

Domain-Focus HMI 2021 Q2 Sales Kit

Edge Computing Co-Creation **Solution Suite** InsightAPM 😍 Intelligent M2I iCity Services WISE-Marketplace AI Platform iBuilding iCity Services 🚅

Advantech Industrial HMI and Monitor

Ideal for diverse visualization applications directly on machines/cabinet, in the plant, or centralized control rooms















Machine Monitor & Control



Energy Control Cabinet



Production Line Visualization



Central Control Visualization

WebAccess/HMI



CODESYS

WebAccess/SCADA



3rd Party Software



Configurable Panel IPC (PPC-6000)



Embedded Control HMI



Domain HMI



Operator Panel (WOP-2000/100/200)



Web Browser HMI (TPC-71W)



All-in-one/Modular Thin-Client

(PPC-3000/TPC-2000)



Industrial Monitor (FPM-200/300/600/700/800)

ADVANTECH

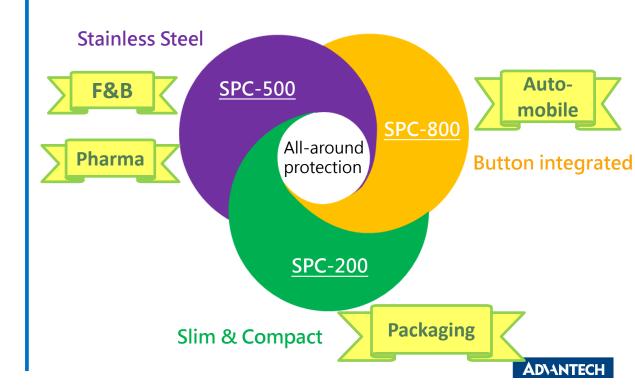
Focused Industries

Explosion Proof segment





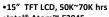
All-around Protection segment



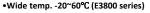
Domain-Focus HMI (Explosion Proof PC)



TPC-125H







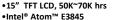


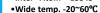
•IP66 true flat resistive touch

•Mini PCIe Slot (iDoor supported);Intel I210 LAN



TPC-155H







•IP66 true flat resistive touch

•Mini PCle Slot (iDoor supported);Intel I210 LAN







Domain-Focus HMI (Standalone PC)

FPM-8151H-R3BE

- •15" industrial monitor
- •Front 316L Stainless Steel Bezel C1D2 Certified for hazardous area



SPC-515-633AE

- •15" PCAP Panel PC with 6th Gen CPU •IP69K Rated Protection w/ 304L SS
- •Touch film to avoid glass splash





IPPC-5211WS-J3AE

- •21.5" FHD 300nits, Celeron J1900
- •IP69K Rated Protection w/ 304L SS
- Rittal CP40 arm system supported

SPC-821-633AG/P

- •21.5" PCAP Panel PC with 6th Gen CPU
- Pipe Mount w/ All-Around IP65
- •RAFI FS 22+ push button supported



SPC-815-633AG/P

- 15.6" PCAP Panel PC with 6th Gen CPU
- Pipe Mount w/ All-Around IP65
- •RAFI FS 22+ push button supported

SPC-821-M7AG/P

- •21.5" Full HD PCAP Touch Monitor
- Pipe Mount w/ All-Around IP65
- •RAFI FS 22+ push button supported



SPC-815-M7AG/P

- •15.6" HD PCAP Touch Monitor
- Pipe Mount w/ All-Around IP65
- •RAFI FS 22+ push button supported



- •18.5" HD 300nits, PCAP TCH
- •4TH Gen. Core i3/i5/i7
- •VESA Mount w/ All-Around IP66



