and Fanless 15.6" Panel PC



- 32 **SP-S154**
Intel® 7th Gen. Core™ High Performance
15" True-Flat Panel PC with Fan



- 32 **SP-7165**
Intel® 7th / 6th Gen. Core™ Fanless and High
Performance 15" Flat Panel PC



- 32 **SP-6565**
Intel® 7th / 6th Gen. Core™ Fanless and High
Performance 15" Flat Panel PC



- 33 **SP-6555**
Intel® Atom® / Pentium® / Celeron® Processor
Fanless and Low Power 15" Panel PC



- 33 **SP-7155**
Intel® Atom® / Pentium® / Celeron® Processor
Fanless and Low Power 15" Flat Panel PC



- 34 **SP-C121** *NEW*
Intel® Apollo Lake Platform SoC Fanless and Low Power
12.1" Flat Touch Panel PC



- 34 **SP-6550**
Intel® Atom® / Pentium® / Celeron® Processor
Fanless and Low Power 10.4" Panel PC



- 34 **SP-6558**
Intel® Atom® / Pentium® / Celeron® Processor
Fanless and Low Power 8.4" Panel PC

Table of Contents



Chapter 9 Full IP66 / IP69K Panel PC

- 36 **Full IP66/ IP69K Panel PC Selection Guide**
- 36 **SG-S238 NEW**
Intel® 12th Gen. Core™ i7-1265UE / i5-1245UE / i3-1215UE / Celeron® 7305E Processor Fanless and All-around IP66 / IP69K Stainless 23.8" Panel PC
- 36 **SG-S232 NEW**
Intel® Celeron® J6412 / Atom® x6425RE Processor Fanless and All-around IP66 / IP69K Stainless 23.8" Panel PC
- 36 **SG-S218 NEW**
Intel® 12th Gen. Core™ i7-1265UE / i5-1245UE / i3-1215UE / Celeron® 7305E Processor Fanless and All-around IP66 / IP69K Stainless 21.5" Panel PC
- 36 **SG-S212 NEW**
Intel® Celeron® J6412 Processor Fanless and All-around IP66 / IP69K Stainless 21.5" Panel PC
- 37 **SG-S198 NEW**
Intel® 12th Gen. Core™ i7-1265UE / i5-1245UE / i3-1215UE / Celeron® 7305E Processor Fanless and All-around IP66 / IP69K Stainless 19" Panel PC
- 37 **SG-S192 NEW**
Intel® Celeron® J6412 / Atom® x6421RE / Atom® x6425RE Processor Fanless and All-around IP66 / IP69K Stainless 19" Panel PC
- 37 **SG-S178 NEW**
Intel® 12th Gen. Core™ i7-1265UE / i5-1245UE / i3-1215UE / Celeron® 7305E Processor Fanless and All-around IP66 / IP69K Stainless 17" Panel PC
- 37 **SG-S172 NEW**
Intel® Celeron® J6412 / Atom® x6425RE Processor Fanless and All-around IP66 / IP69K Stainless 17" Panel PC
- 38 **SG-S168 NEW**
Intel® 12th Gen. Core™ i7-1265UE / i5-1245UE / i3-1215UE / Celeron® 7305E Processor Fanless and All-around IP66 / IP69K Stainless 15.6" Panel PC
- 38 **SG-S162 NEW**
Intel® Celeron® J6412 / Atom® x6425RE Processor Fanless and All-around IP66 / IP69K Stainless 15.6" Panel PC
- 38 **SG-S158 NEW**
Intel® 12th Gen. Core™ i7-1265UE / i5-1245UE / i3-1215UE / Celeron® 7305E Processor Fanless and All-around IP66 / IP69K Stainless 15" Panel PC
- 38 **SG-G156**
Intel® Core™ i5 / i3 Platform Fanless and All-around IP66 15" Panel PC
- 38 **SG-S152 NEW**
Intel® Celeron® J6412 / Atom® x6425RE Processor Fanless and All-around IP66 / IP69K Stainless 15" Panel PC
- 38 **SG-G151**
Intel® Atom® x7-E3950 / Celeron® J3455 Processor Fanless and All-around IP66 15" Panel PC

Chapter 10 Industrial Monitor

- 40 **Industrial Monitor Selection Guide**
- 40 **SP-C175**
17" VESA Mount / Wall Mount Standalone Touch Monitor
- 40 **SP-C155**
15" VESA Mount / Wall Mount Standalone Touch Monitor
- 40 **SP-C105**
10.4" VESA Mount / Wall Mount Standalone Touch Monitor
- 40 **SP-C085**
8.4" VESA Mount / Wall Mount Standalone Touch Monitor

Chapter 11 IIoT Edge Controller

- 42 **IIoT Edge Controller Selection Guide**
- 42 **SI-W000**
IIoT Edge Controller

Chapter 12 Remote I/O Module

- 44 **Remote I/O Module Selection Guide**
- 44 **SI-W109**
Multi-Function I/O Module
- 44 **SI-W309**
8 Channels Digital Input and 8 Channels Digital Output I/O Module
- 44 **SI-W509**
5 Channels Digital Input and 6 Channels Relay Output Remote I/O Module
- 44 **SI-W709**
8 Channels Differential Analog Input I/O Module

Chapter 13 EtherCAT Slave I/O Module

- 46 **EtherCAT Slave I/O Module**
- 46 **SI-X208**
16-Channel Isolated Digital Input EtherCAT Slave I/O Module
- 46 **SI-X308**
8-Channel Isolated Digital Input and 8-Channel Isolated Digital Output EtherCAT Slave I/O Module
- 46 **SI-X408**
16-Channel Isolated Digital Output EtherCAT Slave I/O Module
- 46 **SI-X608**
8-Channel Isolated Analog Input EtherCAT Slave I/O Module





Chapter 1

POS Terminal



Payment POS Selection Guide



Model		PA-R120	PA-J600E
QR Code			
Pictures			
Dimensions (W x H x D)		558 x 523 x 173 mm	550 x 1379 x 480 mm
Weight		Without packing approx. 16.8 kg With packing approx. 19 kg	Without packing approx. 40 kg
Power Supply		120 watt power adaptor	120 watt power adaptor
Certifications		EMI: Class A; ESD: Air 8KV / Contact 4KV	—
O.S. Support		Windows 10 IoT Enterprise	Windows 10
Temperature		Operating: 0°C~35°C; Storage: -20°C~60°C	0°C~35°C
Humidity		Operating & Storage: 20%~85% (no condensation)	20%~90%
I/O Ports (in rear lower of cube-body)	Power Input	1 x C5-type socket, AC 100V-240V available	
	Power Switch	1 x power button	
	USB	PPC I/O: 2 x USB 2.0 Type-A (optional) Chassis I/O: 2 x USB 3.0 Type-A	
	RS232	PPC I/O: 1 x D-sub + 1 (optional) x RJ45 Chassis I/O: 2 (optional) x D-sub	
	LAN Port	1 x RJ45	
Panel-PC	LCD	21.5" TFT LCD/ Resolution: 1920 x 1080 / Brightness: 250cd/m ²	
	Touchscreen	projected capacitive	
	CPU	Kaby Lake-U Core™-i5 7300U / Core™-i3 7100U Celeron® 3965U	
	Memory	1 x DDR4 SO-DIMM (default 4GB, up to 16GB)	
	Storage	1 x 2.5" SATA + 1 x M.2 (2242 type, SATA interface)	
	Options	Vertical MSR & iButton (JIS-I or II, ISO Track1+2+3); Vertical Fingerprint (8-bit grayscale reader)	
Note Acceptor & Recycling Units Capacity		—	
Coin Acceptor		--	
Hopper Capacity		--	
Touch Display		--	
Thermal Printer		2" or 3" standalone thermal printer for 58 mm or 80 mm paper roll	
Barcode Reader		1D: UPC-A, UPC-E, EAN-8, EAN-13, UCC/EAN-128, Code 39, Code 93, Interleaved 2 of 5, Codabar, MSI, GS1 Databar 2D: PDF417, MicroPDF417, DataMatrix, QR Code, MaxiCode	

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

All in One Selection Guide



Model	PA-A310	PA-A900	PA-A901	
QR Code				
Pictures				
LCD Display	10.1" TFT LCD	15.6" TFT LCD	15.6" TFT LCD	
CPU Support	Celeron® J3455	Celeron® J3455	Intel® 7th / 6th Gen. Core™ i5 / i3 / Celeron® / Pentium®	
Max. CPU Speed	2.3~2.5 GHz	2.3 GHz	3.2 GHz	
Chipset	SoC	SoC	H110	
Max. System Memory	8GB	8GB	32GB	
BIOS	AMI	AMI	AMI	
Audio	Realtek ALC888	Realtek ALC888	Realtek ALC888	
I/O PORTS	USB	5 x Type A Female 1 x 12V or 24V Powered USB (option)	5 x Type A Female 1 x 12V or 24V Powered USB (option)	5 x Type A female
	LAN	1 x RJ45	1 x RJ45	1 x RJ45
	Display	1 x HDMI 1 x VGA (option)	1 x HDMI 1 x VGA (option)	1 x VGA
	Cash Drawer	1 + 1 (option) x RJ11	1 + 1 (option) x RJ11	1 + 1 (option) x RJ11
	COM Ports	3 x RJ45 + 1 (option) DB9	3 x RJ45 + 1 (option) DB9	2 x DB9 + 1 x RJ45
	Keyboard / Mouse	--	--	--
	Line Out	1 x phone jack	1 x phone jack	1 x phone jack
	Mic In	--	1 x phone jack	--
	Parallel Port	--	--	--
	Drive Bays	1 x 2.5" SATA HDD	1 x 2.5" HDD or SSD	1 x 2.5" SATA HDD
Touchscreen	10.1" capacitive	15.6" capacitive	15.6" ELO capacitive	
Power Supply	60W/90W adaptor	60W/90W adaptor	120W/150W adaptor	
Dimensions (WxHxD) mm	299 x 148 x 300	372 x 169 x 315	372 x 169 x 315	
Weight (approx)	4 kg	5 kg	5 kg	
Options	printer, customer display, MSR, fingerprint, i-Button reader, RFID barcode scanner	printer, customer display, MSR, fingerprint, i-Button reader, RFID barcode scanner	printer, customer display, MSR, fingerprint, i-Button reader, RFID barcode scanner	
O.S. Support	Windows 10	Windows 10	Windows 10	
Certifications	CE, FCC	CE, FCC	CE, FCC	

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

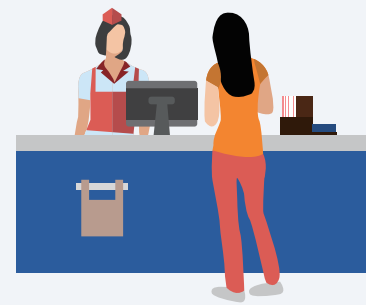
Standalone Selection Guide



Model	PA-6222	PA-J501	PA-J500	PA-5880	PA-J581	
QR Code						
Pictures		NEW	NEW		NEW	
LCD Display	12.1" TFT LCD	15.6" TFT LCD	15.6" TFT LCD	15" TFT LCD	15" TFT LCD	
CPU Support	Celeron® J1900	Elkhart Lake Celeron® J6412	Tiger Lake U Intel® Core™ i5-1145G7E / i3-1115G4E / Pentium® 7505 / Celeron® 6305E	Intel® 7th / 6th Gen. Core™ i7 / i5 / i3 / Celeron®	Elkhart Lake Celeron® J6412	
Max. CPU Speed	2.0 GHz	2.60 GHz	--	2.30~3.80 GHz	2.60 GHz	
Chipset	SoC	SoC	SoC	Intel® H110	SoC	
Max. System Memory	8GB	16GB	16GB	32GB	16GB	
BIOS	AMI	AMI	AMI	AMI	AMI	
VGA	Built-in CPU	Built-in CPU	Built-in CPU	Built-in CPU	Built-in CPU	
Audio	Realtek ALC888	Realtek ALC888	Realtek ALC888	Realtek ALC888	Realtek ALC888	
I/O Ports	USB	5 x Type A female	5 + 1 (option) x Type A female + 24V Powered USB (option) x 1	5 x Type A female	5 x Type A female	
	LAN	1 x RJ45	1 x RJ45	1 x RJ45	1 x RJ45	
	Display	1 x DB15	1 x HDMI	1 x HDMI	1 x DB15	1 x HDMI
	Cash Drawer	1 + 1 (option) x RJ11	1 x RJ11	1 x RJ11	1 x RJ11	1 + 1 (option) x RJ11
	COM Ports	3 + 1 (option) x RJ45	2 + 1 (option) x RJ45	2 x RJ45	1 + 1 (option) x RJ45 2 x DB-9	3 + 1 (option) x RJ45
	Keyboard / Mouse	--	--	--	--	--
	Line Out	1 x phone jack	--	--	1 x phone jack	1 x phone jack (option)
	Mic In	--	--	--	--	1 x phone jack (option)
	Parallel Port	--	--	--	--	--
Drive Bays	1 x 2.5" SATA	1 x M.2 2280 1 x M.2 2242	1 x M.2 2280 1 x M.2 2242	1 x 2.5" SATA	1 x 2.5" SATA 1 x M.2 2280	
Touchscreen	5-wire analog resistive	projected capacitive	projected capacitive	5-wire analog resistive or projected capacitive	5-wire analog resistive or projected capacitive	
Power Supply	72W adaptor	60W/90W adaptor	60W/90W adaptor	120W/150W adaptor	60W/90W adaptor	
Dimensions (WxHxD) mm	320 x 303 x 236 (POS) 320 x 261 x 58 (PPC)	375.68 x 287.43 x 194.95 (POS) 375.68 x 235.51 x 60.5 (PPC) 375.68 x 287.43 x 213.26 (POS + 2nd Display)	375.68 x 287.43 x 194.95 (POS) 375.68 x 235.51 x 60.5 (PPC) 375.68 x 287.43 x 213.26 (POS + 2nd Display)	375 x 378.6 x 288.4 (POS) 3375 x 305 x 69.8 (PPC)	375 x 370.62 x 286.8 (POS) 375 x 305 x 58.75 (PPC)	
Weight (approx)	5 kg	4.23 kg (POS) / 3.6 kg (PPC) 5.33 kg (POS + 2nd Display)	4.23 kg (POS) / 3.6 kg (PPC) 5.33 kg (POS + 2nd Display)	6.7 kg (POS) / 4.6 kg (PPC)	6.4 kg (POS) / 3.8 kg (PPC)	
Options	MSR, customer display, fingerprint	MSR, customer display, fingerprint, scanner, 10.1" 2nd display	MSR, customer display, fingerprint, scanner, 10.1" 2nd display	printer, MSR, customer display, fingerprint, RFID, 2D scanner, camera, i-Button reader	MSR, customer display, 2D scanner, camera, i-Button reader	
O.S. Support	Windows 10	Windows 10 Windows 11	Windows 10 Windows 11	Windows 10	Windows 10 Windows 11	
Certifications	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC	

