

**21.5" Medical Panel PC with 4th Generation Intel® Dual-Core CPU,
Touchscreen, Anti-bacteria Cover, Dual USB 3.0, Dual GbE LAN,
RS-232/422/485, HDMI, VGA, Front IP 65 Rating and RoHS**

POC-W22A-H81

Quick Installation Guide

Version 1.01



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Revision







Date	Version	Changes
January 24, 2017	1.01	Minor update
October 17, 2016	1.00	Initial release

Intended Use

The POC-W22A-H81 medical panel PC is intended to be used to review and update electronic medical records (EMR) in hospital information system (HIS). The device is not suitable for diagnosis display.

Equipment connected to analog or digital interfaces must comply with the respective IEC Standards (e.g. IEC 60950 for data processing equipment and IEC 60601-1 for medical equipment). Furthermore all configurations shall comply with the current version of the standard for SYSTEMS IEC 60601-1-1. Everybody who connects additional equipment to the signal input part or signal output part configure a medical system, and is therefore responsible that the system complies with current version of the requirements of the system standard IEC 60601-1-1. If in doubt, consult the technical service department or your local representative.

Manual Conventions

	WARNING Warnings appear where overlooked details may cause damage to the equipment or result in personal injury. Warnings should be taken seriously.
	CAUTION Cautionary messages should be heeded to help reduce the chance of losing data or damaging the product.
	NOTE These messages inform the reader of essential but non-critical information. These messages should be read carefully as any directions or instructions contained therein can help avoid making mistakes.
	Hot surface This symbol indicates a hot surface that should not be touched without taking care.
	OPERATING INSTRUCTION Follow operating instructions or consult instructions for use.
	IEC 60417-5009: Stand-by

Overview

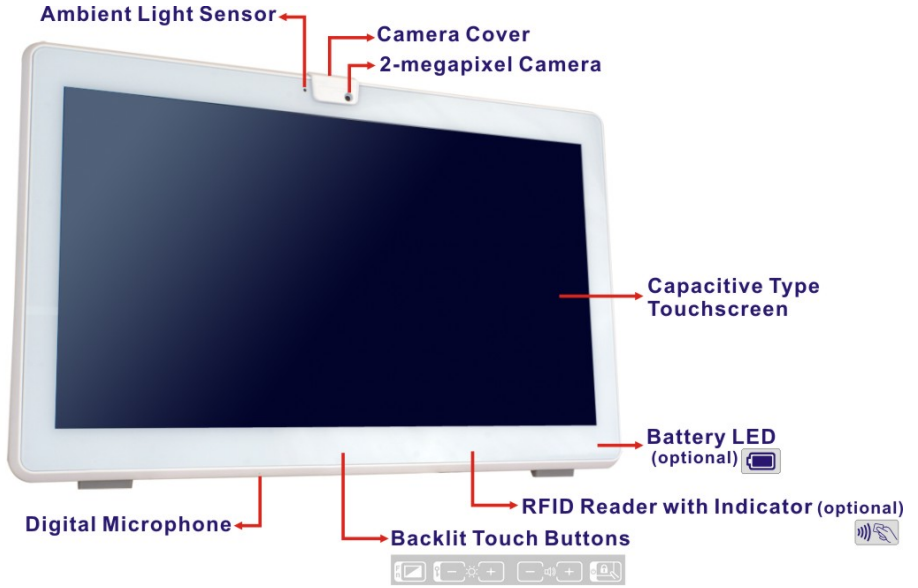


The POC-W22A-H81 is a 4th generation Intel® Core™/Pentium® CPU powered medical-grade panel PC with a rich variety of functions and peripherals. All POC-W22A-H81 models are designed for easy and simplified integration into point-of-care (POC) applications.

