EXPC-1519 Series

Zone 2 19-inch panel computers with multiple connectivity options

> Anti-scratch, 19-inch sunlight viewable, 1000-nit LCD panel
> High performance Intel® processor, Core™ i7-3555LE or Celeron 1047UE CPU
> Fanless design with highly efficient heat dissipation for 70°C environments
> Boots up within 3 minutes at -40°C, without a heater
> Multi-touch, glove-friendly touch screen interface
> Cable gland and standard USB Type-A/RJ45 connector design
> 4 LAN ports with independent MACs; 2 RJ45 and 2 fiber ST
> Totally sealed IP66 / NEMA 4X enclosure
> Class 1 Division 2, ATEX Zone 2, and IECEx certified
> Dual AC/DC power supply
> Optional WLAN and TPM module by request

Introduction

The EXPC-1519 panel computers are designed for indoor and outdoor Zone 2 applications in hazardous environments. The EXPC-1519 series features an Intel® 3rd generation Core™ i7-3555LE 2.5 GHz or Celeron 1047UE 1.4 GHz processor, with up to 16 GB of memory to deliver high performance processing.

The EXPC-1519 series offers flexible interface connectivity options to meet your application needs: standard connectors with cable glands, terminal block with cable glands, and standard connectors on the bottom panel.

The EXPC-1519 computers suppport wide temperature (-40 to 70°C) operation, and 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 and drilling platforms.

In addition, the EXPC-1519 computers feature touchscreen controls with anti-reflection treatment and 1000-nit LED backlight, making them easy to read even during peak daylight hours.

Specifications

Computer

CPU: Intel® Core™ i7-3555LE 2.5 GHz or Intel® Celeron® 1047UE 1.4 GHz processor

Supported OS: Windows Embedded Standard 7 32/64-bit, Windows 7 Professional 32/64-bit, Win10 Embedded 32/64-bit, Windows 10 Professional 32/64-bit

System Chipset: Intel® QM77 Express Chipset (Intel® BD82QM77 PCH)

System Memory: 2 SO-DIMM slot, DDR3/DDR3L support, 4 GB pre-installed, maximum 16 GB capacity

Expansion Bus: 1 mini PCIe socket

BIOS: 64 Mbit SPI Flash

Graphics Controller: Intel® HD Graphics 4000

Touchscreen: Projected capacitive touch, 7H surface hardness, anti-reflection treatment, glove-friendly

Storage

HDD Support: 2.5-inch SATA, 7 or 9.5 mm high hard drives with external access

CFast: Push-push type, with external access

Display

Panel Size: 19-inch SXGA, 1000-nit 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)
Resolution:
• VGA: 640 x 480
• SVGA: 800 x 600
• XGA: 1024 x 768
• SXGA: 1280 x 1024

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
Baudrate: 50 bps to 115.2 Kbps

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

Interface (EXPC-1519-C1-S1/EXPC-1519-C7-S1)

Connector type: On motherboard via cable glands
USB: USB 2.0 hosts x 3, type-A connectors
VGA: 15-pin D-Sub connector (DB15 female), with resolution up to 2048 x 1536 pixels with 32-bit color at 75 Hz
Serial Port: RS-232/422/485 ports (DB9 male) x 2, software-selectable
Ethernet: Auto-sensing 10/100/1000 Mbps ports (RJ45) x 2
Optical Fiber: Multimode 100M fiber optic ports x 2
AC: 100 to 240 VAC (3-pin terminal block)
DC: 24 VDC (2-pin terminal block)

Interface (EXPC-1519-C1-S2/EXPC-1519-C7-S2)

Connector Type: On terminal block via cable glands
USB: USB 2.0 hosts x 4, terminal block
Serial Port: RS-232/422/485 ports (terminal block) x 2, software-selectable
Ethernet: Auto-sensing 10/100/1000 Mbps ports (terminal block) x 2
Optical Fiber : Multimode 100M fiber optic ports x 2
AC: 100 to 240 VAC (3-pin terminal block)
DC: 24 VDC (2-pin terminal block)

Interface (EXPC-1519-C1-S3/EXPC-1519-C7-S3)

Connector Type: On bottom panel
USB: USB 2.0 hosts x 1, type-A connector
Ethernet: Auto-sensing 10/100/1000 Mbps port (RJ45) x 1
AC: 100 to 240 VAC (3-pin terminal block)
DC: 24 VDC (2-pin terminal block)