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

Standalone Selection Guide



Model	PA-J580	PA-J670	PA-6980	PA-6225	PA-5685	PA-J600	
QR Code							
Pictures							
LCD Display	15" TFT LCD	15" TFT LCD	15" TFT LCD	15" TFT LCD	15.6" TFT LCD	21.5" TFT LCD	
CPU Support	Kaby Lake-U Core™-i5 7300U Core™-i3 7100U Celeron® 3965U	Celeron® J3455	Intel® 7th / 6th Gen. Core™ i7 / i5 / i3 / Celeron®	Celeron® J1900	Kaby Lake-U Core™-i3 7100U Celeron® 3965U	Kaby Lake-U Core™-i5 7300U Core™-i3 7100U Celeron® 3965U	
Max. CPU Speed	2.2~3.5 GHz	2.3 GHz	2.30~3.80 GHz	2.0 GHz	2.2~2.4 GHz	2.2~3.5 GHz	
Chipset	SoC	SoC	Intel® H110	SoC	SoC	SoC	
Max. System Memory	16GB	8GB	32GB	8GB	16GB	16GB	
BIOS	AMI	AMI	AMI	AMI	AMI	AMI	
VGA	Built-in CPU	Built-in CPU	Built-in CPU	Built-in CPU	Built-in CPU	Built-in CPU	
Audio	Realtek ALC888	Realtek ALC888	Realtek ALC888	Realtek ALC888	Realtek ALC888	Realtek ALC888	
I/O P O R T S	USB	4 + 2 (option) x Type A female	4 + 1 (option) x Type A female + 1 Powered USB 12V or 24V x1 (option)	5 x Type A female	5 x Type A female	5 x Type A female	4 + 2 (option) x Type A female
	LAN	1 x RJ45	1 x RJ45	1 x RJ45	1 x RJ45	1 x RJ45	1 x RJ45
	Display	1 x DB15	1 x DB15	1 x DB15	1 x DB15	1 x DB15	1 x DB15
	Cash Drawer	1 x RJ11	1 + 1 (option) x RJ11 (+12V or +24V selectable)	1 x RJ11	1 + 1 (option) x RJ11	1 x DB15	1 x RJ11
	COM Ports	1 x RJ45 1 + 1 (option) x DB9	3 + 1 (option) x RJ45	1 x RJ45 2 + 1 (option) x DB-9	3 + 1 (option) x RJ45	1 x DB9 + 2 x RJ45 + 1 (option) x RJ45	2 + 1 (option) x RJ45 1 x DB9
	Keyboard / Mouse	--	--	--	--	--	--
	Line Out	1 x phone jack	1 x phone jack	1 x phone jack	1 x phone jack	1 x phone jack (option)	1 x phone jack
	Mic In	1 x phone jack	1 x phone jack	--	--	1 x phone jack (option)	1 x phone jack
	Parallel Port	--	--	--	--	--	--
Drive Bays	1 x 2.5" SATA	1 x 2.5" SATA	1 x 2.5" SATA	1 x 2.5" SATA	1 x 2.5" SATA	1 x 2.5" SATA	
Touchscreen	projected capacitive	5-wire analog resistive or projected capacitive	5-wire analog resistive or projected capacitive	5-wire analog resistive or projected capacitive	projected capacitive	projected capacitive	
Power Supply	60W/90W adaptor	60W/90W adaptor	120W/150W adaptor	72W/120W adaptor	60W/90W adaptor	90W/120W adaptor	
Dimensions (WxHxD) mm	375 x 378.6 x 288.4 (POS) 375 x 305 x 69.8 (PPC)	388 x 234 x 223 (POS) 388 x 300 x 94 (PPC /w 60W power adapter)	367.5 x 319.7 x 266 (Normal Stand POS) 367.5 x 399 x 274.6 (Printer Stand POS) 367.5 x 282 x 75 (PPC)	377 x 318 x 240 (POS) 377 x 308 x 58 (PPC)	391 x 250 x 49 (POS)	536 x 450 x 297 (with PA-V560) 535 x 389 x 293 (with Big stand) 535 x 342 x 50 (PPC)	
Weight (approx)	6.7 kg (POS) / 4.6 kg (PPC)	6 kg (POS) / 5 kg (PPC)	7 kg	8 kg	6 kg (POS) / 4 kg (PPC)	6.2 kg (PPC)	
Options	printer, MSR, customer display, fingerprint, RFID, 2D scanner, camera, i-Button reader	printer, MSR, customer display, fingerprint, RFID, i-Button reader	printer, MSR, customer display, fingerprint, RFID	printer, MSR, customer display, fingerprint, RFID, i-Button reader	printer, MSR, customer display, fingerprint	printer, MSR, customer display, fingerprint, RFID, 2D scanner, camera, i-Button reader	
O.S. Support	Windows 10	Windows 10	Windows 10	Windows 10	Windows 10	Windows 10	
Certifications	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC	

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

Chapter 2

KIOSK



KIOSK

Selection Guide



Model		KS-M331	KS-M332	KS-M333
QR Code				
Pictures				
D I S P L A Y	Size	32"	32"	32"
	Resolution	1920 x 1080	1920 x 1080	1920 x 1080
	Brightness	400 nits	400 nits	400 nits
	Backlight Life	30,000 hours	30,000 hours	30,000 hours
	Touch	P-CAP	P-CAP	P-CAP
O.S. Support		Windows 11 Windows 10	Windows 11 Windows 10	Android 11
CPU Support		Intel® Core™ i5-1145G7E Intel® Core™ i3-1115G4E Intel® Celeron® 6305E Intel® Pentium® Gold 7505	Intel® Celeron® J6412	Rockchip RK-3399
Chipset / Graphics		Tiger Lake SoC	Elkhart Lake SoC	RK3399 SoC
Memory		Up to DDR4 16GB	Up to DDR4 16GB	Up to LPDDR4 4G
Storage		M.2 / SATA III or NVME SSD	M.2 / SATA III or NVME SSD	Up to 32G eMMC
Speaker		4W x 2	4W x 2	4W x 2
I / O P O R T S	USB	--	--	--
	Serial Port	--	--	--
	Ethernet	RJ45 LAN Port x 2	RJ45 LAN Port x 2	RJ45 LAN Port x 2
O P T I O N A L	Camera	2.1M face camera x 1	2.1M face camera x 1	2.1M face camera x 1
	Document Reader	--	--	--
	Scanner	1D / 2D Barcode x 1	1D / 2D Barcode x 1	1D / 2D Barcode x 1
	MSR	--	--	--
	Card Reader	(Reserved for Design in Credit Card Reader)	(Reserved for Design in Credit Card Reader)	(Reserved for Design in Credit Card Reader)
A C C E S S O R I E S	2nd Display	--	--	--
	Wireless Module	Option	Option	Option
	Printer Device	2" or 3" Standalone Thermal printer for 80 mm paper roll	2" or 3" Standalone Thermal printer for 80 mm paper roll	2" or 3" Standalone Thermal printer for 80 mm paper roll
	Cash Device	--	--	--
	Sensor	--	--	--
	Card Dispenser	--	--	--
	UPS	--	--	--
	IP Rating	IP54 (Front Touch)	IP54 (Front Touch)	IP54 (Front Touch)
Power Supply		AC 100~240V, 50~60Hz	AC 100~240V, 50~60Hz	AC 100~240V, 50~60Hz
Dimensions (WxHxD) mm		With Stand: 440 x 1780 x 550 Without Stand: 478 x 966 x 73	With Stand: 440 x 1780 x 550 Without Stand: 478 x 966 x 73	With Stand: 440 x 1780 x 550 Without Stand: 478 x 966 x 73
Weight (approx)		With Stand: 63 kg Without Stand: 34 kg	With Stand: 63 kg Without Stand: 34 kg	With Stand: 63 kg Without Stand: 34 kg
Certifications		CE, FCC	CE, FCC	CE, FCC

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

KIOSK





Selection Guide



Model		KS-M320		KS-M220		
QR Code						
Pictures						
D I S P L A Y	Size	32"	32"	21.5"	21.5"	21.5"
	Resolution	1920 x 1080	1920 x 1080	1920 x 1080	1920 x 1080	1920 x 1080
	Brightness	400 nits	400 nits	250 nits	250 nits	250 nits
	Backlight Life	30,000 hours	30,000 hours	50,000 hours	50,000 hours	50,000 hours
	Touch	P-CAP	P-CAP	P-CAP	P-CAP	P-CAP
O.S. Support		Windows 10	Windows 10	Windows 10 Windows 7	Windows 10 Windows 7	Windows 10 Windows 7
CPU Support		Intel® Core™ i5-7300U Intel® Core™ i3-7100U Intel® Celeron® J3455	Intel® Core™ i5-7300U Intel® Core™ i3-7100U Intel® Celeron® J3455	Intel® Core™ i5-7300U Intel® Core™ i3-7100U Intel® Celeron® J3455	Intel® Core™ i5-7300U Intel® Core™ i3-7100U Intel® Celeron® J3455	Intel® Core™ i5-7300U Intel® Core™ i3-7100U Intel® Celeron® J3455
Chipset / Graphics		Intel® SoC	Intel® SoC	Intel® SoC	Intel® SoC	Intel® SoC
Memory		DDR4 4GB DDR3L 4GB	DDR4 4GB DDR3L 4GB	DDR4 4GB DDR3L 4GB	DDR4 4GB DDR3L 4GB	DDR4 4GB DDR3L 4GB
Storage		2.5" HDD or SSD x 1	2.5" HDD or SSD x 1	2.5" HDD or SSD x 1	2.5" HDD or SSD x 1	2.5" HDD or SSD x 1
Speaker		2 x Omnidirectional Speaker	2 x Omnidirectional Speaker	2 x Omnidirectional Speaker	2 x Omnidirectional Speaker	2 x Omnidirectional Speaker
I / O P O R T S	USB	--	1 Port	1 Port	--	--
	Serial Port	--	COM Port x 1	COM Port x 1	--	--
	Ethernet	RJ45 LAN Port x 2	RJ45 LAN Port x 1	RJ45 LAN Port x 1	RJ45 LAN Port x 2	RJ45 LAN Port x 2
O P T I O N A L	Camera	2.1M face camera x 1	2.1M face camera x 1	2.1M face camera x 1	2.1M face camera x 1	2.1M face camera x 1
	Document Reader	--	--	--	--	--
	Scanner	1D / 2D Barcode x 1	--	--	1D / 2D Barcode x 1	1D / 2D Barcode x 1
	IC Card / RFID	(Reserved for Design in IC card / RFID Reader x 1)	--	--	IC card / ID Reader x 1	IC card / ID Reader x 1
	Card Reader	(Reserved for Design in Credit Card Reader)	--	--	(Reserve for Design in Credit Card Reader)	(Reserve for Design in Credit Card Reader)
	2nd Display	--	--	--	--	--
A C C E S S O R I E S	Wireless Module	Dual-band (2.4/5GHz) 802.11a/b/g/n 2Tx/2Rx WiFi PCIe Half-Mini Card (Option)	Dual-band (2.4/5GHz) 802.11a/b/g/n 2Tx/2Rx WiFi PCIe Half-Mini Card (Option)	Dual-band (2.4/5GHz) 802.11a/b/g/n 2Tx/2Rx WiFi PCIe Half-Mini Card (Option)	Dual-band (2.4/5GHz) 802.11a/b/g/n 2Tx/2Rx WiFi PCIe Half-Mini Card (Option)	Dual-band (2.4/5GHz) 802.11a/b/g/n 2Tx/2Rx WiFi PCIe Half-Mini Card (Option)
	Printer Device	2" or 3" Standalone Thermal printer for 80 mm paper roll w/ paper near end Resolution: 203dpi Printing Speed: 170mm/s	--	--	2" or 3" Standalone Thermal printer for 70 mm paper roll	2" or 3" Standalone Thermal printer for 70 mm paper roll
	Cash Device	--	--	--	--	Bill / Coin Acceptor and Dispenser
	Sensor	--	--	--	--	--
	Card Dispenser	--	--	--	--	--
	UPS	--	--	--	--	--
	IP Rating	IP54 (Front Touch)	IP54 (Front Touch)	IP54 (Front Touch)	IP54 (Front Touch)	IP54 (Front Touch)
Power Supply	AC 100~240V, 50~60Hz	AC 100~240V, 50~60Hz	AC 100~240V, 50~60Hz	AC 100~240V, 50~60Hz	AC 100~240V, 50~60Hz	
Dimensions (WxHxD) mm	550 x 1807 x 165	488 x 800 x 81	377 x 585 x 70	450 x 1636 x 450	377 x 1705 x 282	
Weight (approx)	64 kg	20.7 kg	18.52 kg	67.52 kg	92.99 kg	
Certifications	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC	

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.