•21.5" FHD 300nits, PCAP TCH •6TH Gen. Core i3/i5/i7

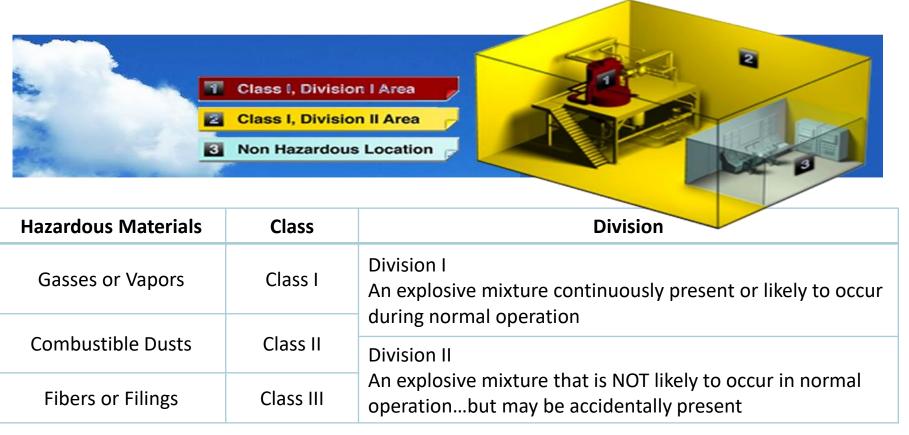
•VESA Mount w/ All-Around IP66







Class/Division Definition





Advantech Class I, Division 2 Industrial Panel PC: TPC-125H/155H

	TPC-125H/ TPC-155H	
CPU	Intel® Atom™ E3845 Quad-Core 1.9GHz	
RAM	Default 4GB DDR3L SDRAM (up to 8GB)	
	Size: 12" and 15"	
	Resolution: 1024x768/ 1024x768	
Display	Colors: 16.2M/ 16.7M	
	Viewing angle: 178/178; 176/176	
	Luminance: 600nits/ 300nits	
LAN	10/100/1000BASE-T x 2	
1/0	1 x RS-232; 1 x RS-232/422/485 1 x USB 3.0; 3 x USB 2.0 1 x iDoor slot 1 x SSD bay; 1 x mSATA	
Expansion	1 x Full-size mini PCle	
Power Input	24VDC +/- 20%	
Operation Temp.	-20 ~ 60°C (-4 ~ 140 °F)	
Dimension	311.8 x 238 x 55.4 /383.2x 307.3 x 55.9 mm	
Mounting	Panel mount with front panel IP66	
Certifications	BSMI, CCC, CE, FCC Class A, UL C1D2	



IP66

UL Class 1, Division 2 Certified



Wide Temp. Range

Front Panel IP66

In-Cabinet Design













WebAccess/HMI WebAccess/SCADA



Advantech Class I, Division 2 Industrial Panel PC: TPC-1881WPH

	TPC-1881WPH	***************************************
CPU	Intel 4th Generation Core i5-4300U 1.9GHz	
Onboard RAM	4GB DDR3L 1600MHz SO-DIMM SDRAM (up to 8GB)	
	Size :18.5	- minyes sapisaning
	Resolution:1920 x 1080	trans.
Display	Colors:16.7M	
	Viewing angle:170/160	
	Luminance:350	
LAN	10/100/1000BASE-T x 2 (one port supports iAMT)	
I/O	RS-232 x 1, RS-232/422/485 x 1 USB 3.0 x 2, HDMI 1.4 x 1 Audio line out x 1, USB 2.0 x 1 (optional) Audio MIC x 1 (optional)	
Expansion	Full-size mini PCle	
Power Input Range	24VDC +/- 20%	
Operation Temp.	0 ~ 55°C (32 ~ 131°F)	
Dimension	488 x 309 x 56.7 mm (19.21" x 12.17" x 2.23")	
Certifications	BSMI, CCC, CE, FCC Class A, UL C1D2	AD/4N

Advantech Class I, Division 2 HMI: FPM-8151H

Model	FPM-8151H			
	Size (diagonal)	15" XGA		
	Resolution	1024 x 768	All Comments and the American Action in the A	
Display	Colors	16.2M	Water Arms	
	Viewing Angel	160, 140		
	Luminance	350	Avenue D	
Direct VGA Inp	ut	Yes	RIO East SCACA and HAI Software Over 1.00 accessful assistation workship.	
DVI Input		Yes	122.	
Touch-screen ((optional)	Resistive		
OSD (On-Screen Display)		Yes		
Power Adapter (AC)		100-240 V		
DV Power Inpu	t	24 V _{DC}		
Front Panel Ingress Protection		NEMA4/IP65		
Operating Temperature		-20 ~ 60°C (-4 ~ 140°F)		
Dimensions (W x H x D)		422 x 338 x 68 mm (16.61" x 13.31" x 2.68")		
Certifications		CID2 Group ABCD, T4		



Drilling Rig Control



- Data acquisition log and archive activities of rigs and sensors
- Real-time rig monitoring and overall equipment effectiveness (OEE) analysis
- Warning and emergency control



TPC-125H

- Intel[®] Atom[™] Quad-Core
- In-Cabinet panel mount
- Front panel IP66 dust & water proof
- Resistive touch
- 2 x GbE, 4 x USB, 2 x COM, iDoor, mSATA,
 1 x mPCle, 1 x SATA, 1 x power terminal