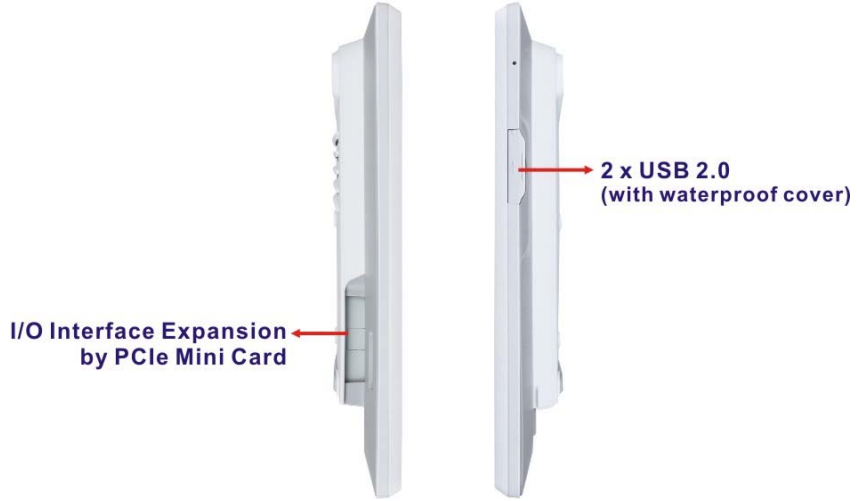
An Intel® Core™ i5/Core™ i3/Pentium® processor coupled with the Intel® H81 chipset delivers optimal memory, graphics, and peripheral I/O support. The system comes with 4.0 GB of pre-installed DDR3 SO-DIMMs and supports a maximum of 16.0 GB ensuring smooth data throughputs with reduced bottlenecks and fast system access. Dual display support is provided via the HDMI port or the VGA port.

One RS-232/422/485 serial port, two USB 3.0 ports and four USB 2.0 ports provide simplified connectivity to a variety of external peripheral devices. Wi-Fi 802.11a/b/g/n/ac high speed wireless and two RJ-45 GbE connectors allow for smooth connection of the system to an external LAN. The system also equips with a SATA interface, supporting both SATA HDD and SSD. In addition, the POC-W22A-H81 features Intelligent Platform Management Interface 2.0 (IPMI 2.0) that helps lower the overall costs of server management by enabling users to maximize IT resource, save time and manage multiple systems. The POC-W22A-H81 supports IPMI 2.0 through the optional iRIS-2400 module.