Model		KF-P230	KF-P231
QR Code			
Pictures			
D I S P L A Y	Size	21.5"	17"
	Resolution	1920 x 1080	1280 x 1024
	Brightness	250 nits	350 nits
	Backlight Life	30,000 hours	50,000 hours
	Touch	P-CAP	P-CAP
O.S. Support		Windows 10 Windows 7	Windows 10
CPU Support		Intel® Core™ i5-7300U Intel® Core™ i3 7100U	Intel® Celeron® Processor J3455
Chipset / Graphics		Intel® SoC	Apollolake SoC
Memory		DDR4 4GB	DDR3L 4GB
Storage		2.5" HDD or SSD x 1	2.5" HDD or SSD x 1
Speaker		2 x Omnidirectional Speaker	4W x 2
I / O P O R T S	USB	--	--
	Serial Port	--	--
	Ethernet	RJ45 LAN Port x 2	RJ45 LAN Port x 2
O P T I O N A L	Camera	2.1M face camera x 1	2.1M face camera x 1
	Document Reader	--	--
	Scanner	1D / 2D Barcode x 1	1D / 2D Barcode x 1
	MSR	--	RFID Reader x 1
	Card Reader	(Reserved for Design in Credit Card Reader)	(Reserved for Design in Credit Card Reader)
A C C E S S O R I E S	2nd Display	--	--
	Wireless Module	--	--
	Printer Device	2" Standalone Thermal printer for 80 mm paper roll	2" or 3" Thermal printer for 80 mm or 130 mm paper roll
	Cash Device	--	Bill / Coin Acceptor and Dispenser
	Sensor	--	Light Sensor x 1
	Card Dispenser	--	--
	UPS	--	Option
	IP Rating	--	IP54 (Front Touch)
Power Supply		AC 100~240V, 47~63Hz	AC 100~240V, 50~60Hz
Dimensions (WxHxD) mm		540 x 1630 x 380	670 x 1719 x 450
Weight (approx)		97.63 kg	170 kg
Certifications		CE, FCC	CE, FCC

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

Chapter 3



Tablet



Rugged Tablet

Selection Guide



Model		MH-0616	MH-T01T
QR Code			
Pictures			
DISPLAY	Size	6" IPS	10.1" IPS
	Resolution	1280 x 720 pixels	1920 x 1200 pixels
	Brightness	500 nits	1000 nits
	Lifetime	30,000 hours	30,000 hours
	Touch	Corning Gorilla Glass and Anti-Fingerprint P-CAP Multi-Touch (i), Optical Bonding with HD LCD	Corning Gorilla Glass and Anti-Fingerprint P-CAP Multi-Touch (i), Optical Bonding with WUXGA LCD
O.S. Support		Android 10	Windows 11 IoT GAC / Windows 10 IoT LTSC
CPU Support		Qualcomm S660 octacore 64-bit processor, Max. 2.2 GHz	Intel® 11th Gen. Core™ i7 / i5 / i3 / Celeron® Processor, Max. 4.4 GHz
Memory		4 + 64 GB eMCP	1 x 8 GB DDR4 (Max.16 GB)
Storage			1 x 256 GB M.2 NVMe SSD (Max. 1 TB)
Audio (Speaker/Mic)		1 x 0.8 W / 1 x Mic	1 x 2W / 1 x Mic
WiFi + BT		WiFi 5 + BT 5.0	WiFi 6E + BT 5.3
Battery Capacity		3.85 V / 4380 mAh / 16.8 Wh	10.8 V / 4600 mAh / 49.6 Wh (Dual-Main Battery for Hot-swap)
Battery Operation		10 hours	8 hours
BIOS		--	AMI
G-Sensor + Gyroscope		1	1
Ambient Light Sensor		1	1
Vibrator		1	1
Buttons		6 (ii)	6 (iii)
Security		--	TPM 2.0 / K-Lock
I/O PORTS	USB	1 x USB Type C (for Fast Charging / Data Transmission)	1 x USB Type C (for Fast Charging / Data Transmission / Display) 2 x USB 3.0 Type A (iv)
	DC Jack	--	1
	Phone Jack	--	1
	SD / SIM	1 / 1	1 (Expansion Slot 1) / 1
	Cradle Connector	1 x POGO pin (for Charging)	1 x POGO pin (for Charging / External Antenna)
	Expansion Slot	--	2
	LAN / COM / HDMI	--	1 / 1 (Expansion Slot 1) / --
OPTIONAL DEVICE	Barcode Scanner	2D Barcode	2D Barcode (Expansion Slot 1)
	FF Front / AF Rear Camera	-- / 13 MP with Flashlight	2 MP (Optional Windows Hello) / 8 MP with Flashlight
	3D Camera	1 (either)	1 (either)
	NFC / RFID	--	--
	MSR / Card Reader	--	1 (either, Expansion Slot 1)
	Payment Card Reader	1	--
	4G / 5G + GPS	4G + GPS on board	5G / 4G + GPS module
Fingerprint	--	1 (Expansion Slot 2)	
ACCESSORIES	Lite Cradle / Vehicle Cradle	1 / --	1 / 1
	Battery Charger	1 bay	2 bay
	Hand Strap / Shoulder Strap	1 / 1	1 / 1
IP Rating		IP65 (Whole)	IP65 (Whole)
Drop Test		1.2 m (MIL-STD-810H)	1.5 m (MIL-STD-810H)
Operating Temp.		-10°C ~ 50°C	-10°C ~ 50°C (Battery mode) and -20°C ~ 60°C (AC mode)
Power Adaptor		QC 3.0 Type C 30W for Tablet and Charging Stand	19V / 3.42V / 65W for Tablet
Dimensions (W x H x D) mm		89 x 168 x (19.1-21.1)	274 x 195 x 25.5 283 x 203 x 27.5 (with Rubber Corner)
Weight (approx)		330 g (Tablet only)	1.28 kg (Tablet only)
Certifications		CE, FCC, PSE, TELEC	CE, FCC, PSE, TELEC

(i) Support Finger / Stylus / Raindrop / Glove

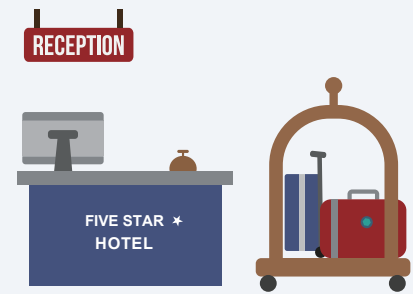
(ii) 1 x Power Button, 1 x Function Key, 2 x Scan Buttons, 1 x Volume+, 1 x Volume-

(iii) 1 x Power Button, 1 x Home Key, 2 x Function Key, 1 x Volume+, 1 x Volume-

(iv) One is on board and another is on Expansion Slot.

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

Industrial Tablet Selection Guide



Model		MH-5752	MH-5102	MH-5108
QR Code				
Pictures				
DISPLAY	Size	7" IPS	10.1" IPS	10.1" IPS
	Resolution	800 x 1280 pixels	1920 x 1200 pixels	1920 x 1200 pixels
	Brightness	400 nits	450 nits	450 nits
	Lifetime	30,000 hours	30,000 hours	30,000 hours
	Touch	Anti-Fingerprint P-CAP Optical Bonding with LCD Panel	Anti-Fingerprint P-CAP Optical Bonding with LCD Panel	Anti-Fingerprint P-CAP Optical Bonding with LCD Panel
O.S. Support		Windows 10 IoT LTSC 2019 64 bit	Windows 10 IoT LTSC 2019 64 bit	Android 9
CPU Support		Intel® Atom™ x5-Z8550 Quad Core™ Max. 2.4 GHz	Intel® Atom™ x5-Z8550 Quad Core™ Max. 2.4 GHz	Qualcomm S450 octacore 64-bit processor, Max. 1.8 GHz
Memory		4 GB LPDDR3	4 GB / 8 GB LPDDR3	2 GB + 16 GB eMCP
Storage		64 GB eMMC	64 GB / 128 GB eMMC	
Audio (Speaker/Mic)		1 x 1W / --	1 x 1W / --	1 x 1W / --
WiFi + BT		WiFi 4 + BT 4.0	WiFi 5 + BT 4.1	WiFi 5 + BT 4.2
Battery Capacity		3.8 V / 7400 mAh / 28.1 Wh	3.6 V / 7900 mAh / 28.4 Wh	3.8 V / 7400 mAh / 28.1 Wh
Battery Operation		8 hours	8 hours	8 hours
BIOS		Insyde	Insyde	--
G-Sensor + Gyroscope		1	1	1
Ambient Light Sensor		1	1	1
Vibrator		--	--	--
Buttons		2	3	2
Security		--	TPM 2.0 / --	--
I/O PORTS	USB	1 x USB Type C	1 x USB 3.0 Type A	1 x USB Type C
	DC Jack	--	1	1
	Phone Jack	--	1	1
	SD / SIM	1 / 1	1 / 1	1 / 1
	Cradle Connector	1 x POGO pin	1 x POGO pin	1 x POGO pin
	Expansion Slot	1	1	1
	LAN / COM / HDMI	--	--	--
OPTIONAL DEVICE	Barcode Scanner	2D Barcode	2D Barcode	2D Barcode
	FF Front / AF Rear Camera	-- / 8 MP	5 MP / 5 MP	8 MP / 8 MP
	3D Camera	--	--	--
	NFC / RFID	1 / --	1 / --	1 / --
	MSR / Card Reader	-- / --	1 / 1	-- / --
	Payment Card Reader	--	1	1
	4G / 5G + GPS	4G + GPS module	4G + GPS module	4G + GPS on board
	Fingerprint	--	--	--
ACCESSORIES	Lite Cradle / Vehicle Cradle	1 / --	1 / --	1 / --
	Battery Charger	2 bay / 4 bay	2 bay / 4 bay	--
	Hand Strap / Shoulder Strap	1 / 1	1 / 1	1 / 1
IP Rating		IP54 (front Panel)	IP54 (front Panel)	IP65 (front Panel)
Drop Test		1.2 m	1.2 m	1.2 m
Operating Temp.		0°C ~ 40°C	0°C ~ 40°C	0°C ~ 40°C
Power Adaptor		Pad with 5V / 3A / 15W Cradle with 12V / 5A / 60W	Pad with 12V / 2A / 24W 24V / 1A / 24W Cradle with 12V / 5A / 60W	Pad with 12V / 2A / 24W
Dimensions (W x H x D) mm		120.6 x 192.6 x (21 - 25.3)	267.84 x 188.5 x 25.2	257 x 169 x 17
Weight (approx)		499 g (Tablet only)	838 g (Tablet only)	700 g (Tablet only)
Certifications		CE, FCC, PSE, TELEC	CE, FCC, PSE, TELEC	CE, FCC, PSE, TELEC

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

Chapter 4

Peripheral



Peripheral Selection Guide







Model	PA-V560	MP-4815	MP-4815	MP-4815	MP-4003	
Application	Stand	Customer Display	Stand-alone Display	Wall-mounted Display	VFD Customer Display	
QR Code						
Pictures						
D I S P L A Y	Size	–	15"	15"	15"	20 columns x 2 lines
	Resolution	–	1024 x 768 pixels	1024 x 768 pixels	1024 x 768 pixels	20 columns x 2 lines by 5 x 7 font
	Brightness	–	300 nits	300 nits	300 nits	–
	Lifetime	–	50,000 hours	50,000 hours	50,000 hours	–
	Viewing Angle	–	Horizontal: 88°, Vertical: 88°	Horizontal: 88°, Vertical: 88°	Horizontal: 88°, Vertical: 88°	Horizontal: 125°, Vertical: 45°
	Touch	–	Resistive touch & P-CAP touch	Resistive touch & P-CAP touch	Resistive touch & P-CAP touch	–
OSD	–	Power button x1, Auto x 1, Menu+ x 1, Menu- x 1	Power button x1, Auto x 1, Menu+ x 1, Menu- x 1	Power button x1, Auto x 1, Menu+ x 1, Menu- x 1	–	
I / O P O R T S	VGA	–	1	1	1	–
	DVI	–	DVI-I cable (support DVI-D signal only)	DVI-I cable (support DVI-D signal only)	DVI-I cable (support DVI-D signal only)	–
	USB	–	Type B x 1	Type B x 1	Type B x 1	–
	COM	–	–	–	–	RS232 with cable x 1
	HDMI	–	–	–	–	–
	LAN	–	–	–	–	–
	Cash Drawer	–	–	–	–	–
	Line In	–	–	–	1	–
	Line Out	–	–	–	–	–
	DC In Jack	–	DC12V x 1	DC12V x 1	DC12V x 1	DC12V with cable x1
O P T I O N A L D E V I C E	Barcode Scanner	1	1	1	1	–
	Camera	–	Front 5M pixels x 1	Front 5M pixels x 1	Front 5M pixels x 1	–
	MSR	–	1	1	1	–
	RFID	1	1	1	1	–
	Fingerprint	–	1	1	1	–
	Smart Card	–	–	–	–	–
	NFC	–	–	–	–	–
Speaker	–	–	–	2W x 2	–	
2nd Display Hinge Module	Support 8", 10", 15" 2nd display	Different 2nd display hinge module for POS (PA-6322, PA-6722, PA-6980, PA-6225, PA-5822 & PA-5880)	–	–	–	
Stand-alone Stand	Yes	–	Yes	–	–	
Wall-mounted Kit	–	–	–	Yes	–	
Language	–	English, French, Deutsch, Italiano, Spanish, Japanese, Chinese (Traditional)...etc.	English, French, Deutsch, Italiano, Spanish, Japanese, Chinese (Traditional)...etc.	English, French, Deutsch, Italiano, Spanish, Japanese, Chinese (Traditional)...etc.	US English, French, German, Swedish, Danish, Spanish, Norwegian, Russian, Japanese (Katakana)... etc.	
OPOS Driver	–	–	–	–	Yes	
IP Rating	–	IP54 (front panel)	IP54 (front panel)	IP54 (front panel)	–	
Power Adaptor	–	12V/3.3A/40W	12V/3.3A/40W	12V/3.3A/40W	12V/1A/12W	
Dimensions (W x H x D) mm	Stand only: 200 x 351.7 x 241	Panel only: 367 x 37.8 x 299.3	Panel only: 367 x 37.8 x 299.3	Panel only: 367 x 37.8 x 299.3	Panel only: 217.3 x 63.4 x 44.6	
Operation Temp.	0°C~40°C	0°C~40°C	0°C~40°C	0°C~40°C	-40°C~80°C	
Certifications	–	CE, FCC	CE, FCC	CE, FCC	CE	