Oil & Gas Application



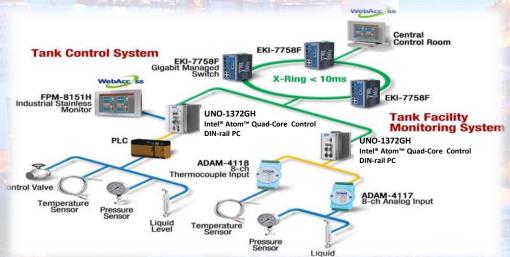


Tank Control & Monitoring



FPM-8151H

- 15" 4:3 XGA TFT LCD
- Resistive touch screen
- Ruggedized enclosure
- Wide operation temperature(-20 ~ 60°C)
- CID2 Group ABCD, T4





- Real-time oil tank level monitoring
- System warning and control
- Sensor data collection, integration & transmission

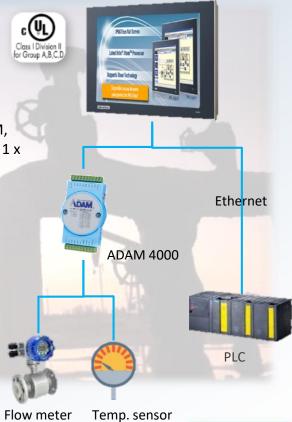
Gas Compressor Control & Monitoring



TPC-125H

- Intel® Atom™ Quad-core
- In-cabinet panel mount
- · Resistive touch
- 2 x GbE, 4 x USB, 2 x COM, iDoor, mSATA, 1 x mPCle, 1 x SATA, 1 x power terminal

- Monitoring engine operational data, such as speed and load control visibility
- Collecting and aggregating data for analysis and overall equipment efficiency





Gasoline KIOSK Application





Platform Products Evolution in terms of mounting

NOW (Panel Mount)





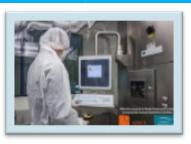




FUTURE (Standalone)











Traditional HMI & Edge Computing Platforms

- Cut-out of chamber or cabinet limited
- Lack of flexibility for ID design of machines

Standalone Products

- All-Around IP protection
- Great compatibility & integration with devices

Offering of Standalone HMI

Encapsulated HMI



SPC-200

SPC-1881WP

- •18.5" HD 300nits, PCAP TCH
- •4TH Gen. Core i3/i5/i7
- Customizable I/O configure

SPC-221-633AE

- •21.5" FHD 300nits, PCAP TCH
- •6THGen.Core3/i5/i7
- Customizable I/O configure

Stainless Steel **HMI**



FPM-8151H-R3BE

- •15" industrial monitor
- Front 316L SS Bezel
- C1D2 certified

IPPC-5211WS

- •21.5" FHD 300nits, J1900
- •IP69K w/ 304L SS Enclosure
- •Rittal CP40 arm system

SPC-515-633AE

- •15" PCAP PC, Core i3 6100U
- •IP69K w/ 304L SS Enclosure
- VESA Mount

Innovative Integrated HMI



SPC-800

SPC-815

- 15.6" PCAP PC. i3-6100U
- •Pipe Mount w/ IP65
- •RAFI FS 22+ push button

SPC-821-633AG/P

- •21.5" PCAP PC, i3-6100U
- •Pipe Mount w/ IP65
- •RAFI FS 22+ push button

Offering



Target "Selected" Industry of Standalone Products

Target Industry

Environmental Requirement

Offering

Packaging



Pharmaceutical

Automotive









Powder & Dust –proof : All-Around IP Domain Certification: IEC 61131-2 Compliance Data Acquisition : Push Button & TPM 2.0

Daily Wash: All-Around IP Protection

 ${\sf Cold\ Storage\ \&\ Smoke\ Chamber:\ \pmb{Wide\ Temp.}}$

Acid & Alkaline Resistance : Rugged Enclosure

Domain Cert.: EN1672-2 (EHEDG) Compatible Design

Material limitation :
Silicone-Free
Domain Certification:
UL 61010 Compliance
High Performance :
Fanless with core i3+