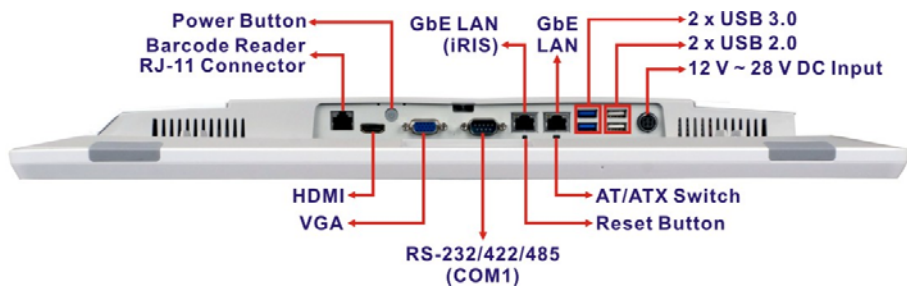
Front Panel



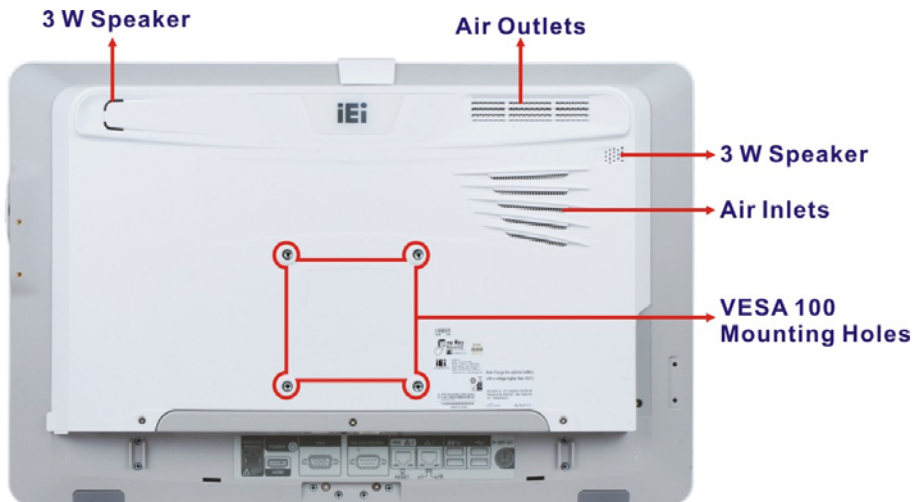
Side Panel



Bottom Panel




Rear Panel



System Specifications

Specification	POC-W22A-H81
CPU	Intel® Pentium® G3320TE (dual-core, 2.3 GHz, TDP 35 W) Intel® Core™ i3-4330TE (dual-core, 2.4 GHz, TDP 35 W) Intel® Core™ i5-4570TE (dual-core, 2.7 GHz, TDP 35 W)
Chipset	Intel® H81
Memory	Two 204-pin 1600/1333 MHz dual-channel DDR3 SO-DIMM slots preinstalled with two 2 GB SDRAM (system max. 16 GB)
Storage	One PCIe Mini card slot for mSATA module installation (ATO) One 2.5" SATA HDD bay
Auto-dimming	Built-in ambient light sensor for panel brightness adjustment
LCD and Touchscreen	
LCD Size	21.5" (16:9)
Max. Resolution	1920 (W) x 1080 (H)
Brightness (cd/m²)	250
Contrast Ratio	1000:1
LCD Color	16.7M
Pixel Pitch (mm)	0.24825 (H) x 0.24825 (V)
Viewing Angle (H-V)	170° / 160°
Backlight MTBF	30,000 hrs
Backlight	LED
Touchscreen	Projected capacitive type with USB interface
Surface Hardness	6H
Network Connection	
Wireless	One pre-installed wireless LAN module (half-size PCIe Mini card) supports 802.11a/b/g/n/ac
LAN	Dual GbE connector
Audio	
Audio	Realtek ALC892 HD Audio codec
Internal Speaker	Two 3 W speakers
Camera	2-megapixel with auto focus and digital microphone
Optional Features	
Battery	Optional 3550 mAH, 54 W internal Li-Ion battery with LED indicator
RFID Reader	Optional Mifare 13.56 MHz card reader (with LED indicator)
Connectors	
I/O Ports	1 x 12 V ~ 28 V DC input jack 1 x Barcode reader connector (RJ-11)

	1 x HDMI connector 1 x RS-232/422/485 serial port (DB-9 connector) 2 x GbE LAN (RJ-45 connector) 2 x USB 3.0 connectors 4 x USB 2.0 connectors 1 x VGA connector	
Buttons, Switches and Indicators		
Backlit Touch Buttons	Six touch buttons (LCD on/off, brightness up, brightness down, volume up, volume down, lock/unlock touch function)	
Buttons & Switches	1 x Power button 1 x AT/ATX switch 1 x Reset button	
LED Indicators	2-light battery status LED indicator (optional) RFID LED indicator (optional)	
Physical		
Construction Material	PC+ABS plastic with anti-bacterial material	
VESA Mount	100 mm x 100 mm	
Dimensions (W x H x D)	542.5 mm x 349.5 mm x 52 mm	
Net Weight	7.3 kg	
Environment		
Transportation/Storage	Temperature	-20°C ~ 60°C
	Humidity	10% ~ 95% (non-condensing)
	Pressure	700 hPa ~ 1060 hPa
Operating	Temperature	0°C ~ 40°C
	Humidity	10% ~ 95% (non-condensing)
	Pressure	700 hPa ~ 1060 hPa
System MTBF	12,503 hrs	
Vibration	1G	
Shock	Operating Shock: 5G peak acceleration (11ms duration) Non-Operating Shock: 15G peak acceleration (11ms duration)	
IP Level	IP 65 compliant front panel	
Safety/EMC	CE, FCC class B part 18, UL 60601-1, EN 60601-1	
Power		
Power Supply	120 W medical-grade power adapter (FSP PMP120-13-2)	
	Input: 100 V AC ~ 240 V AC, 47 Hz ~ 63 Hz, 1.4 A ~ 0.6 A	
	Output: 120 W Max., 19 V  6.32 A	
Power Requirement	19 V DC (bundled with the FSP PMP120-13-20 medical grade adapter)	

UPS Battery

An optional UPS battery can be assembled to order to provide backup power for up to 30 minutes in case of a power interruption. The battery LED indicator is located on the front panel.