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

Peripheral Selection Guide

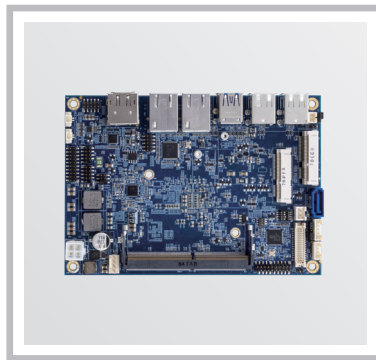
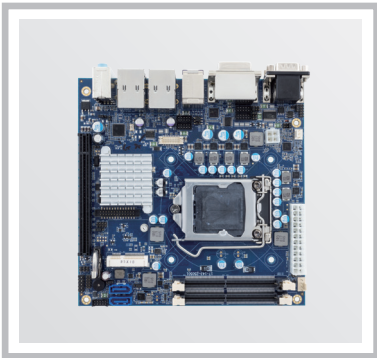


Model		MP-1150	MP-1060
Application		Mobile Thermal Printer	Stand-alone Thermal Printer
QR Code			
Pictures			
Paper Width		58 mm (2")	80 mm (3") or 58 mm (2")
Interface		Bluetooth (Ver. 4.0)/USB	Combo with USB/Serial
Print Speed		Up to 100 mm/sec	Up to 200 mm/sec
Cutter Type		Tear bar	Auto cut
Printing Head Endurance		50 km	100 km
Cutter Endurance		1.5 million cuts	1.5 million cuts
Buffer		4KB	4KB
SRAM		128KB	128KB
Paper Roll Diameter		Up to 38 mm	Up to 80 mm
Flash		2MB	2MB
SOFTWARE	Emulation	ESC/POS CMD compatible	ESC/POS CMD compatible
	Driver	Windows10/x86 Windows8/x86 Windows7 x86/x64 WindowsXP x86 OPOS/JPOS	Windows10/x86 Windows8/x86 Windows7 x86/x64 WindowsXP x86 OPOS/JPOS
LANGUAGE	Character	Traditional Chinese, Simple Chinese, Japanese, Korean	Traditional Chinese, Simple Chinese, Japanese, Korean
	Code Page	CP-437, Katakana character set, CP-850, CP-852, CP-860, CP-863, CP-865, CP-1252	CP-437, Katakana character set, CP-850, CP-852, CP-860, CP-863, CP-865, CP-1252
1D / 2D Barcode Support		Yes	Yes
Power Supply		12V/2A	24V/2.5A
Battery Pack		7.4V/2900mA/21.4Wh	--
ENVIRONMENT	Operating Temp.	-10°C~50°C	-10°C~50°C
	Storage Temp.	-30°C~70°C	-30°C~70°C
	Operating Humidity	30%~80% RH (non-condensing)	30%~80% RH (non-condensing)
	Storage Humidity	5%~90% RH (expect for paper)	5%~90% RH (expect for paper)
	Operating Temp.	-10°C~50°C	-10°C~50°C
Weight		250 g (w/o battery & roll paper)	1.6 kg
Detect Sensor		Paper end, cover open	Paper end and near end sensor
Dimensions (W x H x D)		142 x 127 x 154 mm	140 x 146 x 123 mm
Certifications		CE, FCC	CE, FCC

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

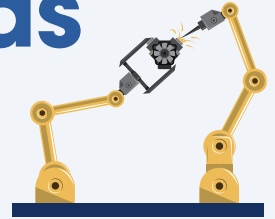
Chapter 5

Industrial CPU Board



Industrial Motherboards

Selection Guide

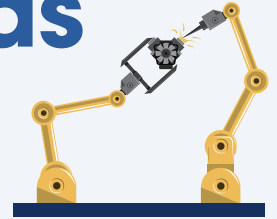


Model	BA-2602	BA-2601	BA-2501	BU-B015	BU-2509	
QR CODE						
Pictures						
Form Factor	ATX	ATX	ATX	Micro-ATX	Micro ATX	
CPU Support	8th Gen. Core™ / Pentium® / Celeron® / Xeon® E-2200/2100 CPU	8th Gen. Core™ / Pentium® / Celeron® / Xeon® E-2100 CPU	7th / 6th Gen. Core™ / Pentium® / Celeron® / Xeon® E-31200 v5/v6	10th Gen. Core™ / Pentium® / Celeron® / Xeon® W-1200 CPU	7th / 6th Gen. Core™ / Pentium® / Celeron® / Xeon® E-31200 v5/v6	
CPU Socket	LGA1151	LGA1151	LGA1151	LGA1200	LGA1151	
CPU List	E-2278GE(GEL) E-2276GE E-2176G E2124G i7-9700E(TE)/8700(T) i5-9500E(TE)/8500(T) i3-9100E(TE)/8100(T) G5400(T) G4900(T)	E-2176G E-2124G i7-8700(T) i7-8500(T) i3-8100(T) G5400(T) G4900(T)	E3-1275 v6/v5 E3-1225 v5 E3-1268L v5 i7-7700(T)/6700(TE) i5-7500(T)/6500(TE) i3-7101E/6100(TE) G4400(TE) G3930E/TE G3900(TE)	W-1290E(TE) W-1270E(TE) W-1250E(TE) i9-10900E(TE) i7-10700E(TE) i5-10500E(TE) i3-10100E(TE) G6400E G6400TE G3930E/TE G5900E G5900TE	E3-1275 v6/v5 E3-1225 v5 E3-1268L v5 i7-7700(T)/6700(TE) i5-7500(T)/6500(TE) i3-7101E/6100(TE) G4400(TE) G3930E/TE G3900(TE)	
Chipset	Intel® Q370 / Intel® C246	Intel® H310 / Intel® Q370 / Intel® C246	Intel® H110 / Intel® Q170 / Intel® C236	Intel® W480E / Intel® Q470E / Intel® H420E	Intel® H110 / Intel® Q170 / Intel® C236	
Max. System Memory	64GB	64GB	64GB	128GB	64GB	
Display	1 x VGA 2 x DP 1 x eDP	1 x VGA 1 x DVI-D 1 x eDP	1 x VGA 1 x DVI-D 1 x eDP	1 x VGA 2 x DP 1 x eDP	1 x VGA 1 x DVI-D 1 x DP (internal)	
Audio	Line In Line Out Mic In	Line In Line Out Mic In	Line In Line Out Mic In	Line In Line Out Mic In	Line In Line Out Mic In	
I / O P O R T S	SATA Interface	6 x SATA 3.0	6 x SATA 3.0	6 x SATA 3.0	6 x SATA 3.0	
	FDD Interface	–	–	--	–	
	Serial Ports	6	6	6	6	
	Parallel Port	1	1	--	–	
	LAN	2	2	2	2	
	USB	4 x USB 3.1 2 x USB 3.0 6 x USB 2.0	4 x USB 3.1 2 x USB 3.0 4 x USB 2.0	6 x USB 3.0 4 x USB 2.0	2 x USB 3.1 4 x USB 3.0 6 x USB 2.0	6 x USB 3.0 4 x USB 2.0
	PS/2	1	2	2	1	
IrDA	–	–	--	–		
Expansion Bus	1 x PCIe (x16) 3 x PCIe (x4) 1 x PCIe (x1) 2 x PCI 1 x mini PCIe 1 x M.2 (2242) NVMe	1 x PCIe (x16) 1 x PCIe (x4) 5 x PCI 1 x mini PCIe	1 x PCIe (x16) 1 x PCIe (x4) 5 x PCI 1 x mini PCIe	1 x PCIe (x16) 2 x PCIe (x4) 1 x PCIe (x1) 1 x mini PCIe 1 x M.2 (2280) NVMe	1 x PCIe (x16) 2 x PCIe (x4) 1 x PCIe (x1) 1 x mini PCIe 1 x mini PCIe	
Power Requirement	ATX Power	ATX Power	ATX Power	ATX Power	ATX Power	
Certifications	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC	

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

Industrial Motherboards

Selection Guide

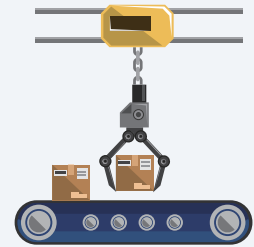


Model	BM-D025	BM-2505	BM-2503	BM-2502	BM-0982	
QR CODE						
Pictures						
Form Factor	Mini-ITX	Mini-ITX	Mini-ITX	Mini-ITX	Mini-ITX	
CPU Support	10th Gen. Core™ / Pentium® / Celeron® / Xeon® W-1200 (up to TDP 65W)	7th / 6th Gen. Core™ / Pentium® / Celeron®	7th / 6th Gen. Core™ / Pentium® / Celeron®	7th / 6th Gen. Core™ / Pentium® / Celeron®	N4200: 1.1GHz N3350: 1.1GHz J3455: 1.5GHz	
CPU Socket	LGA1200	LGA1151	LGA1151	LGA1151	onboard	
CPU List	W-1290TE W-1270TE W-1250TE i9-10900E(TE) i7-10700E(TE) i5-10500E(TE) i3-10100E(TE) G6400E(TE) G5900E(TE)	i7-7700(T) i7-6700(TE) i5-7500(T) i5-6500(TE) i3-7101E/TE i3-6100(TE) G4400(TE) G3930E/TE G3900(TE)	i7-7700(T) i7-6700(TE) i5-7500(T) i5-6500(TE) i3-7101E/TE i3-6100(TE) G4400(TE) G3930E/TE G3900(TE)	i7-7700(T) i7-6700(TE) i5-7500(T) i5-6500(TE) i3-7101E/TE i3-6100(TE) G4400(TE) G3930E/TE G3900(TE)	N4200: 1.1GHz N3350: 1.1GHz J3455: 1.5GHz	
Chipset	Intel® H420E / Intel® Q470E / Intel® W480E	Intel® H110/ Intel® Q170	Intel® H110/ Intel® Q170	Intel® H110/ Intel® Q170	--	
Max. System Memory	64GB	32GB	32GB	32GB	8GB	
Display	2 x DVI-D 1 x DP (internal)	2 x DVI-D 1 x DP (internal)	1 x VGA 1 x DP 1 x LVDS	2 x DVI-D 1 x DP (internal)	1 x VGA 1 x DP/HDMI 1 x LVDS	
Audio	Line In Line Out Mic In	Line In Line Out Mic In	Line In Line Out Mic In	Line In Line Out Mic In	Line In Line Out Mic In	
P O R T S	SATA Interface	2 x SATA 3.0	2 x SATA 3.0	2 x SATA 3.0	2 x SATA 3.0	
	FDD Interface	--	--	--	--	
	Serial Ports	6	6	2	6	6
	Parallel Port	1	1	1	1	0
	LAN	2	2	2	2	2
	USB	6 x USB 3.0 2 x USB 2.0	4 x USB 3.0 4 x USB 2.0	4 x USB 3.0 4 x USB 2.0	4 x USB 3.0 5 x USB 2.0	4 x USB 3.0 2 x USB 2.0
	PS/2	1	1	--	--	2
IrDA	--	--	--	--	--	
Expansion Bus	1 x PCIe (x16) 1 x M.2 (2242) NVMe	1 x PCIe (x16) 1 x mini PCIe	1 x PCIe (x16) 1 x M.2 (2242)	1 x PCIe (x16) 1 x mini PCIe	1 x PCIe (x1) 1 x mini PCIe 1 x M.2 (2242)	
Power Requirement	ATX Power	ATX Power	DC 12V	ATX Power	DC 12~24V	
Certifications	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC	

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

Embedded Boards

Selection Guide

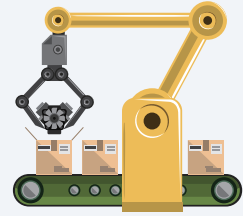












Model	BE-U236	BE-0996	BE-U830	BE-0986	BE-0981	
QR Code						
Pictures						
Form Factor	3.5"	3.5"	EPIC	3.5"	3.5"	
CPU Support	Core™ i7-1265UE, 2P8E, 96EU Core™ i5-1245UE, 2P8E, 80EU Core™ i3-1215UE, 2P6E, 64EU Celeron® 7305E, 1P4E, 48EU	Core™ i5-7300U, 2.6GHz Core™ i3-7100U, 2.4GHz	Intel® Celeron® J6412, 1.8GHz Atom® X6212RE, 1.2GHz Atom® X6425RE, 1.9GHz	Celeron® J3455, 1.5GHz Celeron® N3350, 1.1GHz Atom® E3950, 1.6GHz	Celeron® J3455, 1.5GHz Celeron® N3350, 2.4GHz Pentium® N4200, 2.5GHz Atom® E3950, 2.0GHz	
Chipset	--	--	--	--	--	
Max. System Memory	DDR5, 32GB	DDR4, 16GB	DDR4, 32GB	DDR3L, 8GB	DDR3L, 8GB	
BIOS	AMI	AMI	AMI	AMI	AMI	
Watchdog Timer	1~255 secs	1~255 secs	1~255 secs	1~255 secs	1~255 secs	
Display	1 x HDMI 1 x DP 1 x LVDS	1 x HDMI 1 x DP 1 x LVDS	1 x HDMI 1 x DP 1 x LVDS	1 x VGA 1 x HDMI 1 x LVDS	1 x VGA 1 x DP 1 x LVDS	
Audio	Line In / Line Out / Mic In (pin header)	Line In / Line Out / Mic In (pin header)	Line In / Line Out / Mic In (pin header)	HD Line Out / Line In / Mic In	HD Line Out / Line In / Mic In	
I / O P O R T S	Serial Ports	2	2	4	4	
	Parallel Port	--	--	--	--	
	LAN	2	2	2	2	
	USB	4 x USB 3.0 4 x USB 2.0	2 x USB 3.0 6 x USB 2.0	2 x USB 3.0 6 x USB 2.0	4 x USB 3.0 2 x USB 2.0	4 x USB 3.0 2 x USB 2.0
	SATA Interface	1	1	1	1	1
	CF/CFast/SD	--	--	--	--	--
Expansion Bus	1 x M.2 (2230) slot 1 x M.2 (3042) slot 1 x M.2 (2280) NVMe	1 x full-sized mPCIe slot (PCIe/USB) 1 x full-sized mSATA slot (SATA/USB) 1 x I ² C	1 x full-sized mPCIe slot 1 x M.2 (2280) NVMe 1 x I ² C	1 x full-sized mPCIe slot 1 x full-sized mSATA slot 1 x I ² C	1 x full-sized mPCIe slot 1 x full-sized mSATA slot 1 x I ² C	
FAN conn	1 x 4 pin FAN conn	1 x 4 pin FAN conn	--	1 x 4 pin FAN conn	1 x 4 pin FAN conn	
Power Requirement	DC In 12V~24V	DC In 12V/24V	DC In 12V/24V	DC In 12V&19V&24V	DC In 12V	
Certifications	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC	