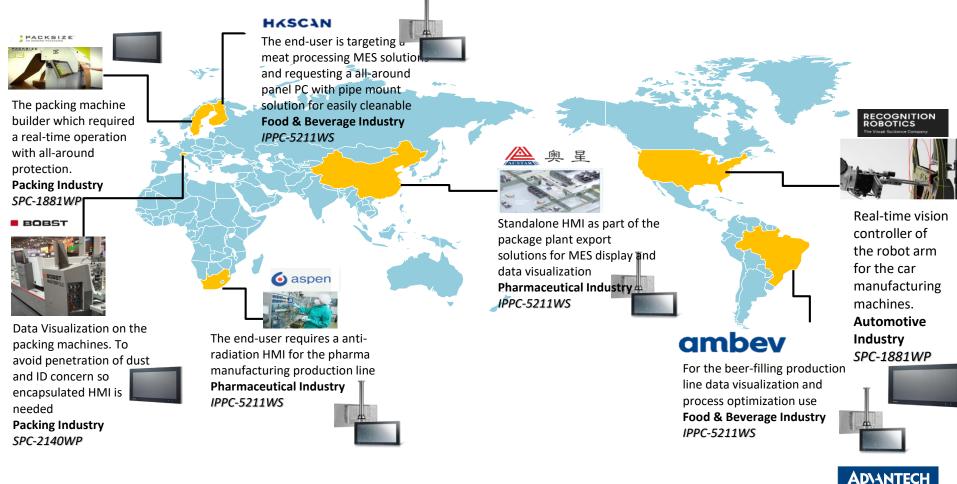
SPC-200

SPC-500

IPPC-5211WS

ADVANTECH

Successful Standalone HMI Case Globally



Innovative HMI (SPC-800)

01

Plug & Play:

General I/O with All-Around Protection

02

Silicone-Free:

Great fit for high-end automotive industry

03

Extended Scope:

Independent visualization node in IIoT field



Processing 8
Packaging

Machine Builders

Automotive



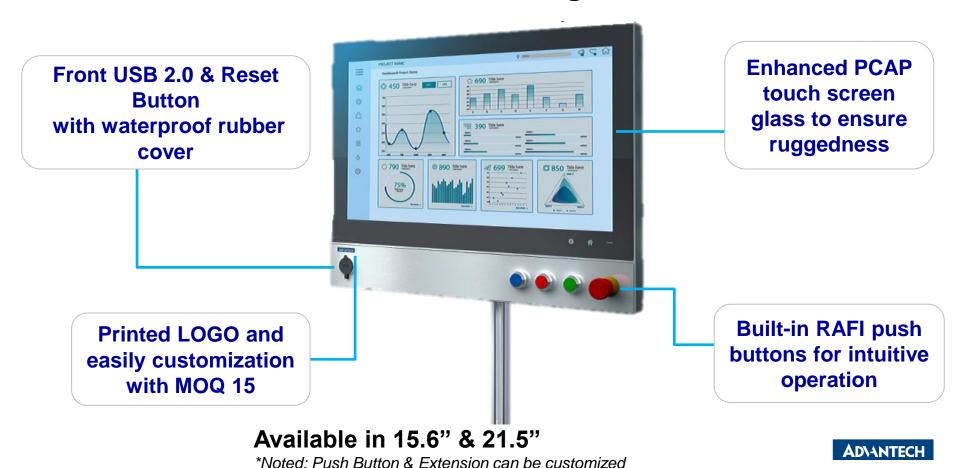








SPC-800 Front Look & Design Overview

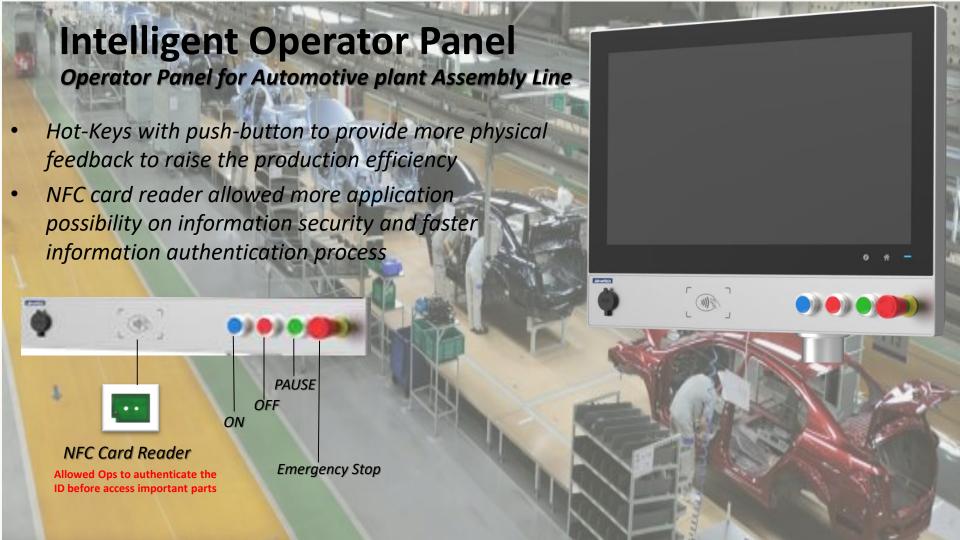


SPC-800

Button-integrated design delivers intuitive operation











Product Rear Side Overview



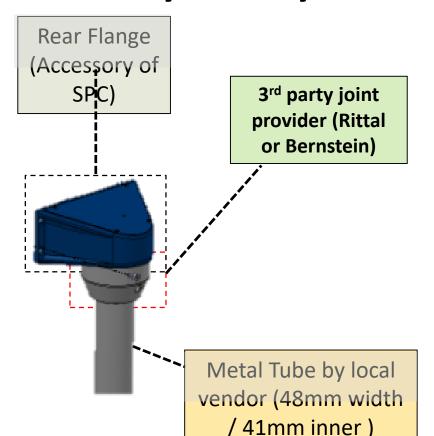
- Same Rear Flange for both Pendant and Pedestal mounting ways
- Support most common 3rd party arm system provider globally: Rittal & Bernstein



3rd Party Arm System Support







	Rittal	Bernstein
Supported Model	CP40 (with narrower tube)	CS-480 B.Flex
Maximum Load	400N	500N (1m length of the extension arm)





CP 6501.050 (Steel)

CP 6501.070 (Steel)

CP 6501.120 (Steel)

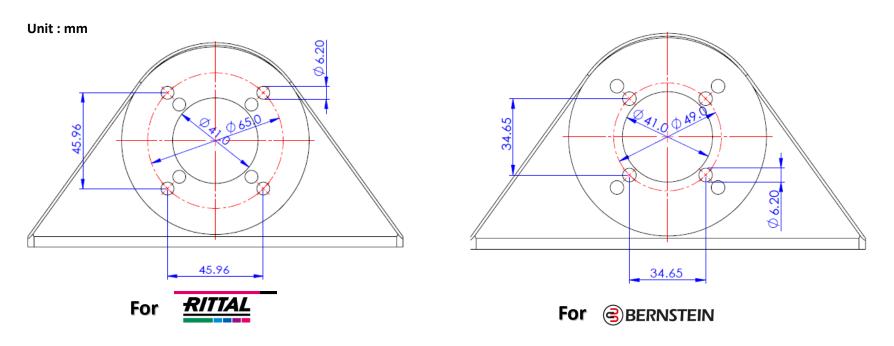


^{*}For Rittal CP40 series, there are some limitat<mark>ion-regrading to the screw dimension. Not all CP40 ca</mark>h be supported.



^{*}Contact your local Advantech contact window for more information

SPC-800 Flange Installation Guidance



- Flange of SPC-800 supports 2 set of screw dimension for both Rittal & Bernstein
- For Rittal CP40, not all P/N can be supported by SPC-800.
- Please make sure the connected screw dimension be 65mm (diameter) & 46mm (length between holes)

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Push Button Connection



Main Model Selection (Pre-Configured Button Model)					
P/N	SPC-821-633AP	SPC-815-633AP	SPC-821-M7AP	SPC-815-M7AF	
Туре	21"Panel PC	15" Pane PC	21" Monitor	15" Monitor	
Push Button	3	3	3	3	
Emerg. Button	1	1	1	1	
Front USB	V	V	V	V	

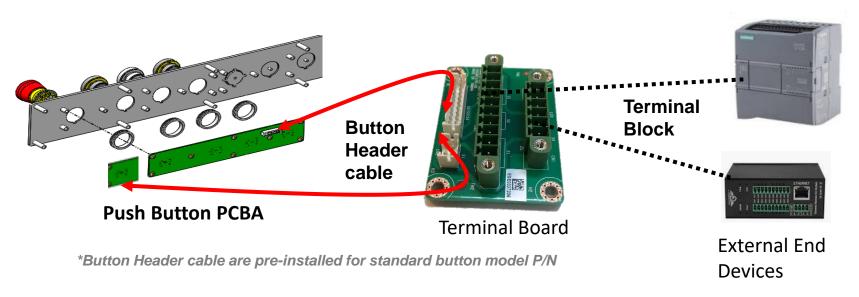
Panel Size	Panel Size Max. Buttons Ma Supported Buttons	
SPC-815	7	6
SPC-821	10	8

- Terminal Board will pre-installed in the standard model with push button configure
- Users follow the pin definition and connected to end devices directly with terminal block

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Terminal Board Wiring Diagram

