MPC-2190 Series

19-inch ECDIS color calibrated, fanless panel computers



Features and Benefits

- Third-generation Intel® processor (Intel® Core™ i7 3517UE 1.7 GHz or Celeron® 1047UE, 1.40 GHz)
- 19-inch panel computer
- · Color calibrated for ECDIS compliance (available by CTOS)
- · SavvyTouch display controls
- · Fanless system design
- Built-in NMEA 0183 and 3-in-1 software selectable RS-232/422/485 interfaces
- Multiple power supplies (AC & DC)

Certifications

Introduction

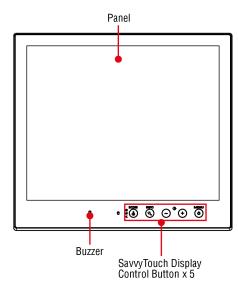
MPC-2190 panel computers feature an Intel® 3rd generation processor matched to 4 GB of system memory, delivering a reliable, highperformance platform of wide versatility for use in industrial marine environments. With its two RS-232/422/485 serial ports, four NMEA 0183 ports, and two Gigabit Ethernet ports, the MPC-2190 panel computer supports a wide variety of serial and marine-specific interfaces as well as highspeed IT communications, all with native network redundancy.

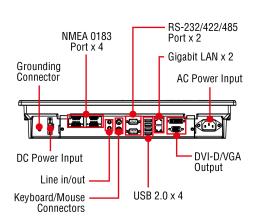
The MPC-2190 Series comes with a range of standard display enhancements useful in industrial environments (including full range dimming, wide viewing angles, and optional optical bonding), as well as a few innovations especially deployed for maritime environments: user-friendly OSD controls, called SavvyTouch, featuring a proximity sensor for convenient adjustment in dark situations, immediate BIOS-level reports on hardware status (useful for determining why a machine will not boot up), and a quick-switch ECDIS button (for color-calibrated ECDIS models only) that allows instant brightness adjustments to any of the three pre-set calibrations dictated by the ECDIS standard. In addition to all of this, the MPC-2190 Series features a modular design that makes device integration into either new or existing industrial systems much simpler, reducing deployment costs and overall time-to-market.

The MPC-2190 panel computers are compliant with several industrial marine standards, including IEC 60945, IEC 61162, IEC 61174, DNV, and IACS E10, verifying their resilience for maritime operations. The IP54 (front panel) and IP22 (rear panel) rated unibody shell provides strong additional protection against the harsh conditions found in marine environments.

Color-calibrated ECDIS models are available upon request, providing an ideal HMI alternative for ECDIS charting and navigation stations.

Appearance







Specifications

Computer

CPUC2-1902-WFZ/21902/11
Graphics ControllerIntel® HD Graphics 520System Memory Pre-installed4 GB DDR3/DDR3LSystem Memory SlotSODIMM DDR3/DDR3L slot x 1Pre-installed OSWindows Embedded Standard 7 (WS7P) 64-bitSupported OSWindows T Pro 6 A-bit Windows T Pro 6 A-bit Pro 2010 Maps Pro 2010 Maps Mater Pro 2010 MapsGrap Drub Do 1000 Maps VGA x 1, 15-pin D-sub connector (female) VGA x 1, 15-pin D-sub connector (female) VGA x 1, 15-pin D-sub connector (female) VGA x 1, 15-pin D-sub connector (female) Mater Pro 1LiD Indicators Display Dis
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System Power x 1 LAN 2 per port (10/1000 Mbps) Display 376.32 (H) x 301.06 (V) mm
LAN 2 per port (10/1000 Mbps) Display 376.32 (H) x 301.06 (V) mm
Display Active Display Area 376.32 (H) x 301.06 (V) mm
Active Display Area 376.32 (H) x 301.06 (V) mm
Aspect Ratio 5:4
Contrast Ratio 2000:1
Light Intensity (Brightness) 300 cd/m ²
Max. No. of Colors 16.7M (8-bit/color)
Panel Size 19-inch viewable image
Panel Type MVA
Panel Type MVA Pixel Pitch (RGB) 0.294 (H) x 0.294 (V) mm