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

Daughter Boards

Selection Guide

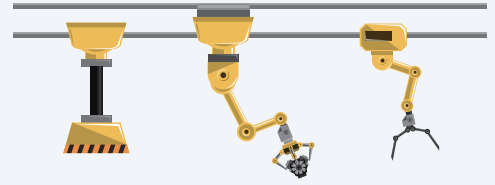





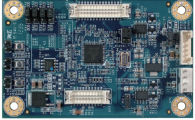
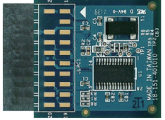
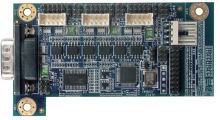
Model	BR-U830-D4	SR-5700	BR-U830-D2 (pair w/ BR-U830-D1)	BR-U830-D3 (pair w/ BR-U830-D1)	SR-6150
QR Code					
Pictures					
Function	4 Ports LAN	Power USB	2 Ports LAN	2 Ports LAN	Speaker
Input I/F	PCIe x4 (Golden Finger)	PCIe x1 (Golden Finger)	30-pin board to board connector	30-pin board to board connector	mPCIe
Output I/F	4 x GbE LAN (Option PoE) 15W (802.3 af)	3 x USB & Power	2 x GbE LAN (Option PoE PSE) 30W (802.3 at)	2 x GbE LAN (w/ PoE PD)	2-pin speaker out
Dimensions	175.3 x 106.7 mm (w/o bracket)	106 x 100.4 mm (w/o bracket)	70 x 80 mm	90 x 80 mm	27 x 30 mm

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

Daughter Boards

Selection Guide



Model	BR-8080	BR-4010	BR-6061
QR Code			
Pictures			
Function	Display	TPM module version (2.0)	I/O Expansion
Input I/F	DP/eDP	LPC	LPC
Output I/F	LVDS	n/a	4 x COM
Dimensions	50 x 80 mm	31.3 x 29.7 mm	50 x 89 mm

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

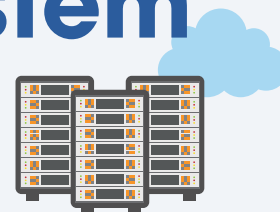
Chapter 6

Wall & Rack Mount System



Wall & Rack Mount System

Selection Guide



Model	BS-0996	BS-0981	BC-K201	BC-2602	BS-W025	
QR Code						
Pictures						
Mounting Type	1U Rack mount	1U Rack mount	2U Rack mount	4U Rack mount	Wall mount	
Dimensions (W x H x D) mm	482 x 45 x 250	482 x 45 x 250	428,2 x 88 x 310	430 x 177 x 330	277 x 136 x 316	
CPU Support	Intel® Core™ i5-7300U Core™ i3-7100U	Intel® Celeron® N3350: 2C, 2.4GHz Celeron® J3455: 4C, 1.5GHz	Intel® 10th Gen. Core™ / Pentium® / Celeron® / Xeon® W-1200 CPU	Intel® 9th / 8th Xeon®/ Core™ / Pentium® / Celeron® CPU (socket: LGA1151) (≤ 65W)	Intel® 7th / 6th Core™ / Pentium® / Celeron® CPU (socket: LGA1151)	
Chipset	--	--	Intel® W480E / Q470E / H420E	Intel® Q370 / H310 / C246	Intel® Q170 / H110 / C236	
Max. System Memory	16GB	16GB	128GB	64GB	32GB	
Drive Bay	1 x 2.5" SSD/HDD (SATA 3.0)	1 x 2.5" SSD/HDD (SATA 3.0)	2 x 2.5" SSD/HDD (SATA 3.0) or 1 x 3.5" HDD (SATA 3.0)	3.5" x 4 (SATA 3.0) 2.5" x 2 (optional)	2 x 2.5" SSD/HDD (SATA 3.0)	
Display	1 x HDMI 1 x DP	1 x DP	VGA 2 x DP	VGA 2 x DP	1 x VGA 1 x DVI-D	
Audio	Line Out	Line Out	Mic In / Line In / Line Out	Mic In / Line In / Line Out	Mic In / Line In / Line Out	
P O R T S	Serial Ports	2	4	2	6	2
	Parallel Port	--	--	--	1	--
	LAN	2	2	2	2	2
	USB	8	6	2 x USB 3.1 2 x USB 3.0 2 x USB 2.0	2 x USB 3.1 2 x USB 3.0 4 x USB 2.0	2 x USB 2.0 4 x USB 3.0
Expansion Slots	1 x mSATA 1 x mini PCIe	1 x mSATA 1 x PCIe (x1)	1 x PCIe (x16) 2 x PCIe (x4) 1 x PCIe (x1)	1 x PCIe (x16) 3 x PCIe (x4) 1 x PCIe (x1) 2 x PCI 1 x mini PCIe 1 x M.2 (2242) NVMe	1 x PCIe (x16) 2 x PCIe (x4) 1 x PCIe (x1)	
Power Requirement	DC In 12V/24V	DC In 12V	ATX	ATX	DC In 24V	
O.S. Support	Windows 10	Windows 10 / Windows 7	Windows 10	Windows 10	Windows 10 / Windows 7	
Certifications	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC	

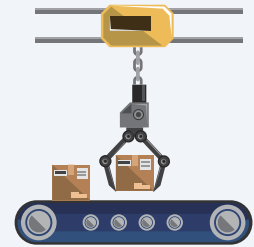
*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

Chapter 7

Applied Computer



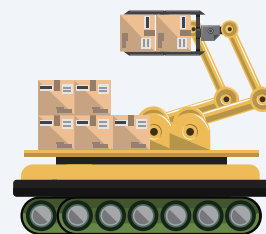
Applied Computer Selection Guide





		Embedded PC High End				Embedded PC Entry			
Model		SE-N108	SE-N207	BS-E099	SE-8400	BS-U830	SE-8134	BS-E098	BS-E097
QR Code									
Pictures									
Processor		Intel® Core™ i7-1265UE, 2P8E, 96EU i5-1245UE, 2P8E, 80EU i3-1215UE, 2P6E, 64EU Celeron® 7305E, 1P4E, 48EU	Intel® Core™ i7-8665UE 1.80GHz i5-8365UE 1.60GHz i3-8145UE 2.10GHz Celeron® 4305U	Intel® Core™ i5-7300U 2.6GHz i3-7100U 2.4GHz	Intel® i7-6700TE 2.4GHz i5-6500TE 2.3GHz i3-6100TE 2.7GHz Pentium® G4400TE Celeron® G3900TE	Intel® Celeron® J6412, 1.8GHz Atom® X6212RE, 1.2GHz Atom® X6425RE, 1.9GHz	Intel® N3350: 2C, 2.4GHz N4200: 4C, 2.5GHz J3455: 4C, 2.3GHz E3950: 4C, 1.8GHz	Intel® N3350: 2C, 2.4GHz N4200: 4C, 2.5GHz J3455: 4C, 2.3GHz E3950: 4C, 1.8GHz	Intel® E3940: 4C, 1.8GHz J3455: 4C, 2.3GHz N3350: 2C, 1.1GHz
Chipset		-	-	-	Intel® Q170/H110	-	--	-	-
Max. System Memory		32GB DDR5	32GB DDR4	16GB DDR4	32GB DDR4	32GB DDR4	8GB DDR3L	8GB DDR3L	8GB DDR3L
I/O PORTS	Display	1 x DP 1 x HDMI	1 x HDMI 2 x HDMI/DP (option)	1 x DP 1 x HDMI	1 x DVI-I 1 x HDMI	1 x DP 1 x HDMI	1 x DVI-D 2 x HDMI	1 x VGA 1 x DP	1 x VGA 1 x HDMI
	USB	4 x USB 3.2 Gen 2 4 x USB 2.0	4 x USB 3.0 + 6 x USB 2.0 (option)	4 x USB 3.0 2 x USB 2.0	6 x USB 3.0 (Q170) 4 x USB 3.0 + 2 x USB 2.0 (H110)	2 x USB 3.0 5 x USB 2.0	4 x USB 3.0	4 x USB 3.0 2 x USB 2.0	4 x USB 3.0 2 x USB 2.0
	Audio Line In / Line Out / Mic In	0 / 1 / 1	1 / 1 / 1	0 / 1 / 0	1 / 1 / 1	0 / 1 / 0	0 / 1 / 1	1 / 0 / 0	1 / 0 / 0
	LAN	2 x 2.5GbE	2 or 4 x GbE with PoE as option or 6 x GbE (option)	2 x GbE	2 x GbE with PoE as option	2 x GbE or 4 x GbE (option, max. 2 x PoE)	2 x GbE with PoE as option	2 x GbE	2 x GbE or 4 x GbE (option, max. 2 x PoE)
	Serial Ports	2	2 or 4 or 6 (option)	2 + 2 (option)	4 + 2 (option)	1 or 2 (option)	4	4	3 or 4 (option)
	Parallel Port	--	1 (option)	--	1 (option)	--	--	--	--
	Digital I/O Port	4in / 4out	8in / 8out	8in / 8out	8in / 8out	8in / 8out	4in / 4out	8	8
	CAN Bus	--	2 (option)	--	--	--	--	--	--
	SIM Card	1	--	--	1	1	2	--	--
	SD Card	--	1	--	--	--	1	--	--
DC Out	--	12V / 5V (1A)	--	12V / 5V (1A)	--	--	--	--	
Expansion Slots		1 x M.2 2230-E (PCIe/USB 2.0) 1 x M.2 3042-B (SATA/PCIe/USB2.0) 1 x M.2 2280-M (PCIe Gen4x4)	1 x M.2 slot (2242-E) PCIe/USB 2.0 support 1 x full-sized mPCIe (USB 2.0/PCIe)	1 x full-sized mPCIe (USB/PCIe) 1 x full-sized mSATA (SATA/USB)	1 x full-sized mPCIe (USB 2.0/PCIe/external SIM card) 1 x half-sized mPCIe (USB 2.0/PCIe)	1 x full-sized mPCIe 1 x NVMe M.2 (2280)	1 x full-sized mPCIe (USB 2.0/PCIe/external SIM card) 1 x full-sized mSATA (SATA/USB 2.0/external SIM card)	1 x full-sized mPCIe (USB/PCIe) 1 x full-sized mSATA (SATA/USB)	1 x full-sized mPCIe (USB/PCIe) 1 x full-sized mSATA (SATA/USB)
Drive Bays		1 x 2.5" SATAIII SSD	1 x 2.5" SATAIII HDD/SSD 1 x M.2 slot (2242-B) PCIe/SATA support	1 x 2.5" SATAIII HDD/SSD	2 x 2.5" SATAIII HDD/SSD 1 x CFAST	1 x 2.5" SATAIII HDD/SSD	1 x 2.5" SATAIII HDD/SSD	1 x 2.5" SATAIII HDD/SSD	1 x 2.5" SATAIII HDD/SSD
Power		+12V~24V DC In	+9V~36V DC In	+12V/+24V DC In	+9V~36V DC In	+12V/+24V DC In	+9V~36V DC In	+12V DC In	+12V/+16V~24V DC In
Dimensions (W x H x D) mm		TBD	228 x 71 x 212	217.5 x 46 x 140.6	260 x 80 x 200	217.5 x 46.6 x 140.6	217.5 x 45 x 148	217.5 x 46 x 140.6	217.5 x 46.6 x 140.6
System Weight		TBD	3.0 kg	2.0 kg	4.0 kg	2.0 kg	2.0 kg	2.0 kg	2.0 kg
Operation Temperature		-20°C~60°C with SSD	-40°C~70°C with SSD	-10°C~60°C with SSD	0°C~50°C with SSD	0°C~40°C with SSD	-20°C~50°C with SSD	0°C~40°C with SSD	-40°C~40°C for E3940 0°C~40°C for J3455 with SSD
Operating System		Windows 10 IoT LTSC 2021 64 bit/ Windows 11 IoT Enterprise (GAC)/ Ubuntu 22.04 (kernel: 5.15)	Windows 10 IoT LTSC 2019 64 bit/ Ubuntu 18.04 (kernel: 4.19)	Windows 10 IoT LTSC 2016 64 bit/ Ubuntu 16.04 (kernel: 4.4)	Windows 10 IoT LTSC 2019/ LTSC 2016/ Windows 8.1 (64bit)/ Windows 7 (64bit)/ Linux ubuntu 14.04 (64bit)	Windows 10 IoT LTSC 2019 64 bit/ Ubuntu 20.04 (kernel: 5.04)	Windows 10 IoT LTSC 2016 64 bit/ Ubuntu 16.04 (kernel: 4.4)	Windows 10 64 bit/ Ubuntu 17.04 (kernel: 4.4)	Windows 10 64 bit/ Ubuntu 17.04 (kernel: 4.4)