Wiring Diagram





SPC-800 Ordering Information



Main Model Selection (Standard Model)					
P/N	SPC-821-633AG SPC-815-633AG SPC-821-M7 (L)AG SPC-815-M7(I				
Туре	21"Panel PC	15" Pane PC	21" Monitor	15" Monitor	
Push Button	NI/A (Demissed to ender economy for much button economis)				
Emerg. Button	N/A (Required to order accessory for push button assembly)			assembly)	
Front USB	V V V V				



Button Main Model Selection (Pre-Configured Button Model)						
CTOS P/N	OS P/N SPC-821-633AP SPC-815-633AP SPC-821-M7(L)AP SPC-815-M7(L)					
Туре	21"Panel PC	15" Pane PC	21" Monitor	15" Monitor		
Push Button	3	3	3	3		
Emerg. Button	1	1	1	1		
Front USB	V	V	V	V		



^{*}It can be equipped with push button by either "Ready-to-go Push Button Bracket" or pick up "Button Accessory" separately

Stainless Steel HMI Introduction



Waterproof & Dustproof (IP)

- Daily High-pressure water clean
- All-Around IP69k protection design

Rugged 304L (V2A) SS Housing

- Withstand fully clean with disinfectants / cleanser / Acid & Alkali
- Highly hygiene concerned

Ubiquitous Mounting Ways in Different Field

- Panel Mount : FPM-800
- VESA w/ IP69k : SPC-515
- Pipe w/ IP69k : IPPC-5211WS

Food Process Industry-Friendly

- Touch ON/OFF via iKey
- Optional F/W for gloves
- <u>EN 1672-2</u> compliance
- <u>C1D2</u> Solutions for hazardous regions

ADVANTECH

Stainless Steel HMI in Factory Automation

Field: Weighing Room Requirement: SS Enclosure / low performance / Invisible Cables

Unique Selling Points:

- Cost-effective HMI Solutions
- •Panel Mount would be great chouces



- · Suggestion Model:
 - FPM-8151H
 - FPM-815S
 - FPM-817S



Field: Manufacturing Requirement: High

Performance / IP Protection

Unique Selling Points:

•All-Around IP66/69k or Front IP66

•High Stabililty



Suggestion Model:

SPC-221 / SPC-515







Field: Packaging

Requirement: Rugged 304L SS Housing / Certification / Sustain to chemical ingredients

Unique Selling Points:

- •High hygeine concern (certification)
- •All-Around IP69k



Suggestion Model:

SPC-515 / IPPC-5211





IPPC-5211WS Introduction

- 304L Stainless Steel Enclosure
- Touch enable/disable function to ensure safety during washing
- Front side or all-around IP69k protection
- All of the IO ports can be locked by screws in order to

avoid unintended unplugging during assembly.













VESA



IP69K: Frond side





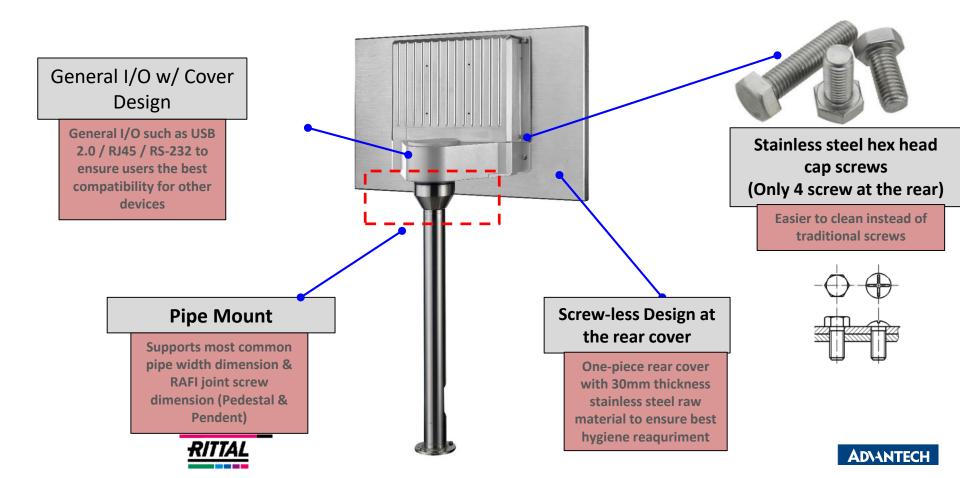






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IPPC-5211WS Key Differentiation with Competitors



