

EXPC-1319 Series

Fanless rugged Zone 2 19-inch 1000 nits LCD panel computer with touch screen



- > Zone 2 certified for hazardous area applications
- > High performance / low power Intel dual core Atom D525 1.8 GHz CPU
- > Anti-scratch 19-inch sunlight viewable 1000 nits LCD panel
- > Self-health diagnostics software package for remote predictive maintenance
- > -40 to 60°C extended operation temperature (with built-in Intelligent Heater)
- > Totally sealed IP66 / NEMA 4X panel computer
- > Fanless, streamlined enclosure for highly efficient heat dissipation
- > Touch screen control button to enable/disable touch screen interface
- > Optional WLAN, 100M Fiber optic connection



Introduction

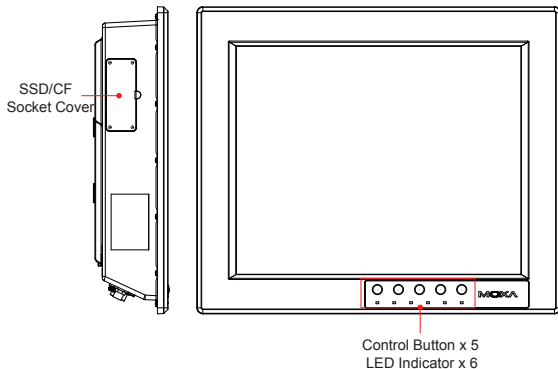
The EXPC-1319 panel computers are fanless, durable devices made for both indoor and outdoor hazardous environments. The EXPC-1319 series features the Intel Atom dual core D525 1.8 GHz processor, with up to 4 GB of memory available to deliver high performance processing. The EXPC-1319 is Zone 2 certified, and comes with two electrically isolated, software-selectable RS-232/422/485 serial ports alongside two Gigabit LAN ports, providing reliable serial and high speed Ethernet LAN transmissions with full network redundancy.

The EXPC-1319 computers come with a patented, fanless, streamlined

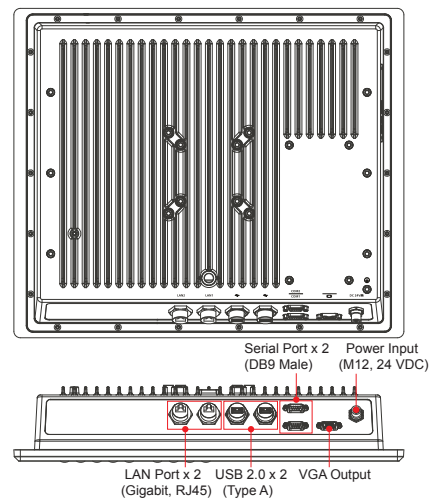
enclosure designed for highly efficient heat dissipation, making this one of the most reliable industrial platforms available for harsh, hot outdoor environments like oil and gas fields, or drilling platforms. In addition, EXPC-1319 computers come with an expanded set of self-health diagnostics that communicate over SNMP and may also be ordered with Moxa's Intelligent Heating Solution (IHS), a heating utility for use in extremely low temperature (-40°C) environments. Finally, these computers feature capacitive touchscreen controls with glass-film-glass bonding, making them scratch- and glare-resistant and easy to read even during the peak daylight hours.

Appearance

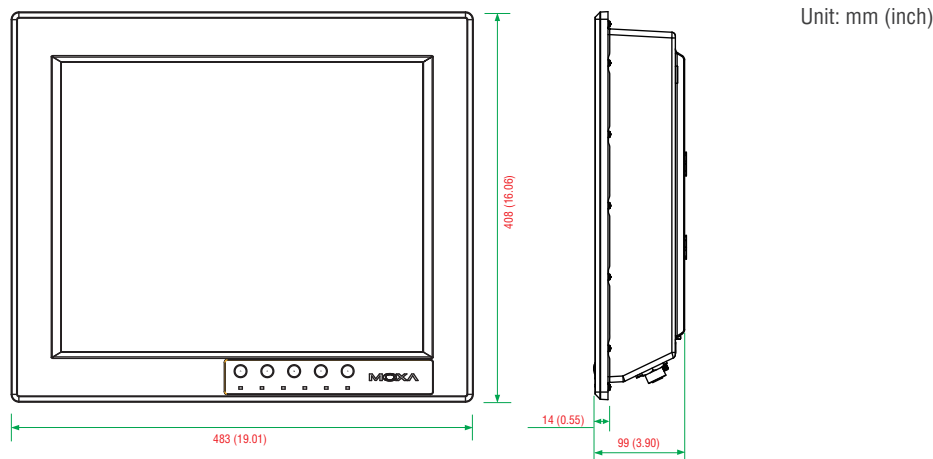
Front and Side Views



Rear and Bottom Views



Dimensions



Hardware Specifications

Computer

- CPU:** Intel Atom D525 dual core 1.8 GHz processor
- OS:** Windows Embedded Standard 7
- System Chipset:** Intel Pineview-D+ ICH8M
- BIOS:** 16 Mbit Flash BIOS, SPI type with ACPI
- Graphics Controller:** Intel GMA3150 integrated graphics controller
- Video Output:** VGA output, waterproof DB-15 (female) connector
- System Memory:** 4 GB capacity, 2 GB pre-installed: 2 slots of 2 GB DDR3-800 SO-DIMM SDRAM
- Automatic Reboot Trigger:** Built-in software-programmable watchdog timer for system resets, configurable from 1 to 255 second timeout intervals
- Expansion Bus:** 1 PCI-104 slot, 1 mini PCIe socket
- USB:** 2 USB 2.0 hosts, waterproof circular type A connector
- KB/MS:** PS/2 interface supports both keyboard and mouse via Y type cable, waterproof connector (optional)