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

Applied Computer Selection Guide





		Box PC
Model		SA-N718
QR Code		
Pictures		
Processor		Intel® 10th Gen. Core™ / Pentium® / Celeron® / Xeon® W-1200 (up to TDP 65W)
Chipset		Intel® H420E / Q470E / W480E
Max. System Memory		64GB DDR4
I / O P O R T S	Display	2 x DVI-D
	USB	4 x USB 3.0 4 x USB 2.0
	Audio Line In / Line Out / Mic In	1 / 1 / 1
	LAN	2
	Serial Ports	4 + 2 (option)
	Parallel Port	1 (option)
	Keyboard / Mouse	1
	Cash Drawer Port	—
Drive Bays		2 x 2.5" SATA HDDs
Expansion Slots		1 x PCIe (x16) 1 x NVMe M.2 (2242)
Power		AC In 100~240V 50~60Hz
Dimensions (W x H x D) mm		300 x 94 x 270
System Weight		5 kg
Certifications		CE, FCC
Operating System		Windows 10 IoT 2019/ Linux Ubuntu 20.04 LTS

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

In-Vehicle Computing System Selection Guide



		Vehicle PC
Model		IV-Z318
QR Code		
Pictures		
Processor		Intel® Core™ i7-1185GRE (15W, 12MB Cache, 1.80GHz), WT Intel® Core™ i5-1145GRE (15W, 8MB Cache, 1.50GHz), WT Intel® Core™ i3-1115GRE (15W, 6MB Cache, 2.20GHz), WT
Chipset		-
Max. System Memory		32GB DDR4-3200
I / O P O R T S	Display	1 x DP 2 x HDMI
	USB	2 x USB 3.2 Gen 2 2 x USB 2.0
	Audio Line In / Line Out / Mic In	0 / 1 / 1
	LAN	4 x GbE with PoE as option
	Serial Ports	4
	Parallel Port	0
	Digital I/O Port	4in / 4out
	CAN Bus	2 (option)
	SIM Card	2
	SD Card	--
DC Out	--	
Expansion Slots		1 x M.2 slot (2230-E) 1 x M.2 slot (3042/3052-B) 1 x full-sized mPCIe (USB 2.0/PCIe) 1 x full-sized mPCIe (USB 2.0)
Drive Bays		2 x 2.5" SATAIII HDD/SSD 1 x M.2 slot (2280-M) NVMe SSD
Power		+9V~48V DC In
Dimensions (W x H x D) mm		259.5 x 72 x 184.8
System Weight		3.2 kg
Operation Temperature		-40°C~70°C with SSD
Operating System		Windows 10 LTSC 2019/2021 Windows 11 IoT Enterprise (GAC) Ubuntu 20.04 LTS

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

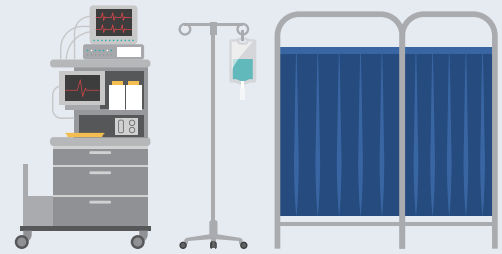
Chapter 8

Panel PC



Panel PC

Selection Guide

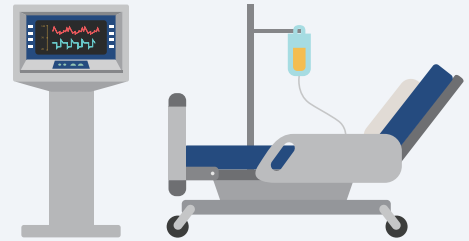


		21.5" High End		21.5" Entry	19" High End	19" Entry
Model		SP-S214	SP-S216	SP-S211	SP-6269	SP-6159
QR Code						
Pictures						
Panel Spec	Display Type	FHD	FHD	FHD	SXGA	SXGA
	Max. Resolution	1920 x 1080	1920 x 1080	1920 x 1080	1280 x 1024	1280 x 1024
	Pixel Pitch	0.248 x 0.248	0.248 x 0.248	0.248 x 0.248	0.294 x 0.294	0.294 x 0.294
	Brightness (cd/m ²)	350	350 / 1600	350 / 1600	350	350
	Response Time (Tr + Td)	22 ms	22 ms	22 ms	10 ms	10 ms
	Viewing Angle (up / down / left / right)	89/89/89/89	89/89/89/89	89/89/89/89	80/80/85/85	80/80/85/85
Processor		Intel® Core™ i7-7700T Core™ i5-7500T Core™ i3-7101TE Celeron® G3930TE	Intel® Core™ i7-7700T/6700TE Core™ i5-7500T/6500TE Core™ i3-7101TE/6100TE Pentium® G4400TE Celeron® G3930TE Celeron® G3900TE	Intel® Celeron® J3455 4C 2.3 GHz	Intel® Core™ i7-6700TE Core™ i5-6500TE Core™ i3-6100TE Pentium® G4400TE Celeron® G3900TE	Intel® Celeron® N3350 2C 2.4 GHz Pentium® N4200 4C 2.5 GHz Atom® x7 E3950 4C 2.0 GHz
Chipset		Intel® Q170/H110	Intel® Q170/H110	SoC	Intel® Q170/H110	SoC
Max. System Memory		32GB DDR4 SO-DIMM	32GB DDR4 SO-DIMM	8GB DDR3L	32GB DDR4 SO-DIMM	8GB DDR3L
I/O PORTS	Display	2 x DVI-D	1 x DVI-I	1 x DVI-D 1 x HDMI (4K)	1 x DVI-I	1 x DVI-D 1 x HDMI
	USB	4 x USB 3.0 4 x USB 2.0	4 x USB 3.0	3 x USB 3.0	4 x USB 3.0	3 x USB 3.0
	Audio Line In / Line Out / Mic In	1 / 1 / 1	1 / 1 / 1	- / 1 / 1	1 / 1 / 1	- / 1 / 1
	LAN	2	2	2	2	2
	Serial Ports	4	4	2	4	2
	Parallel Port	1	-	-	-	-
	Digital I/O Port	-	8in / 8out	-	8in / 8out	-
	Keyboard / Mouse	-	-	-	-	-
Fan		Fan	Fanless	Fanless	Fanless	Fanless
Drive Bays		2 x 2.5" SATAIII HDD	2 x 2.5" SATAIII HDD 1 x CFAST card on board	1 x 2.5" SATAIII HDD	2 x 2.5" SATAIII HDD 1 x CFAST card on board	1 x 2.5" SATAIII HDD
Touchscreen		Projected capacitive touch	Projected capacitive touch	Projected capacitive touch	5W analog resistive	5W analog resistive
Construction		Electro galvanized steel chassis Stainless steel front bezel	Electro galvanized steel chassis Stainless steel front bezel	Electro galvanized steel chassis Stainless steel front bezel	Electro galvanized steel chassis Aluminum front bezel	Electro galvanized steel chassis Aluminum front bezel
Waterproof Level		IP65 (for front panel only)	IP65 (for front panel only)	IP65 (for front panel only)	IP65 (for front panel only)	IP65 (for front panel only)
Wall Mount Type		VESA 75/100	VESA 100	VESA 100	VESA 100	VESA 100
Power		AC In 100V~240V 50Hz~60Hz	DC In 9V~36V	DC In 9V~36V	DC In 9V~36V	DC In 9V~36V
Dimensions (W x H x D) mm		585 x 377 x 107	585 x 377 x 132	585 x 377 x 92	471 x 396 x 131	471 x 396 x 91
System Weight		11.8 kg	12.8 kg	10 kg	11.5 kg	10.7 kg
Operating System		Windows 10 IoT LTSC 2019	Windows 10 IoT LTSC 2019 / Ubuntu LTS 16.04	Windows 10 IoT LTSC 2019 / Ubuntu LTS 16.04	Windows 10 IoT LTSC 2019 / Windows 8.1 / Windows 7 / Ubuntu LTS 16.04	Windows 10 IoT LTSC 2019 / Ubuntu LTS 16.04
Certifications		CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

Panel PC

Selection Guide

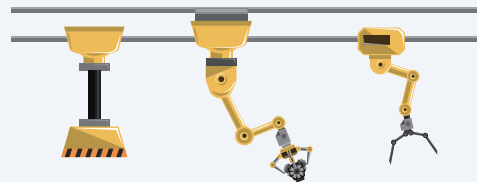


		17" High End		
Model		SP-S174	SP-7167	SP-6567
QR Code				
Pictures				
Panel Spec	Display Type	SXGA	SXGA	SXGA
	Max. Resolution	1280 x 1024	1280 x 1024	1280 x 1024
	Pixel Pitch	0.264 x 0.264	0.264 x 0.264	0.264 x 0.264
	Brightness (cd/m ²)	350	350	350
	Response Time (Tr + Td)	30 ms	30 ms	30 ms
	Viewing Angle (up / down / left / right)	80/80/85/85	80/80/85/85	80/80/85/85
Processor		Intel® Core™ i7-7700T Core™ i5-7500T Core™ i3-7101TE Celeron® G3930TE	Intel® Core™ i7-6700TE Core™ i5-6500TE Core™ i3-6100TE Pentium® G4400TE Celeron® G3900TE	Intel® Core™ i7-6700TE Core™ i5-6500TE Core™ i3-6100TE Pentium® G4400TE Celeron® G3900TE
Chipset		Intel® Q170/H110	Intel® Q170/H110	Intel® Q170/H110
Max. System Memory		32GB DDR4 SO-DIMM	32GB DDR4 SO-DIMM	32GB DDR4 SO-DIMM
I/O PORTS	Display	2 x DVI-D	1 x DVI-I	1 x DVI-I
	USB	4 x USB 3.0 4 x USB 2.0	4 x USB 3.0	4 x USB 3.0
	Audio Line In / Line Out / Mic In	1 / 1 / 1	1 / 1 / 1	1 / 1 / 1
	LAN	2	2	2
	Serial Ports	4	4	4
	Parallel Port	1	--	--
	Digital I/O Port	--	8in / 8out	8in / 8out
	Keyboard / Mouse	--	--	--
Fan		Fan	Fanless	Fanless
Drive Bays		2 x 2.5" SATAIII HDD	2 x 2.5" SATAIII HDD 1 x CFAST card on board	2 x 2.5" SATAIII HDD 1 x CFAST card on board
Touchscreen		Projected capacitive touch / 5W analog resistive	Projected capacitive touch / 5W analog resistive	Projected capacitive touch / 5W analog resistive
Construction		Electro galvanized steel chassis Stainless steel front bezel	Electro galvanized steel chassis Stainless steel front bezel	Electro galvanized steel chassis Aluminum front bezel
Waterproof Level		IP65 (for front panel only)	IP65 (for front panel only)	IP65 (for front panel only)
Wall Mount Type		VESA 75/100	VESA 100	VESA 100
Power		AC In 100V~240V 50Hz~60Hz	DC In 9V~36V	DC In 9V~36V
Dimensions (W x H x D) mm		436 x 368 x 103	434 x 366 x 127	395 x 327 x 127
System Weight		9.1 kg	10.9 kg	10.5 kg
Operating System		Windows 10 IoT LTSC 2019	Windows 10 IoT LTSC 2019 / Ubuntu LTS 16.04	Windows 10 IoT LTSC 2019 / Windows 8.1 / Windows 7 / Ubuntu LTS 16.04
Certifications		CE, FCC	CE, FCC	CE, FCC

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

Panel PC

Selection Guide



		17" Entry		15.6" Entry
Model		SP-7157	SP-6557	SP-7256
QR Code				
Pictures				
Panel Spec	Display Type	SXGA	SXGA	WXGA
	Max. Resolution	1280 x 1024	1280 x 1024	1366 x 768
	Pixel Pitch	0.264 x 0.264	0.264 x 0.264	0.252 x 0.252
	Brightness (cd/m ²)	350	350	400
	Response Time (Tr + Td)	30 ms	30 ms	8 ms
	Viewing Angle (up / down / left / right)	80/80/85/85	80/80/85/85	70/80/80/80
Processor		Intel® Celeron® N3350 2C 2.4 GHz Pentium® N4200 4C 2.5 GHz Celeron® J3455 4C 2.3 GHz Atom® x7 E3950 4C 1.8 GHz	Intel® Celeron® N3350 2C 2.4 GHz Pentium® N4200 4C 2.5 GHz Celeron® J3455 4C 2.3 GHz Atom® x7 E3950 4C 1.8 GHz	Intel® Celeron® N3350 Intel® Celeron® J3455 Intel® Pentium® N4200
Chipset		SoC	SoC	SoC
Max. System Memory		8GB DDR3L	8GB DDR3L	8GB DDR3L
I/O PORTS	Display	1 x DVI-D 1 x HDMI	1 x DVI-D 1 x HDMI	1 x HDMI
	USB	3 x USB 3.0	3 x USB 3.0	4 x USB 3.0 1 x USB 2.0
	Audio Line In / Line Out / Mic In	- / 1 / 1	- / 1 / 1	- / 1 / 1
	LAN	2	2	2
	Serial Ports	2	2	1
	Parallel Port	-	-	-
	Digital I/O Port	-	-	4in / 4out
	Keyboard / Mouse	-	-	-
Fan		Fanless	Fanless	Fanless
Drive Bays		1 x 2.5" SATAIII HDD	1 x 2.5" SATAIII HDD	1 x 2.5" SATAIII HDD
Touchscreen		Projected capacitive touch / 5W analog resistive	Projected capacitive touch / 5W analog resistive	Projected capacitive touch
Construction		Electro galvanized steel chassis Stainless steel front bezel	Electro galvanized steel chassis Aluminum front bezel	Plastic front bezel Aluminum die casting back cover
Waterproof Level		IP65 (for front panel only)	IP65 (for front panel only)	-
Wall Mount Type		VESA 100	VESA 100	VESA 75/100
Power		DC In 9V~36V	DC In 9V~36V	DC In 12V/24V
Dimensions (W x H x D) mm		436 x 368 x 87	396 x 328 x 75	391 x 246 x 48
System Weight		6.9 kg	6.5 kg	3.2 kg
Operating System		Windows 10 IoT LTSC 2019 / Ubuntu LTS 16.04	Windows 10 IoT LTSC 2019 / Ubuntu LTS 16.04	Windows 10 IoT LTSC 2019 / Ubuntu LTS 16.04
Certifications		CE, FCC	CE, FCC	CE, FCC