LEDs and Buttons

System LEDs: Power, Fiber1, Fiber2, LAN1, LAN2, Touch, Info, DAY, Dusk, Night
LAN LEDs: 100M/Link, 1000M/Link (on each RJ45 connector)
Buttons: Power, Brightness +/-, Fn, Touch, Info, Brightness mode

Physical Characteristics

Housing: Aluminum
Weight: 12.7 kg (28.00 lb)
Dimensions: 483 x 408 x 99.5 mm (19.02 x 16.06 x 3.92 in)
Mounting: VESA (100 x 100 mm), desktop, yoke, wall, panel

Environmental Limits

Operating Temperature: -40 to 70°C (-40 to 158°F)
Storage Temperature: -40 to 70°C (-40 to 158°F)
Ambient Relative Humidity: 5 to 95% (non-condensing)
Anti-Vibration: 2 Grms, 5-500 Hz frequency, compliant with IEC 60068-2-6 standard
Anti-Shock: 20 Grms, half sine wave under system operating, 11 ms duration, compliant with IEC 60068-2-27 standard

Power Requirements

Input Voltage: 100 to 240 VAC or 24 VDC (18 to 32 VDC, 2-pin terminal block)
Power Consumption: 100 to 240 VAC, 47 to 63 Hz, 1 A (less than 100 W) or 24 VDC, 6 A (less than 150 W)

Standards and Certifications

Safety: UL 60950-1, IEC 60950-1
Hazardous Environments: Class 1 Division 2, ATEX Zone 2, IECEx
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: 3 V/m
IEC 61000-4-4 EFT: Power: 1 kV; Signal: 0.5 kV
IEC 61000-4-5 Surge:
  AC Power: 2 kV; Signal: 1 kV;
  DC Power: 1 kV; Signal: 1 kV
IEC 61000-4-6 CS: 3 V
IEC 61000-4-8, IEC 61000-4-11
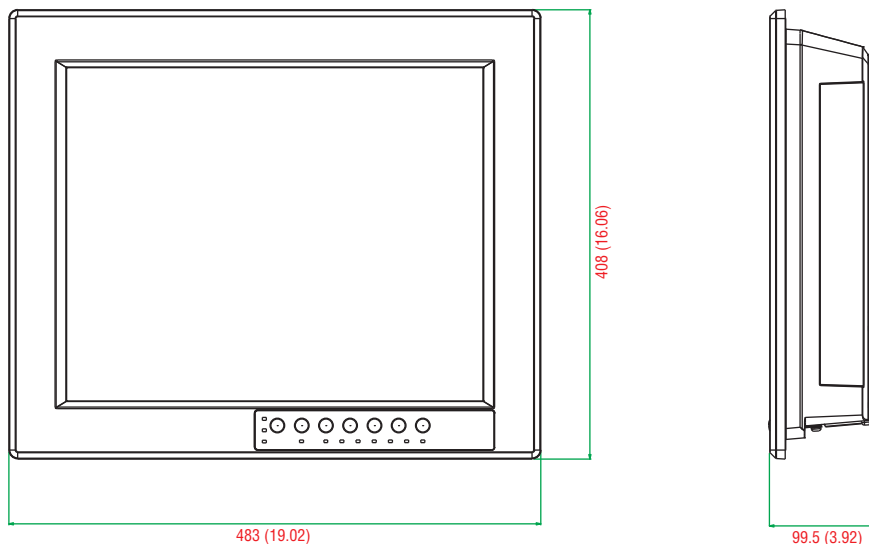**Ingress Protection Rating:** IP66 / NEMA 4X
Green Product: RoHS, cRoHS, WEEE

Warranty

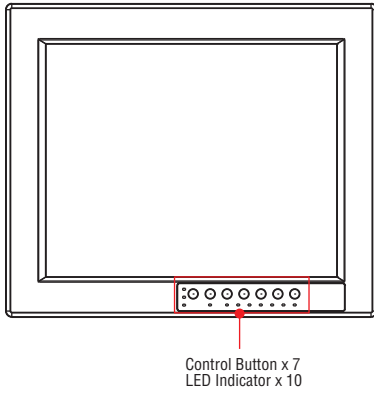**Warranty Period:** 3 years for computer system, 1 year for LCD panel
Details: See www.moxa.com/warranty

Dimensions

Unit: mm (inch)

408 (16.06)