CAUTION:

The following precautions should be followed when using the battery:

- Do not use battery power to boot up the POC-W22A-H81.
 - Charge the battery with a voltage higher than 16.8 V.
 - Charging time (from 30% to 100%):
 - System off: 3 hours
 - System on: 2 hours
 - Risk of explosion if battery is replaced by an incorrect type. Only certified engineers should replace the on-board battery.
 - Dispose of used batteries according to instructions and local regulations.
-

Installation Precautions

When installing the medical panel PC, please follow the precautions listed below:

- **Manufacturer authorization:** Do not modify this equipment without authorization of manufacturer.
- **Certified Engineers:** Only certified engineers should install and modify the hardware settings.
- **Power turned off:** When installing the medical panel PC, make sure the power is off. Failing to turn off the power may cause severe injury to the body and/or damage to the system.
- **Anti-static Discharge:** If a user open the rear panel of the medical panel PC, to configure the jumpers or plug in added peripheral devices, ground themselves first and wear an anti-static wristband.

Mounting the System – Wall Mount

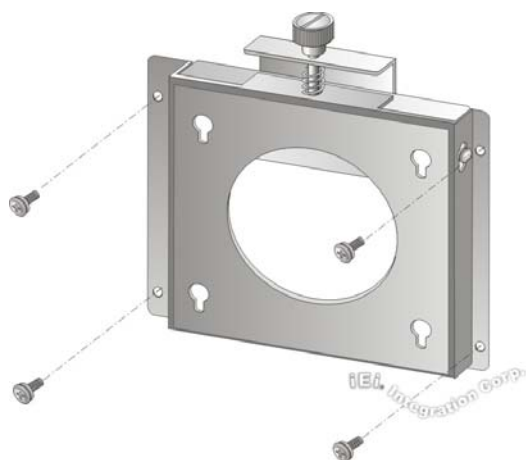


WARNING:

Use suitable mounting apparatus and be sure to secure the screws of the mounting apparatus tightly to avoid risk of injury.

To mount the medical panel PC onto the wall, please follow the steps below.

- Step 1:** Select the location on the wall for the wall-mounting bracket.
- Step 2:** Carefully mark the locations of the four screw holes in the bracket on the wall.
- Step 3:** Drill four pilot holes at the marked locations on the wall for the bracket retention screws.
- Step 4:** Align the wall-mounting bracket screw holes with the pilot holes.
- Step 5:** Secure the mounting-bracket to the wall by inserting the retention screws into the four pilot holes and tightening them.

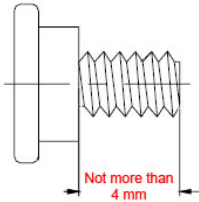


- Step 6:** Insert the four monitor mounting screws provided in the wall mount kit into the four screw holes on the rear panel of the medical panel PC and tighten until the screw shank is secured against the rear panel.



WARNING:

Please use the M4 screws provided in the wall mount kit for the rear panel. If the screw is missing, the thread depth of the replacement screw should be not more than 4 mm.



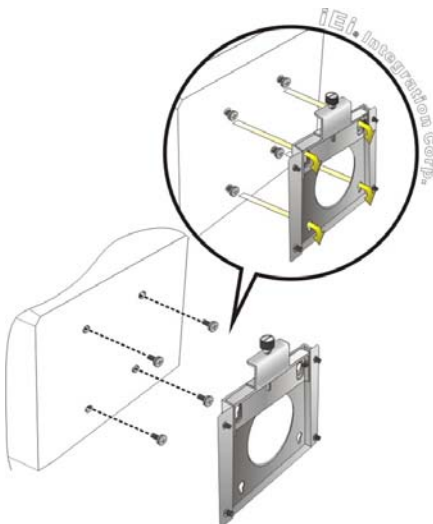
Step 7: Align the mounting screws on the monitor rear panel with the mounting holes on the bracket.

Step 8: Carefully insert the screws through the holes and gently pull the monitor downwards until the monitor rests securely in the slotted holes. Ensure that all four of the mounting screws fit snugly into their respective slotted holes.