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

Panel PC

Selection Guide



		15" High End		
Model		SP-S154	SP-7165	SP-6565
QR Code				
Pictures				
Panel Spec	Display Type	XGA	XGA	XGA
	Max. Resolution	1024 x 768	1024 x 768	1024 x 768
	Pixel Pitch	0.297 x 0.297	0.297 x 0.297	0.297 x 0.297
	Brightness (cd/m ²)	450	450	450
	Response Time (Tr + Td)	8 ms	8 ms	8 ms
	Viewing Angle (up / down / left / right)	70/80/80/80	70/80/80/80	70/80/80/80
Processor		Intel® Core™ i7-7700T Core™ i5-7500T Core™ i3-7101TE Celeron® G3930TE	Intel® Core™ i7-6700TE Core™ i5-6500TE Core™ i3-6100TE Pentium® G4400TE Celeron® G3900TE	Intel® Core™ i7-6700TE Core™ i5-6500TE Core™ i3-6100TE Pentium® G4400TE Celeron® G3900TE
Chipset		Intel® Q170/H110	Intel® Q170/H110	Intel® Q170/H110
Max. System Memory		32GB DDR4 SO-DIMM	32GB DDR4 SO-DIMM	32GB DDR4 SO-DIMM
I / O P O R T S	Display	2 x DVI-D	1 x DVI-I	1 x DVI-I
	USB	4 x USB 3.0 4 x USB 2.0	4 x USB 3.0	4 x USB 3.0
	Audio Line In / Line Out / Mic In	1 / 1 / 1	1 / 1 / 1	1 / 1 / 1
	LAN	2	2	2
	Serial Ports	4	4	4
	Parallel Port	1	—	—
	Digital I/O Port	--	8in / 8out	8in / 8out
	Keyboard / Mouse	--	—	—
Fan		Fan	Fanless	Fanless
Drive Bays		2 x 2.5" SATAIII HDD	2 x 2.5" SATAIII HDD 1 x CFAST card on board	2 x 2.5" SATAIII HDD 1 x CFAST card on board
Touchscreen		Projected capacitive touch / 5W analog resistive	Projected capacitive touch / 5W analog resistive	Projected capacitive touch / 5W analog resistive
Construction		Electro galvanized steel chassis Stainless steel front bezel	Electro galvanized steel chassis Stainless steel front bezel	Electro galvanized steel chassis Aluminum front bezel
Waterproof Level		IP65 (for front panel only)	IP65 (for front panel only)	IP65 (for front panel only)
Wall Mount Type		VESA 75/100	VESA 100	VESA 100
Power		AC In 100V~240V 50Hz~60Hz	DC In 9V~36V	DC In 9V~36V
Dimensions (W x H x D) mm		408 x 320 x 98	408 x 320 x 122	364 x 279 x 118
System Weight		8.1 kg	8.9 kg	10 kg
Operating System		Windows 10 IoT LTSC 2019	Windows 10 IoT LTSC 2019 / Ubuntu LTS 16.04	Windows 10 IoT LTSC 2019 / Ubuntu LTS 16.04
Certifications		CE, FCC	CE, FCC	CE, FCC

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

Panel PC

Selection Guide

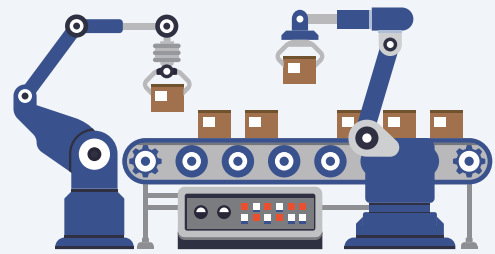


		15" Entry	
Model		SP-6555	SP-7155
QR Code			
Pictures			
Panel Spec	Display Type	XGA	XGA
	Max. Resolution	1024 x 768	1024 x 768
	Pixel Pitch	0.297 x 0.297	0.297 x 0.297
	Brightness (cd/m ²)	400	400
	Response Time (Tr + Td)	8 ms	8 ms
	Viewing Angle (up / down / left / right)	80/80/80/80	80/80/80/80
Processor		Intel® Celeron® N3350 2C 2.4 GHz Pentium® N4200 4C 2.5 GHz Celeron® J3455 4C 2.3 GHz Atom® x7 E3950 4C 1.8 GHz	Intel® Celeron® N3350 2C 2.4 GHz Pentium® N4200 4C 2.5 GHz Celeron® J3455 4C 2.3 GHz Atom® x7 E3950 4C 1.8 GHz
Chipset		SoC	SoC
Max. System Memory		8GB DDR3L	8GB DDR3L
I / O P O R T S	Display	1 x DVI-D 1 x HDMI	1 x DVI-D 1 x HDMI
	USB	3 x USB 3.0	3 x USB 3.0
	Audio Line In / Line Out / Mic In	- / 1 / 1	- / 1 / 1
	LAN	2	2
	Serial Ports	2	2
	Parallel Port	-	-
	Digital I/O Port	-	-
	Keyboard / Mouse	-	-
Fan		Fanless	Fanless
Drive Bays		1 x 2.5" SATAIII HDD	1 x 2.5" SATAIII HDD
Touchscreen		Projected capacitive touch / 5W analog resistive	Projected capacitive touch / 5W analog resistive
Construction		Electro galvanized steel chassis Aluminum front bezel	Electro galvanized steel chassis Stainless steel front bezel
Waterproof Level		IP65 (for front panel only)	IP65 (for front panel only)
Wall Mount Type		VESA 100	VESA 100
Power		DC In 9V~36V	DC In 9V~36V
Dimensions (W x H x D) mm		365 x 280 x 75	408 x 320 x 82
System Weight		6.0 kg	6.0 kg
Operating System		Windows 10 IoT LTSC 2019 / Ubuntu LTS 16.04	Windows 10 IoT LTSC 2019 / Ubuntu LTS 16.04
Certifications		CE, FCC	CE, FCC

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

Panel PC

Selection Guide



		12.1" Entry	10.4" Entry	8.4" Entry
Model		SP-C121	SP-6550	SP-6558
QR Code				
Pictures				
Panel Spec	Display Type	XGA	SVGA	SVGA
	Max. Resolution	1024 x 768	800 x 600	800 x 600
	Pixel Pitch	0.24 x 0.24	0.264 x 0.264	0.264 x 0.264
	Brightness (cd/m ²)	500	400	600
	Response Time (Tr + Td)	35 ms	35 ms	16 ms
	Viewing Angle (up / down / left / right)	80/80/80/80	60/70/80/80	70/65/75/75
Processor		Intel® Celeron® J3455 4C 2.3 GHz	Intel® Celeron® N3350 2C 2.4 GHz Pentium® N4200 4C 2.5 GHz Celeron® J3455 4C 2.3 GHz Atom® x7 E3950 4C 1.8 GHz	Intel® Celeron® N3350 2C 2.4 GHz Pentium® N4200 4C 2.5 GHz Celeron® J3455 4C 2.3 GHz Atom® x7 E3950 4C 1.8 GHz
Chipset		SoC	SoC	SoC
Max. System Memory		8GB DDR3L	8GB DDR3L	8GB DDR3L
I/O PORTS	Display	1 x VGA 1 x DP	1 x DVI-D 1 x HDMI	1 x DVI-D 1 x HDMI
	USB	4 x USB 3.0 2 x USB 2.0	3 x USB 3.0	3 x USB 3.0
	Audio Line In / Line Out / Mic In	1 / 0 / 0	-- / 1 / 1	- / 1 / 1
	LAN	2	2	2
	Serial Ports	4	2	2
	Parallel Port	—	—	--
	Digital I/O Port	8	—	--
	Keyboard / Mouse	—	—	--
Fan		Fanless	Fanless	Fanless
Drive Bays		1 x 2.5" SATAIII HDD/SSD	1 x 2.5" SATAIII HDD	1 x 2.5" SATAIII HDD
Touchscreen		5W analog resistive	Projected capacitive touch / 5W analog resistive	Projected capacitive touch / 5W analog resistive
Construction		Electro galvanized steel chassis Aluminum front bezel	Electro galvanized steel chassis Aluminum front bezel	Electro galvanized steel chassis Aluminum front bezel
Waterproof Level		—	IP65 (for front panel only)	IP65 (for front panel only)
Wall Mount Type		VESA 75	VESA 100	VESA 100
Power		DC In 12V/24V	DC In 9V~36V	DC In 9V~36V
Dimensions (W x H x D) mm		324 x 253 x 71	259 x 216 x 74	224 x 176 x 76
System Weight		3.55 kg	3 kg	2 kg
Operating System		Windows 10 64 bit	Windows 10 IoT LTSC 2019 / Windows 7 / Ubuntu LTS 14.04	Windows 10 IoT LTSC 2019 / Windows 7 / Ubuntu LTS 14.04
Certifications		CE, FCC	CE, FCC	CE, FCC

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

Chapter 9

Full IP66 / IP69K Panel PC



Full IP66 / IP69K Panel PC

Selection Guide

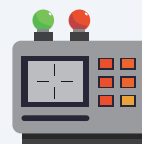


		23.8" High End	23.8" Entry	21.5" High End	21.5" Entry
Model		SG-S238	SG-S232	SG-S218	SG-S212
QR Code					
Pictures					
Panel Spec	Display Type	FHD	FHD	FHD	FHD
	Max. Resolution	1920 x 1080	1920 x 1080	1920 x 1080	1920 x 1080
	Pixel Pitch	0.274 x 0.274	0.274 x 0.274	0.248 x 0.248	0.248 x 0.248
	Brightness (cd/m ²)	400	400	350	350
	Response Time (Tr + Td)	14 ms	14 ms	22 ms	22 ms
	Viewing Angle (up / down / left / right)	89/89/89/89	89/89/89/89	89/89/89/89	89/89/89/89
Processor		Intel® 12th Gen. Core™ i7-1265UE Core™ i5-1245UE Core™ i3-1215UE Celeron® 7305E	Intel® Celeron® J6412 Atom® x6425RE	Intel® 12th Gen. Core™ i7-1265UE Core™ i5-1245UE Core™ i3-1215UE Celeron® 7305E	Intel® Celeron® J6412
Chipset		Alder Lake P SoC	Elkhart Lake SoC	Alder Lake P SoC	Elkhart Lake SoC
Max. System Memory		DDR5 32GB	DDR4 32GB	DDR5 32GB	DDR4 32GB
I O P O R T S	Display	--	--	--	--
	USB	2 x M12 waterproof connector (4 x USB 2.0)	2 x M12 waterproof connector (4 x USB 2.0)	2 x M12 waterproof connector (4 x USB 2.0)	2 x M12 waterproof connector (4 x USB 2.0)
	Audio Line In / Line Out / Mic In	--	--	--	--
	LAN	2	2	2	2
	Serial Ports	2	2	2	2
	Parallel Port	--	--	--	--
	Digital I/O Port	--	--	--	--
	Keyboard / Mouse	--	--	--	--
Fan		Fanless	Fanless	Fanless	Fanless
Drive Bays		1 x 2.5" HDD	1 x 2.5" HDD	1 x 2.5" HDD	1 x 2.5" HDD
Touchscreen		Projected capacitive touch	Projected capacitive touch	Projected capacitive touch / 5W analog resistive	Projected capacitive touch / 5W analog resistive
Construction		Stainless SUS304	Stainless SUS304	Stainless SUS304	Stainless SUS304
Waterproof Level		IP66 / IP69K	IP66 / IP69K	IP66 / IP69K	IP66 / IP69K
Wall Mount Type		VESA 100	VESA 100	VESA 100	VESA 100
Power		DC In 12V/24V	DC In 12V/24V	DC In 12V/24V	DC In 12V/24V
Dimensions (W x H x D) mm		635 x 404 x 87.5	635 x 404 x 87.5	590 x 395 x 91	590 x 395 x 91
System Weight		14 kg	14 kg	13.5 kg	13.5 kg
Operating System		Windows 10 IoT LTSC 2021 Windows 11 Ubuntu 22.04	Windows 10 IoT LTSC 2019 Windows 11 Ubuntu 20.04	Windows 10 IoT LTSC 2021 Windows 11 Ubuntu 22.04	Windows 10 IoT LTSC 2019 Windows 11 Ubuntu 20.04
Certifications		CE, FCC, IP66/69K, NEMA 4X	CE, FCC, IP66/69K, NEMA 4X	CE, FCC, IP66/69K, NEMA 4X	CE, FCC, IP66/69K, NEMA 4X