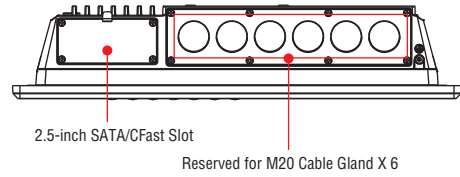483 (19.02)

99.5 (3.92)

MOXA®

: **Appearance**

Front View

Control Button x 7
LED Indicator x 10

Bottom View (EXPC-1519-C1-S1-T, EXPC-1519-C7-S1-T, EXPC-1519-C1-S2-T, EXPC-1519-C7-S2-T)

2.5-inch SATA/CFast Slot

Reserved for M20 Cable Gland X 6

Bottom View (EXPC-1519-C1-S3-T, EXPC-1519-C7-S3-T)
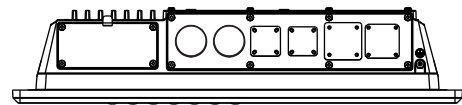
Out-of-the-box view; connectors must be installed by the user

Reserved for USB 2.0 Port
2.5-inch SATA/CFast Slot   USB 2.0 Port

AC/DC Power Input
Reserved for Ethernet Port
Reserved Interface   Ethernet Port
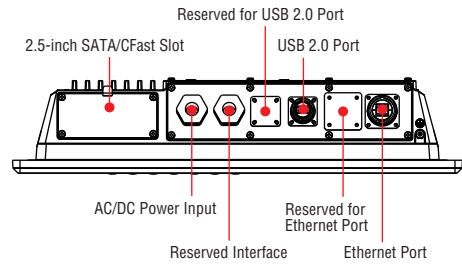
View with connectors installed

Rear View (EXPC-1519-C1-S1-T, EXPC-1519-C7-S1-T)

*Viewed at a 5-degree angle

Optional Antenna Port (N type)

Connector Panel

DC Input   VGA Port   USB 2.0 x 3   Optional M20 Cable Glands

AC Input   Serial Port x 2   Fiber Port x2   Ethernet Port x 2
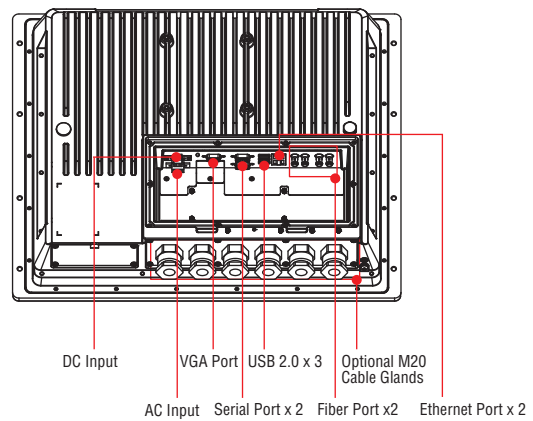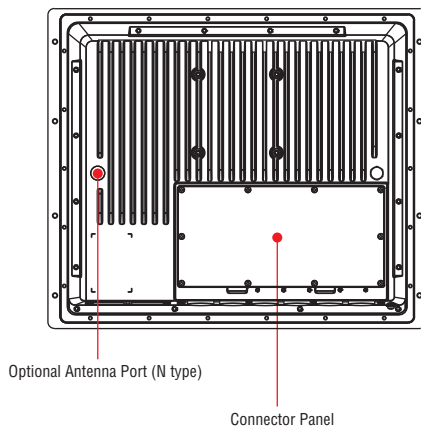
Rear View (EXPC-1519-C1-S2-T, EXPC-1519-C7-S2-T)   *Viewed at a 5-degree angle

Optional Antenna Port (N type)

Connector Panel

Serial Port x 2   USB 2.0 x 4
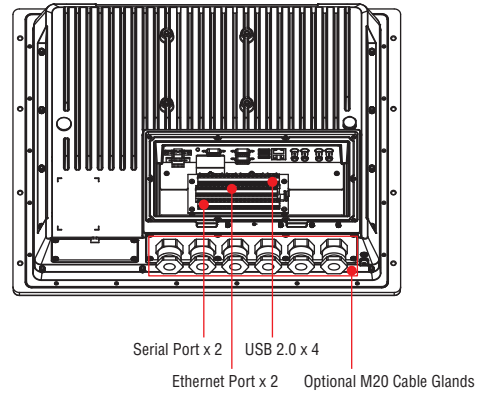
Ethernet Port x 2   Optional M20 Cable Glands
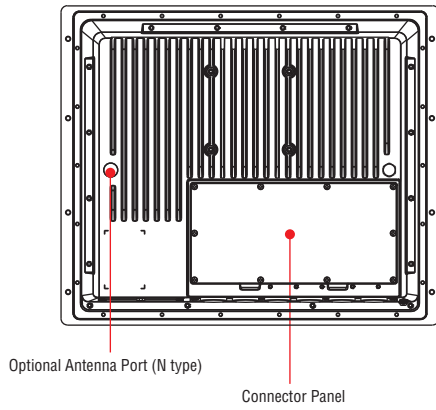
Rear View (EXPC-1519-C1-S3-T, EXPC-1519-C7-S3-T)   *Viewed at a 5-degree angle