IPPC-5211WS Ordering Information

STEP 1
Choosing rear cover material



Aluminium or Stainless Steel

Rear Cove Type	P/N
Aluminium Cover (Black Cover)	IPPC-5211WS-J3AE
Stainless Steel Cover (Silver Cover)	IPPC5211WSJ1501E-T

STEP 2
Choosing Mounting Ways



Flange Adapter

Mounting Ways	P/N	
VESA	No Flange Adapter Needed (Only front IP69k)	
Pipe Mount	IPPC-5211WS-EMKE	
(non stainless steel / Black)	(Full IP69k Protection)	
Pipe Mount	IPPC-5000-FLAE	
(Stainless Steel / Silver)	(Full IP69k Protection)	

STEP 3
Tube & Arm System
Selection



Arm System Support

The metal tube would require local supply (Support Rittal CP40 installation dimension)

Metal tube (Customization)













SPC-515 Introduction (VESA + M12 Solution)

Model	SPC-515		
Display	Size (diagonal)	15" XGA	
	Resolution	1024 x 768	
	Luminance	300	
	Backlight Life	70000	
CPU		Core i3 6100U / Celeron 3955U (optional)	
RAM		DDR3L 8GB	
Touch-screen		PCAP with enhanced glass	
DV Power Input		24 V _{DC}	
1/0		M12 A-Coded: USB*2 / COM*1 / LAN*2 / POWER*1	
IP Protection		All-Around IP69k	
Operating Te	emperature	0~ 50°C	
Surface Treatment		Hair-Line Finished	
Mounting		VESA 100x100	
Certifications		EN1672-2 / CE / FCC / CB / UL62368	



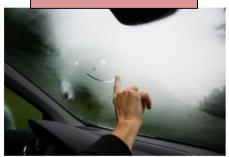


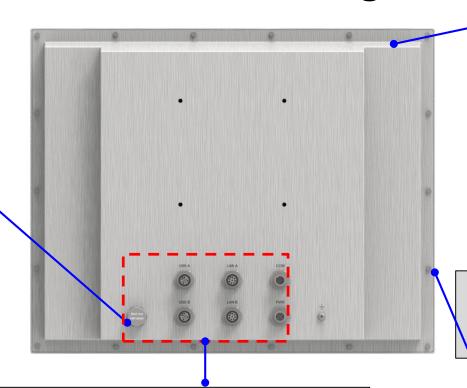
Hygiene-concerned Rear-cover design of SPC-500



Pressure-relief Valve

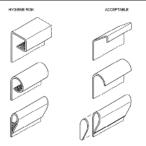
Allow air flow under IP69k protection to speed up the process of foggy on touch screen glass





Bevel at all edges

All bevels to ensure the water drip would drop normally instead of flooding



Stainless steel hex head cap screws (Good for clean)

Easier to clean instead of traditional screws



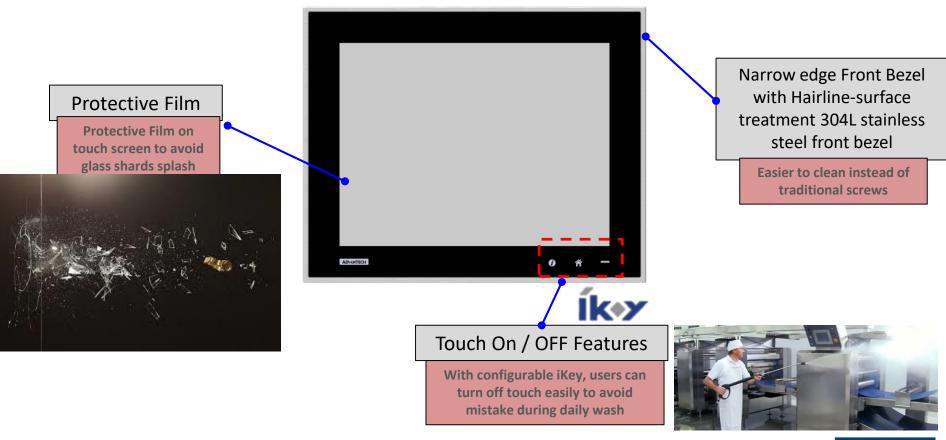


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M12 A-Code Conn.:
Power*1 / USB*2 /LAN*2/COM*1

Flexible on I/O Customization

SPC-515 Key Differentiation with Competitors



ADVANTECH

Stainless Steel Industrial Monitor – FPM-800S (Panel Mount Solution)











Glove applications (Res. Touch)



Wide Operation Temp. (-20~60°C)