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

Full IP66 / IP69K Panel PC

Selection Guide

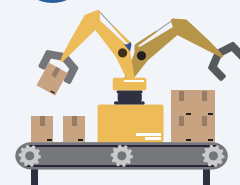


		19" High End	19" Entry	17" High End	17" Entry
Model		SG-S198	SG-S192	SG-S178	SG-S172
QR Code					
Pictures					
Panel Spec	Display Type	SXGA	SXGA	SXGA	SXGA
	Max. Resolution	1280 x 1024	1280 x 1024	1280 x 1024	1280 x 1024
	Pixel Pitch	0.294 x 0.294	0.294 x 0.294	0.264 x 0.264	0.264 x 0.264
	Brightness (cd/m ²)	350	350	350 / 800	350 / 800
	Response Time (Tr + Td)	10 ms	10 ms	30 ms	30 ms
	Viewing Angle (up / down / left / right)	80/80/85/85	80/80/85/85	85/85/85/85	85/85/85/85
Processor		Intel® 12th Gen. Core™ i7-1265UE Core™ i5-1245UE Core™ i3-1215UE Celeron® 7305E	Intel® Celeron® J6412 Atom® x6212RE Atom® x6425RE	Intel® 12th Gen. Core™ i7-1265UE Core™ i5-1245UE Core™ i3-1215UE Celeron® 7305E	Intel® Celeron® J6412 Atom® x6425RE
Chipset		Alder Lake P SoC	Elkhart Lake SoC	Alder Lake P SoC	Elkhart Lake SoC
Max. System Memory		DDR5 32GB	DDR4 32GB	DDR5 32GB	DDR4 32GB
I/O PORTS	Display	--	--	--	--
	USB	2 x M12 waterproof connector (4 x USB 2.0)	2 x M12 waterproof connector (4 x USB 2.0)	2 x M12 waterproof connector (4 x USB 2.0)	2 x M12 waterproof connector (4 x USB 2.0)
	Audio Line In / Line Out / Mic In	--	--	--	--
	LAN	2	2	2	2
	Serial Ports	2	2	2	2
	Parallel Port	--	--	--	--
	Digital I/O Port	--	--	--	--
	Keyboard / Mouse	--	--	--	--
Fan		Fanless	Fanless	Fanless	Fanless
Drive Bays		1 x 2.5" HDD	1 x 2.5" HDD	1 x 2.5" HDD	1 x 2.5" HDD
Touchscreen		Projected capacitive touch / 5W analog resistive	Projected capacitive touch / 5W analog resistive	Projected capacitive touch / 5W analog resistive	Projected capacitive touch / 5W analog resistive
Construction		Stainless SUS304	Stainless SUS304	Stainless SUS304	Stainless SUS304
Waterproof Level		IP66 / IP69K	IP66 / IP69K	IP66 / IP69K	IP66 / IP69K
Wall Mount Type		VESA 100	VESA 100	VESA 100	VESA 100
Power		DC In 12V/24V	DC In 12V/24V	DC In 12V/24V	DC In 12V/24V
Dimensions (W x H x D) mm		487 x 408 x 85	487 x 408 x 85	450 x 381 x 95	450 x 381 x 95
System Weight		11.5 kg	11.5 kg	13 kg	13 kg
Operating System		Windows 10 IoT LTSC 2021 Windows 11 Ubuntu 22.04	Windows 10 IoT LTSC 2019 Windows 11 Ubuntu 20.04	Windows 10 IoT LTSC 2021 Windows 11 Ubuntu 22.04	Windows 10 IoT LTSC 2019 Windows 11 Ubuntu 20.04
Certifications		CE, FCC, IP66/69K, NEMA 4X	CE, FCC, IP66/69K, NEMA 4X	CE, FCC, IP66/69K, NEMA 4X	CE, FCC, IP66/69K, NEMA 4X

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

Full IP66 / IP69K Panel PC

Selection Guide



		15.6" High End	15.6" Entry	15" High End		15" Entry	
Model		SG-S168	SG-S162	SG-S158	SG-G156	SG-S152	SG-G151
QR Code							
Pictures							
Panel Spec	Display Type	HD	HD	XGA	XGA	XGA	XGA
	Max. Resolution	1366 x 768	1366 x 768	1024 x 768	1024 x 768	1024 x 768	1024 x 768
	Pixel Pitch	0.252 x 0.252	0.252 x 0.252	0.297 x 0.297	0.297 x 0.297	0.297 x 0.297	0.297 x 0.297
	Brightness (cd/m ²)	400	400	450 / 1600	450	450 / 1600	450
	Response Time (Tr + Td)	8 ms	8 ms	8 ms	8 ms	8 ms	8 ms
	Viewing Angle (up / down / left / right)	80/80/85/85	80/80/85/85	70/80/80/80	70/80/80/80	70/80/80/80	70/80/80/80
Processor		Intel® 12th Gen. Core™ i7-1265UE Core™ i5-1245UE Core™ i3-1215UE Celeron® 7305E	Intel® Celeron® J6412 Atom® x6425RE	Intel® 12th Gen. Core™ i7-1265UE Core™ i5-1245UE Core™ i3-1215UE Celeron® 7305E	Intel® Core™ i5-7300U Core™ i3-7100U	Intel® Celeron® J6412 Atom® x6425RE	Intel® Celeron® J3455 Atom® x7-E3950
Chipset		Alder Lake P SoC	Elkhart Lake SoC	Alder Lake P SoC	Kaby Lake-U SoC	Elkhart Lake SoC	Apollo Lake SoC
Max. System Memory		DDR5 32GB	DDR4 32GB	DDR5 32GB	DDR4 16GB	DDR4 32GB	DDR3L 8GB
I/O PORTS	Display	--	--	--	--	--	--
	USB	2 x M12 waterproof connector (4 x USB 2.0)	2 x M12 waterproof connector (4 x USB 2.0)	2 x M12 waterproof connector (4 x USB 2.0)	2 x M12 waterproof connector (4 x USB 2.0)	2 x M12 waterproof connector (4 x USB 2.0)	2 x M12 waterproof connector (4 x USB 2.0)
	Audio Line In / Line Out / Mic In	--	--	--	--	--	--
	LAN	2	2	2	2	2	2
	Serial Ports	2	2	2	1	2	1
	Parallel Port	--	--	--	--	--	--
	Digital I/O Port	--	--	--	--	--	--
	Keyboard / Mouse	--	--	--	--	--	--
Fan		Fanless	Fanless	Fanless	Fanless	Fanless	Fanless
Drive Bays		1 x 2.5" HDD	1 x 2.5" HDD	1 x 2.5" HDD	1 x 2.5" HDD	1 x 2.5" HDD	1 x 2.5" HDD
Touchscreen		Projected capacitive touch / 5W analog resistive	Projected capacitive touch / 5W analog resistive	Projected capacitive touch / 5W analog resistive	Projected capacitive touch / 5W analog resistive	Projected capacitive touch / 5W analog resistive	Projected capacitive touch / 5W analog resistive
Construction		Stainless SUS304	Stainless SUS304	Stainless SUS304	Aluminum	Stainless SUS304	Aluminum
Waterproof Level		IP66 / IP69K	IP66 / IP69K	IP66 / IP69K	IP66	IP66 / IP69K	IP66
Wall Mount Type		VESA 100	VESA 100	VESA 100	VESA 100	VESA 100	VESA 100
Power		DC In 12V/24V	DC In 12V/24V	DC In 12V/24V	DC In 12V/24V	DC In 12V/24V	DC In 12V/24V
Dimensions (W x H x D) mm		450 x 304 x 85	450 x 304 x 85	450 x 335 x 91	365 x 279 x 99	450 x 335 x 91	365 x 279 x 99
System Weight		12 kg	12 kg	12.5 kg	7.2 kg	12.5 kg	7.2 kg
Operating System		Windows 10 IoT LTSC 2021/Windows 11/Ubuntu 22.04	Windows 10 IoT LTSC 2019/Windows 11/Ubuntu 20.04	Windows 10 IoT LTSC 2021/Windows 11/Ubuntu 22.04	Windows 10 IoT LTSC 2019/Ubuntu 16.04	Windows 10 IoT LTSC 2019/Windows 11/Ubuntu 20.04	Windows 10 IoT LTSC 2019/Ubuntu 16.04
Certifications		CE, FCC, IP66/69K, NEMA 4X	CE, FCC, IP66/69K, NEMA 4X	CE, FCC, IP66/69K, NEMA 4X	CE, FCC, IP66	CE, FCC, IP66/69K, NEMA 4X	CE, FCC, IP66

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

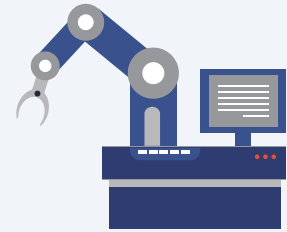
Chapter 10

Industrial Monitor



Industrial Monitor

Selection Guide



Model		SP-C175	SP-C155	SP-C105	SP-C085
QR Code					
Pictures					
D I S P L A Y	Sizes	17"	15"	10.4"	8.4"
	Resolution	1280 x 1024 pixels	1024 x 768 pixels	800 x 600 pixels	800 x 600 pixels
	Brightness	350 nits	450 nits / 300 nits	450 nits	600 nits
	Lifetime	50,000 hours	50,000 hours	50,000 hours	30,000 hours
	Viewing Angle	Horizontal: -80°~80°, Vertical: -80°~70°			
	Touch	P-CAP touch / Resistive touch			
I / O P O R T S	VGA	1			
	DVI	DVI-I cable (support DVI-D signal only)			
	USB	Type A x 1 for connecting touch			
	HDMI	1			
	DC In Jack	DC12V x 1			
OSD	Power Button x1, Auto x 1, Menu x 1, SEL+ x 1, SEL- x 1				
Stand-alone Stand	Option				
Wall-mounted Kit	Option				
IP Rating	IP65 (front Panel)				
Power Adaptor	12V/3.3A/40W				
Dimensions (W x H x D) mm	396 x 328 x 54	365 x 280 x 54	260 x 217 x 48	225 x 177 x 49	
Weight	4.4 kg	3.5 kg	1.8 kg	1.4 kg	
Operation Temp.	-20°C~60°C / 0°C~50°C				
Certifications	CE, FCC				

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

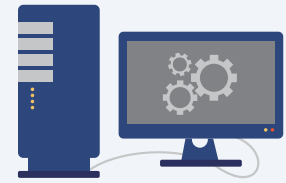
Chapter 11



IIoT Edge Controller



IIoT Edge Controller

Selection Guide



Model		SI-W000
QR Code		
Pictures		
SYSTEM	Processor	ARM Cortex-A8 32-bit RISC
	Speed	1 GHz
	Memory	512MB DDR3L
	Storage	8GB eMMC
	Display	1 x VGA
	Communications	1 x GbE LAN 2 x RS-232 (Tx, Rx, GND) 2 x RS-485 (D+, D-)
	Firmware	Protech Firmware
I/O PORTS	USB	1 x USB 2.0 Type A
	LAN	1 channel
	RS-232 (Tx, Rx, GND)	2 channels
	RS-485 (D+, D-)	1 channel
	RS-485 (D+, D-, GND.ISO)	1 channel
	SD Card Slot	1 x micro SD Card Slot
	SIM Slot	1
	Digital Input	-
	Digital Output	-
	Relay Output	-
Thermocouple Input	-	
Local I/O Module		1 channel with RS-232 Signal
Remote I/O Module		2 x Modbus RTU Module 1 x Modbus TCP Module
Expansion Slot		1 x full-sized mini-PCIe with USB2.0 Signal
Protocol Support		Modbus TCP/RTU, DHCP, HTTP, OPC UA, MQTT, CGI, FTP
Enclosure		Plastic
Mount Type		DIN-Rail, Wall Mount
Power		DC In 9V~50V
Dimensions (W x H x D) mm		90 x 115 x 49
Weight (approx)		285 g
Certifications		CE, FCC
Operation Systems		Embedded Linux

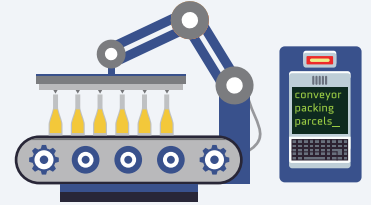
*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

Chapter 12

Remote I/O Module



Remote I/O Module Selection Guide



Model		SI-W109	SI-W309	SI-W509	SI-W709
QR Code					
Pictures					
SYSTEM	Processor	8-bit Micro Controller			
	Memory	2 KB on-chip			
	Storage	64KB on-chip flash			
	Communications	RS-485 (D+, D-)			
	Firmware	Protech Firmware			
I/O PORTS	RS-485 (D+, D-)	1 channel			
	Analog Input	4 channels	--	--	--
	Analog Output	2 channels	--	--	--
	Digital Input	4 channels	8 channels	5 channels	--
	Digital Output	4 channels	8 channels	--	--
	Relay Output	--	--	6 channels	--
	Thermocouple Input	--	--	--	8 channels
Protocol Support		Modbus RTU			
Enclosure		Plastic			
Mount Type		DIN-Rail, Wall Mount			
Power		DC In 9V~50V			
Dimensions (W x H x D) mm		90 x 115 x 29			
Weight (approx)		220 g			
Certifications		CE, FCC			

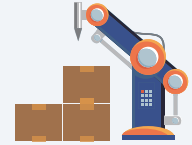
*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

Chapter 13

EtherCAT Slave I/O Module



EtherCAT Slave I/O Module Selection Guide



Model		SI-X208	SI-X308	SI-X408	SI-X608
QR Code					
Pictures					
SYSTEM	Controller	EtherCAT Slave Controller			
	Interface	Ethernet			
	Connector	2 x RJ-45			
	Distance Between Stations	Max. 100m 100 BASE-TX			
I/O PORTS	Analog Input	--	--	--	8 channels
	Analog Output	--			
	Digital Input	16 channels	8 channels	--	--
	Digital Output	--	8 channels	16 channels	--
	Relay Output	--			
	Thermocouple Input	--			
Protocol Support		EtherCAT			
Enclosure		Plastic			
Mount Type		DIN-Rail			
Power		DC In 9V~48V			
Dimensions (W x H x D) mm		90 x 115 x 29			
Weight (approx)		285 g			
Certifications		CE, FCC			

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

INDUSTRY4.0



A series of horizontal dashed lines for writing.