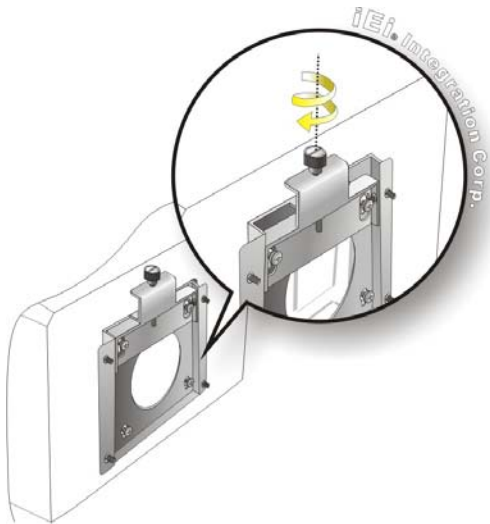


NOTE:

In the diagram below the bracket is already installed on the wall.



Step 9: Secure the panel PC by fastening the retention screw of the wall-mounting bracket.



Powering On the System



WARNING:

To avoid risk of electric shock, this equipment must only be connected to supply mains with protective earth.



CAUTION:

The FSP PMP120-13-2 power adapter came with the POC-W22A-H81 is a forming part of the medical device.

Step 1: Connect the power cord to the power adapter. Connect the other end of the power cord to a power source.

Step 2: Connect the power adapter to the power connector of the POC-W22A-H81.

Step 3: Locate the power button on the I/O panel.

Step 4: Short press the power button to turn on the POC-W22A-H81.

Shutdown Procedure

Turn off the power and disconnect the power cord.

To prevent the risk of electric shock, make sure power cord is unplugged from wall socket. To fully disengage the power to the unit, please disconnect the power cord from the AC outlet. Refer servicing to qualified service personnel. The AC outlet shall be readily available and accessible.

Troubleshooting

If the following situations happen, contact your distributor, sales representatives or IEI customer service center for technical support.

- The HDD is installed correctly, but the POC-W22A-H81 is unable to boot with AC power input after pressing the power button.
- Unable to shut down the POC-W22A-H81 normally
- The system fan makes a loud and annoying noise

Please have the following information prepared prior to reporting the abnormal situations:

- Product name and S/N
- OS, BIOS version and applications
- A complete description of the abnormal situation (with photos or video if available)

System Maintenance

If the components of the POC-W22A-H81 fail they must be replaced. Please contact the system reseller or vendor to purchase the replacement parts.

Maintenance and Cleaning








Prior to cleaning any part or component of the POC-W22A-H81, please read the details below.

- To clean the POC-W22A-H81,
 - remove dirt with a lightly moistened cloth. Then wipe the external chassis with a soft dry cloth.
 - use 75% ethanol alcohol to clean the external chassis.
- Cleaning frequency: follow the cleaning method guidelines of the hospital.
- Except for the LCD panel, never spray or squirt liquids directly onto any other components.

- The interior of the POC-W22A-H81 does not require cleaning. Keep fluids away from the POC-W22A-H81 interior.
- Never drop any objects or liquids through the openings of the POC-W22A-H81.




Accessories

The POC-W22A-H81 medical panel PC is shipped with the following components:

Quantity	Item	Image
1	POC-W22A-H81 medical panel PC	
1	Medical-grade power adapter (120 W, 19 V DC output) (P/N: 63040-010120-010-RS)	
1	Power cord (P/N: 32702-000200-100-RS)	
4	Pan-head screw (M3*5) for HDD installation (P/N: 44043-030051-RS)	
1	Quick Installation Guide	
1	Utility CD	
1	One Key Recovery CD	

Optional Items

The following are optional components which may be separately purchased:

Item and Part Number	Image
VESA 100 wall mount kit (four M3*6 screws included) (P/N: AFLWK-19B)	 A silver metal VESA 100 wall mount kit, showing a square frame with four mounting holes and a central cutout for a device.
14.8 V 3550 mAH Li-ion battery (Getac BAT003-4S1P3550-0, assemble-to-order) (P/N: MEDP-BAT-R10)	 A black, rectangular Li-ion battery with a small label on the top edge.
Mifare RFID reader compliant with ISO 14443A, ISO 14443B and ISO 15693 protocols (assemble-to-order) (P/N: MEDP-MF-RFID-R10)	 A green printed circuit board (PCB) with various electronic components, including a small antenna and a connector labeled 'RFID'.