Viewing Angles178°/178°Fouch FunctionFouch TypeTouch TypeMPC-2190Z/2197Z: Capacitive Touch (PCAP) MPC-2190X/2197X: NoneTouch Support PointsMPC-2190Z/2197Z: 4 pointsSerial InterfaceMPC-2190Z/2197Z: 4 pointsBaudrate50 bps to 115.2 kbpsData Bits5, 6, 7, 8Flow ControlRTS/CTS, XON/XOFF, ADDC® (automatic data direction control) for RS-485, RTS Toggle (RS-232 only)ParityNone, Even, Odd, Space, Mark
Touch TypeMPC-2190Z/2197Z: Capacitive Touch (PCAP) MPC-2190X/2197X: NoneTouch Support PointsMPC-2190Z/2197Z: 4 pointsSerial InterfaceSerial InterfaceBaudrate50 bps to 115.2 kbpsData Bits5, 6, 7, 8Flow ControlRTS/CTS, XON/XOFF, ADDC® (automatic data direction control) for RS-485, RTS Toggle (RS-232 only)
MPC-2190X/2197X: NoneTouch Support PointsMPC-2190Z/2197Z: 4 pointsSerial Interface50 bps to 115.2 kbpsBaudrate50 bps to 115.2 kbpsData Bits5, 6, 7, 8Flow ControlRTS/CTS, XON/XOFF, ADDC® (automatic data direction control) for RS-485, RTS Toggle (RS-232 only)
Serial Interface Baudrate 50 bps to 115.2 kbps Data Bits 5, 6, 7, 8 Flow Control RTS/CTS, XON/XOFF, ADDC® (automatic data direction control) for RS-485, RTS Toggle (RS-232 only)
Baudrate 50 bps to 115.2 kbps Data Bits 5, 6, 7, 8 Flow Control RTS/CTS, XON/XOFF, ADDC® (automatic data direction control) for RS-485, RTS Toggle (RS-232 only)
Data Bits 5, 6, 7, 8 Flow Control RTS/CTS, XON/XOFF, ADDC® (automatic data direction control) for RS-485, RTS Toggle (RS-232 only)
Flow Control RTS/CTS, XON/XOFF, ADDC® (automatic data direction control) for RS-485, RTS Toggle (RS-232 only)
Toggle (RS-232 only)
Parity None, Even, Odd, Space, Mark
Stop Bits 1, 1.5, 2
NMEA InterfaceSerial Standards: NMEA 0183: RS-422 NMEA 2000: CAN bus (available on request) Baudrate: 4800 bps Data Bits: 8 Handshake: None Optical Isolation Protection: 3 kV Parity: None Serial Standards: NMEA 0183v2 (NMEA 2000 available on request) Stop Bits: 1, 1.5, 2 Voltage Differential: -6 V to +6 V (maximal differential level)
Serial Signals
RS-232 TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
RS-422 Tx+, Tx-, Rx+, Rx-, GND
RS-485-2w Data+, Data-, GND
RS-485-4w Tx+, Tx-, Rx+, Rx-, GND
Power Parameters
Input Voltage 100 to 240 VAC, 18 to 34 VDC
Physical Characteristics
Housing Metal
IP Rating IP54, front IP20, rear
Dimensions 429 x 387 x 74.5 mm (16.89 x 15.24 x 2.93 in)
Weight 8,658 g (19.09 lb)
Environmental Limits
Operating Temperature -15 to 55°C (5 to 131°F)
Storage Temperature (package included) -20 to 60°C (-4 to 140°F)
Ambient Relative Humidity 5 to 95% (non-condensing)

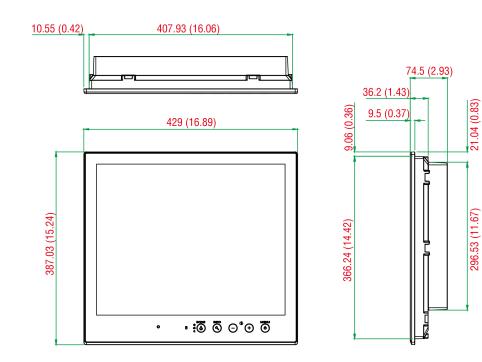


Standards and Sertifications	
EMC	EN 55032/24
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-4 EFT: Power: 1 kV; Signal: 0.5 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV IEC 61000-4-6 CS: 10 V
Environmental Testing	IEC 60068-2-1, DNVGL-CG-0339 IEC 60068-2-2, DNVGL-CG-0339 IEC 60068-2-2, IEC 60945 IEC 60068-2-30, IEC 60945
Maritime	ABS, CCS, DNV-GL
Safety	EN 60950-1, IEC 60950-1, UL 60950-1
Vibration	IEC 60068-2-6, IEC 60945, IEC 60068-2-64, DNVGL-CG-0339
Declaration	
Green Product	RoHS, CRoHS, WEEE
Warranty	
Details	See www.moxa.com/warranty
Warranty Period	LCD: 1 year System: 3 years
Package Contents	
Device	1 x MPC-2190 Series computer
Installation Kit	1 x terminal block, 2-pin 1 x panel-mounting kit
Documentation	1 x document and software CD 1 x quick installation guide 1 x warranty card



Dimensions

Unit: mm (inch)



Ordering Information

Model Name	Panel	CPU	RAM	OS Preinstalled	Touchscreen	LAN	Serial	NME A 0183	Video Outputs	Power Input	IP Rating	Operating Temp.
MPC- 2190Z-W7E	19" (4:3) 300 nits	Celeron 1047UE	4 GB	W7E OS 64 GB SSD	Capacitive	2	2	4	1 x VGA 1 x DVI-D	12/24 VDC 100-240 VAC	IP54 (front), IP20 (rear)	-15 to 55°C
MPC-2190Z	19" (4:3) 300 nits	Celeron 1047UE	4 GB	-	Capacitive	2	2	4	1 x VGA 1 x DVI-D	12/24 VDC 100-240 VAC	IP54 (front), IP20 (rear)	-15 to 55°C
MPC-2190X	19" (4:3) 300 nits	Celeron 1047UE	4 GB	-	-	2	2	4	1 x VGA 1 x DVI-D	12/24 VDC 100-240 VAC	IP54 (front), IP20 (rear)	-15 to 55°C
MPC-2197Z	19" (4:3) 300 nits	i7- 3517UE	4 GB	-	Capacitive	2	2	4	1 x VGA 1 x DVI-D	12/24 VDC 100-240 VAC	IP54 (front), IP20 (rear)	-15 to 55°C
MPC-2197X	19" (4:3) 300 nits	i7- 3517UE	4 GB	-	-	2	2	4	1 x VGA 1 x DVI-D	12/24 VDC 100-240 VAC	IP54 (front), IP20 (rear)	-15 to 55°C

Accessories (sold separately)

Desktop Mounting Kits	
MPC-MD-2-19-DMTK w/ hinge	Desktop-mounting kit for 19-inch panels
MPC-MD-2-19-DMTK w/o hinge	Desktop-mounting kit for 19-inch panels, (no hinge)
Panel Mounting Kits	
MPC-MD-2-19-RMTK	Rubber gasket for 19-inch panels



MPC-MD-2-19-VESAMTK

VESA kit for 19-inch panels (can be used with 100 x 100 mm or 280 x 150 mm VESA mounts)

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