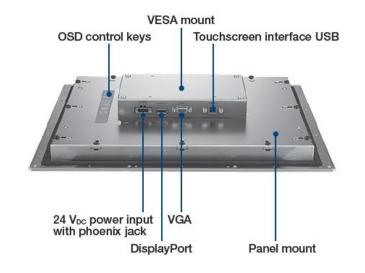


FPM-800S Product Specifications

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	11	

Front Panel IP66

	Product	FPM-815S	FPM-817S	
Display	Size	15"	17"	
	Resolution	1024 x 768	1280 x 1024	
	Aspect ratio	4:3	5:4	
	Luminance	500 nits	350 nits	
	Number of colors	16.7M	16.7M	
	Backlight life	70,000 hrs	50,000 hrs	
Touch	Surface Treatment	Anti-glare	Anti-glare	
	Touch Technology	Resistive	Resistive	
I/O ports	Power input	DC 24V	DC 24V	
	Video interfaces	VGA/DP	VGA/DP	
	Touch Connection	USB	USB	
Mounting	Default	VESA/Panel	VESA/Panel	
	Optional	Wall/Stand (with FPM-1000T-SMKE)	Wall/Stand (with FPM-1000T-SMKE)	
In	gress Protection	Front panel IP66	Front panel IP66	
Operation Temperature		-20~60°C	-20~60°C	
Warranty		2 years	2 years	





SPC-200 Introduction



All-around Die-casting IP66 with M12 connectors

Encapsulated HMI (SPC-200)

Light & Easy to Mount Customized I/O Powerful Platform All-Around IP66 Protection VESA 75/100 supported Slim & Compact Design Customized I/O Intel 6th Gen. Skylake-U i3/i5/i7 embedded CPU Up to 16GB RAM Intel LAN Chipset

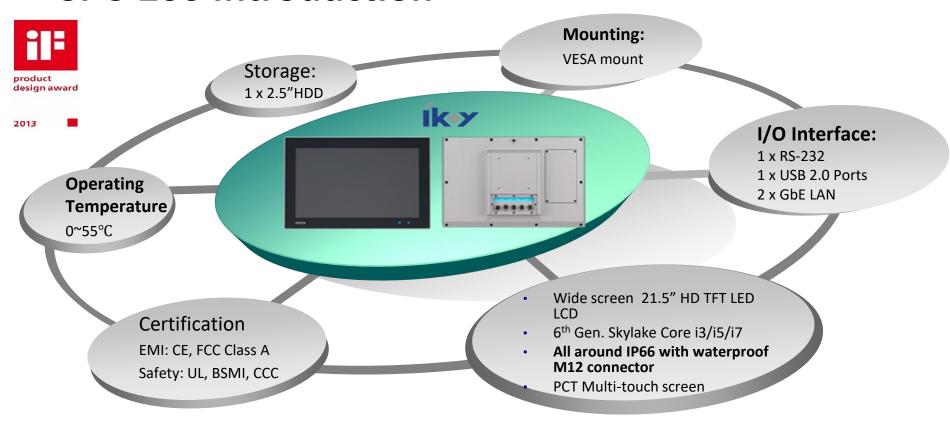




Slim & Compact that can fit it anywhere with All-around protection

ADVANTECH

SPC-200 Introduction





Stationary & Standalone HMI Naming Rule

SPC-X₁X₂X₃-Y₁Y₂Y₃Y₄E

- X₁: Product Series
 - 2: General SPC (old SPC-1881/2140)
 - 5: Stainless Steel HMI (align w/ IPPC-5000)
 - 8: Innovative HMI
- · X₂ X₃: LCD panel size
 - · 15: 15" (4:3)
 - · 16: 15.6" (16:9)
 - · 18: 18.5"
 - · 21: 21.5"
 - · 24: 23.8"

- Y₁ Y₂ : CPU
 - ATOM
 E1=E39 series(Apollo Lake)
 E2, E3....=Exx series
 (Predecessor of Apollo Lake,
 Atom D or N series follow same
 rules
 - Core i Gen. # + Intel® Core™ i3 (63) Gen. # + Intel® Core™ i7 (67)
- Y₃: Memory Size
 - 1/2/3/4/5: 2GB/4GB/8GB/16GB
- Y₄: Version
 - A~Z
- E: RoHS





For more info, please contact...

PM Domain HMI: Giorgio.Wei # 7612

Industrial HMI PD team: KevinHY.Chu # 7949 RayYJ.Tsai # 7398 Giorgio.Wei # 7612 HsinHui.Lin #7686



Co-Creating the Future of the IoT World