DECLARATION OF CONFORMITY



This equipment is in conformity with the following EU directives:

- EMC Directive (2004/108/EC, 2014/30/EU)
- Low-Voltage Directive (2006/95/EC, 2014/35/EU)
- RoHS II Directive (2011/65/EU, 2015/863/EU)
- Medical Device Directive 93/42/EEC: EN 60601-1

If the user modifies and/or install other devices in the equipment, the CE conformity declaration may no longer apply.

If this equipment has telecommunications functionality, it also complies with the requirements of the Radio Equipment Directive 2014/53/EU.

IEI Integration Corp declares that this equipment is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.

FCC WARNING



This equipment complies with part 18 of the FCC Rules.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

UL CLASSIFIED



Medical general medical equipment with respect to electrical shock, fire and mechanical hazards only in accordance with ANSI/AAMI ES60601-1 (2005 and Amendment 1), CAN/CSA-C22.2 NO. 60601-1 (2014).

ROHS STATEMENT



The label on the product indicates this product conforms to European (EU) Restriction of Hazardous Substances (RoHS) that set maximum concentration limits on hazardous materials used in electrical and electronic equipment.

CHINA ROHS



The label on the product indicates the estimated “Environmentally Friendly Use Period” (EFUP). This is an estimate of the number of years that these substances would “not leak out or undergo abrupt change.” This product may contain replaceable sub-assemblies/components which have a shorter EFUP such as batteries and lamps. These components will be separately marked.

Safety Precautions



WARNING:

The precautions outlined below should be strictly followed. Failure to follow these precautions may result in permanent damage to the POC-W22A-H81.

General Safety Precautions

Please ensure the following safety precautions are adhered to at all times.

- To prevent the risk of electric shock, make sure power cord is unplugged from wall socket. To fully disengage the power to the unit, please disconnect the power cord from the ac outlet. Refer servicing to qualified service personnel. The AC outlet shall be readily available and accessible.
- Users must not allow SIP/SOPs and the patient to come into contact at the same time.
- Grounding reliability can only be achieved when the equipment is connected to an equivalent receptacle marked “Hospital Only” or “Hospital Grade”.
- Follow the electrostatic precautions outlined below whenever the POC-W22A-H81 is opened.
- Make sure the power is turned off and the power cord is disconnected whenever the POC-W22A-H81 is being installed, moved or modified.
- Do not apply voltage levels that exceed the specified voltage range. Doing so may cause fire and/or an electrical shock. Use a power cord that matches the voltage of the power outlet, which has been approved and complies with the safety standard of your particular country.
- Electric shocks can occur if the POC-W22A-H81 chassis is opened when the POC-W22A-H81 is running. To avoid risk of electric shock, this equipment must only be connected to a supply mains with protective earth.
- Do not drop or insert any objects into the ventilation openings of the POC-W22A-H81.
- If considerable amounts of dust, water, or fluids enter the POC-W22A-H81, turn off the power supply immediately, unplug the power cord, and contact the POC-W22A-H81 vendor.
- DO NOT:
 - Drop the POC-W22A-H81 against a hard surface.
 - Strike or exert excessive force onto the LCD panel.

- Touch any of the LCD panels with a sharp object
- In a site where the ambient temperature exceeds the rated temperature

Product Disposal

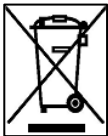


CAUTION:

Risk of explosion if battery is replaced by an incorrect type. Only certified engineers should replace the on-board battery.

Dispose of used batteries according to instructions and local regulations.

- Outside the European Union - If you wish to dispose of used electrical and electronic products outside the European Union, please contact your local authority so as to comply with the correct disposal method.
- Within the European Union - The device that produces less waste and is easier to recycle is classified as electronic device in terms of the European Directive 2012/19/EU (WEEE), and must not be disposed of as domestic garbage.