Storage

- Storage Expansion:**
 - On-board CompactFlash socket x 1
 - One extra on-board SATA interface, supporting configurable RAID 0/1
- Storage Support:** Removable 32 GB industrial grade SSD (operating temperature: -40 to 85°C) to store OS; supports up to 256 GB

Display

- Panel Size:** 19-inch SXGA, 1000 nits LED backlit LCD
- Aspect Ratio:** 5:4
- Response Time:** 5 ms
- Contrast Ratio:** 1000:1
- Viewing Angles:**
 - Horizontal: 170° (left to right)
 - Vertical: 160° (up to down)
- Max Colors:** 16.7 M colors
- Graphics Controller:** Integrated Intel GMA3150 graphics controller
- Video Output:** VGA output, waterproof DB15 (female) connector
- Resolution:**
 - VGA: 640 x 480
 - SVGA: 800 x 600
 - XGA: 1024 x 768
 - SXGA: 1280 x 1024

Touchscreen

- EXPC-1319-ST5:** Resistive single point glass-film-glass
- EXPC-1319-MTS:** Capacitive multi point (available on request)
- Note:** All EXPC-1319 touchscreens are scratch resistant and anti-glare, suitable for use outdoors around heavy equipment.

Ethernet Interface

- Hardware Interface:** Waterproof RJ45 connector
- LAN:** 2 auto-sensing 10/100/1000 Mbps ports
- Optical Fiber Interface:** 2 multimode 100M fiber optic ports with waterproof Q-ODC connector (available on request)
- WLAN:** 1 802.11b/g/n interface (available on request)
- Magnetic Isolation Protection:** 1.5 kV built-in

Serial Interface

- Serial Standards:** 2 RS-232/422/485 ports, software-selectable
- Connector Type:** Waterproof DB-9 (male)
- Baudrate:** Up to 38,400 bps
- Isolation Protection:** 2 kV

Serial Communication Parameters

- Data Bits:** 5, 6, 7, 8
- Stop Bits:** 1, 1.5, 2
- Parity:** None, Even, Odd, Space, Mark
- Flow Control:** RTS/CTS, XON/XOFF, ADCC® (automatic data direction control) for RS-485
- Baudrate:** Up to 38,400 bps

Serial Signals

- RS-232:** TxD, RxD, DTR, DSR, RTS, CTS, DCD, GND
- RS-422:** TxD+, TxD-, RxD+, RxD-, GND
- RS-485-4w:** TxD+, TxD-, RxD+, RxD-, GND
- RS-485-2w:** Data+, Data-, GND

LEDs and Buttons

- LEDs:** Power on/off, heater on/off, storage, LAN port communication x 2, fiber communication
- Control Buttons:** System on/off, brightness adjustment x 2, touchscreen on/off, programmable "Fn" button

Physical Characteristics

- Housing:** Aluminum
- Weight:**
 - 10.7 kg (without Intelligent Heating Solution)
 - 11.9 kg (with Intelligent Heating Solution)
- Dimensions:** 483 x 408 x 99 mm (19.02 x 16.06 x 3.90 in)
- Mounting:** Mounting holes for VESA 75/100, yoke mounting, and panel mounting

Environmental Limits

- Operating Temperature:**
 - Without Intelligent Heating Solution: -20 to 60°C (-4 to 140°F)
 - With Intelligent Heating Solution: -40 to 60°C (-40 to 140°F)
- Storage Temperature:** -40 to 80°C (-40 to 176°F)
- Ambient Relative Humidity:** 5 to 95% (non-condensing)

Anti-Vibration: 2 g rms, 5-500 Hz frequency, compliant with IEC 60068-2-6 standard

Anti-Shock: 20 g, half sine wave under system operating, 11 ms duration, compliant with IEC 60068-2-27 standard

Power Requirements

Input Voltage:

- Typical 24 VDC
- External 100 to 240 VAC isolated power supply unit (available on request)

Connector: M12, customizable

Power Consumption:

- Without Intelligent Heating Solution: 60 W
- With Intelligent Heating Solution: 120 W

Standards and Certifications

Hazardous Environments: UL Class 1 Division 2, ATEX Zone 2, IECEx EMC: EN 55022 Class B, EN 55024-4-2, EN 55024-4-3, EN 55024-4-4, FCC Part 15 Subpart B Class A