EU-wide legislation, as implemented in each Member State, requires that waste electrical and electronic products carrying the mark (left) must be disposed of separately from normal household waste. This includes monitors and electrical accessories, such as signal cables or power cords. When you need to dispose of your display products, please follow the guidance of your local authority, or ask the shop where you purchased the product. The mark on electrical and electronic products only applies to the current European Union Member States.

Please follow the national guidelines for electrical and electronic product disposal.

Classification

- Power by Class I power supply (IEI, POC-W22A-H81)
- No Applied Part.
- No protection against the ingress of water: IPX0
- Mode of operation: Continuous Operation

The equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide: Not AP or APG Category.

EMC Test Summary

Guidance and manufacturer's declaration – electromagnetic emissions		
The model POC-W22A-H81 is intended for use in the electromagnetic environment specified below. The customer or the user of the model POC-W22A-H81 should assure that it is used in such an environment.		
Emissions test	Compliance	Electromagnetic environment – guidance
RF emissions CISPR 11		The model POC-W22A-H81 uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11		The model POC-W22A-H81 is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2		
Voltage fluctuations/ flicker emissions IEC 61000-3-3		

Recommended separation distances between portable and mobile RF communications equipment and the model POC-W22A-H81			
The model POC-W22A-H81 is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the model POC-W22A-H81 can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the model POC-W22A-H81 as recommended below, according to the maximum output power of the communications equipment.			
Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz $d = 1,2\sqrt{P}$	80 MHz to 800 MHz $d = 1,2\sqrt{P}$	800 MHz to 2,5 GHz $d = 2,3\sqrt{P}$
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3,8	3,8	7,3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.


Guidance and manufacturer's declaration – electromagnetic immunity

The model POC-W22A-H81 is intended for use in the electromagnetic environment specified below. The customer or the user of the model POC-W22A-H81 should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±6 kV contact ±8 kV air	±6 kV contact ±8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Electrical fast transient/burst IEC 61000-4-4	±2 kV for power supply lines ±1 kV for input/output lines	±2 kV for power supply lines ±1 kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±1 kV line(s) to line(s) ±2 kV line(s) to earth	±1 kV line(s) to line(s) ±2 kV line(s) to earth	Mains power quality should be that of a typical commercial or hospital environment.
Interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5 % UT (>95 % dip in UT) for 0,5 cycle 40 % UT (60 % dip in UT) for 5 cycles	<5 % UT (>95 % dip in UT) for 0,5 cycle 40 % UT (60 % dip in UT) for 5 cycles	Mains power quality should be that of a typical commercial or hospital environment. If the user of the model POC-W22A-H81 requires continued

	70 % <i>UT</i> (30 % dip in <i>UT</i>) for 25 cycles <5 % <i>UT</i> (>95 % dip in <i>UT</i>) for 5 sec	70 % <i>UT</i> (30 % dip in <i>UT</i>) for 25 cycles <5 % <i>UT</i> (>95 % dip in <i>UT</i>) for 5 sec	operation during power mains interruptions, it is recommended that the model POC-W22A-H81 be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE: <i>UT</i> is the a.c. mains voltage prior to application of the test level.			

Guidance and manufacturer's declaration – electromagnetic immunity			
The model POC-W22A-H81 is intended for use in the electromagnetic environment specified below. The customer or the user of the model POC-W22A-H81 should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	Vrms	Portable and mobile RF communications equipment should be used no closer to any part of the model POC-W22A-H81, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2,5 GHz	V/m	Recommended separation distance $d = 1,2\sqrt{P}$ $d = 1,2\sqrt{P}$ 80 MHz to 800 MHz $d = 2,3\sqrt{P}$ 800 MHz to 2,5

		<p>GHz</p> <p>where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m).</p> <p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, ^a should be less than the compliance level in each frequency range. ^b</p> <p>Interference may occur in the vicinity of equipment marked with the following symbol:</p> 
<p>NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.</p> <p>NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.</p>		
<p>^a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the model POC-W22A-H81 is used exceeds the applicable RF compliance level above, the model POC-W22A-H81 should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the model POC-W22A-H81.</p> <p>^b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than V/m.</p>		

Contact Information

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