Mechanical: IP66, NEMA 4X

Green Product: RoHS, cRoHS, WEEE

Warranty

Warranty Period: 3 years for computer system, 1 year for LCD panel

Details: See www.moxa.com/warranty

Software Specifications

Windows Embedded Standard 7

Core OS:

- 32-bit support
- Remote Client
- Remote Procedure Call

Applications and Services Development:

- .Net Framework 3.5
- Remote Desktop Protocol 7.1
- COM OLE Application Support
- COM+ Application Support
- MSMQ

Internet Services:

- Internet Explorer 8.0
- IIS 7.0

File Systems and Data Store:

- Windows Data Access Components
- Windows Backup and Restore

Diagnostics:

- Common Diagnostic Tools
- Problem Reports and Solutions

Fonts: Chinese (Trad. and Simp.), Japanese, Korean, Western, Middle Eastern, South East Asian, and South Asian Fonts

Graphics and Multimedia:

- MPEG DTV-DVD Audio Decoder (MPEG-2, AAC)
- MPEG Layer-3 Audio Codecs(MP3)
- MPEG4 Decoders
- Windows Media Video VC-1 (WMV) Codecs
- DirectX and Windows Device Experience
- Windows Media Player 12

International:

- IME Simplified Chinese Support
- IME Traditional Chinese Support

Management:

- Group Policy Management
- Windows Management Instrument (WMI)
- Windows Update

Networking:

- Extensible Authentication Protocol (EAP)
- Internet Authentication Service
- Telnet Server
- Bluetooth
- Domain Services
- Network Access Protection
- Network and Sharing Center
- Quality of Service
- Remote Access Service (RAS)
- Telephony API Client
- Windows Firewall
- Wireless Networking

Security:

- Credential Roaming Service
- Credentials and Certificate Management
- Windows Authorization Manager (AZMAN)
- Windows Security Center
- Active Directory Rights Management
- Security Base
- Encrypted File System (EFS)

Embedded Features:

- Enhanced Write Filter (EWF)
- File-Based Write Filter (FBWF)
- Message Box Default Reply
- Registry Filter
- WSDAPI for .NET

Embedded Self-Health Diagnostic Software: SNMP-based remote scripting layer for monitoring, reporting, and control

Ordering Information

Available Models

EXPC-1319-ST5-W7E: Fanless rugged Zone 2 19-inch 1000 nits LCD panel computer, single point touchscreen, IP66, Atom D525 dual core 1.8 GHz CPU, -20 to 60°C operating temperature

EXPC-1319-ST5-IHS-W7E: Fanless rugged Zone 2 19-inch 1000 nits LCD panel computer, single point touchscreen, IP66, Atom D525 dual core 1.8 GHz CPU, -40 to 60°C operating temperature, with Intelligent Heating Solution (IHS)

EXPC-1319-MT5-W7E: Fanless rugged Zone 2 19-inch 1000 nits LCD panel computer, multi point touchscreen, IP66, Atom D525 dual core 1.8 GHz CPU, -20 to 60°C operating temperature (available on request)

EXPC-1319-MT5-IHS-W7E: Fanless rugged Zone 2 19-inch 1000 nits LCD panel computer, multi point touchscreen, IP66, Atom D525 dual core 1.8 GHz CPU, -40 to 60°C operating temperature, with Intelligent Heating Solution (IHS) (available on request)

Package Checklist

- 1 EXPC-1319 panel computer
- Ethernet cable: RJ45 to RJ45 cross-over cable, 100 cm
- Waterproof USB connector pack x 2
- Waterproof DB9 connector pack x 2
- Waterproof LAN connector pack x 2
- Waterproof power connector pack x 1
- Wall mounting kit
- Quick installation guide
- Documentation and software DVD
- Warranty card

Optional Accessories (can be purchased separately)

Connectors	Item	Model Name	Description
	1	A-PLG-WPRJ-IP67-01	Field-installation screw-in RJ45 connector, rated IP67
	2	A-PLG-WPUSBA-IP67-01	Field-installation screw-in USB A type male connector, rated IP67
	3	A-PLG-WPM9-IP67-01	Field-installation screw-in D-Sub 9-pin female connector, rated IP67
	4	M12A-5P-IP68	Field-installation A-coded screw-in power connector, 5-pin female M12 connector, rated IP68
Power Accessories			
	1	CBL-Power Jack to M12	Power jack to M12 cable
	2	PWR-24250-DT-S1	Power adaptor with input: 100 - 240 VAC, 50-60 Hz, 1.5 A output: 24 VDC, 2.5 A, 60 W (for office testing and system development under ambient temperatures)
	3	PWC-C7US-2B-183	Power cord with 2-pin connector, USA plug
	4	PWC-C7EU-2B-183	Power cord with 2-pin connector, Euro plug
	5	PWC-C7UK-2B-183	Power cord with 2-pin connector, British plug
	6	PWC-C7AU-2B-183	Power cord with 2-pin connector, Australia plug
	7	PWC-C7CN-2B-183	Power cord with 2-pin connector, China plug
Mounting Kits			
	1	Pack/EXPC-1319/WKx2/TMSx6/ M4x10mm Nylok	Wallmount Kit x 2