Optional Antenna Port (N type)
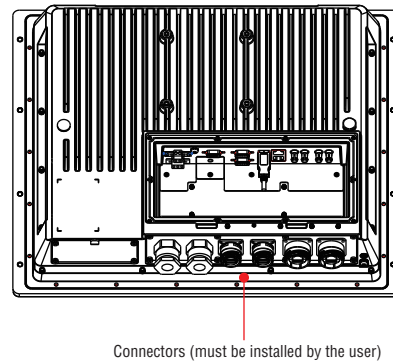
Connector Panel

Connectors (must be installed by the user)
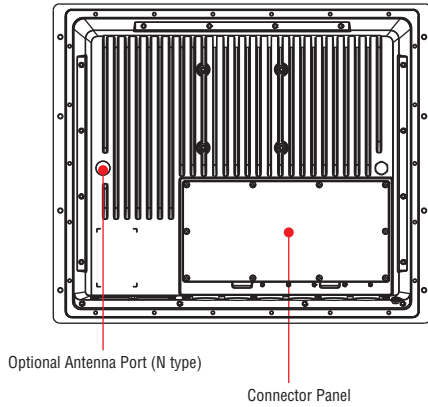
⋮ Ordering Information

Available Models (storage and OS not included)

Model Name	CPU	RAM	Storage (pre-installed)	OS (pre-installed)	Brightness (cd/m²)	SSD Slots	CFast Slots	LANs	Serial Ports	USB 2.0 Ports	Power Input	Operating Temp.	Interface Connectivity
EXPC-1519-C7-S1-T	i7-3555LE, 2.5 GHz	4GB	N/A	N/A	1000	1	1	2	2	2	18 to 32 VDC 100 to 240 VAC	-40 to 70°C	Cable gland with standard I/O
EXPC-1519-C7-S2-T	i7-3555LE, 2.5 GHz	4GB	N/A	N/A	1000	1	1	2	2	4	18 to 32 VDC 100 to 240 VAC	-40 to 70°C	Cable gland with terminal block
EXPC-1519-C7-S3-T	i7-3555LE, 2.5 GHz	4GB	N/A	N/A	1000	1	1	1	–	1	18 to 32 VDC 100 to 240 VAC	-40 to 70°C	Rugged connectors
EXPC-1519-C1-S1-T	Celeron 1047UE, 1.4 GHz	4GB	N/A	N/A	1000	1	1	2	2	2	18 to 32 VDC 100 to 240 VAC	-40 to 70°C	Cable gland with standard I/O
EXPC-1519-C1-S2-T	Celeron 1047UE, 1.4 GHz	4GB	N/A	N/A	1000	1	1	2	2	4	18 to 32 VDC 100 to 240 VAC	-40 to 70°C	Cable gland with terminal block
EXPC-1519-C1-S3-T	Celeron 1047UE, 1.4 GHz	4GB	N/A	N/A	1000	1	1	1	–	1	18 to 32 VDC 100 to 240 VAC	-40 to 70°C	Rugged connectors

Note: Use the Moxa CTOS process to select RAM, storage, and OS options. Contact your Moxa sales representative for details.

Package Checklist (EXPC-1519-C1-S1-T, EXPC-1519-C7-S1-T, EXPC-1519-C1-S2-T, EXPC-1519-C7-S2-T)

- 1 EXPC-1519 panel computer
- 1 HDD/SSD installation kit
- 2 cable gland connectors
- 1 2-pin terminal block for DC power input
- 1 3-pin terminal block for AC power input
- Quick installation guide
- Documentation and software DVD
- Warranty card

Package Checklist (EXPC-1519-C1-S3-T, EXPC-1519-C7-S3-T)

- 1 EXPC-1519 panel computer
- 1 HDD/SSD installation kit
- 2 cable gland connectors
- 1 2-pin terminal block for DC power input
- 1 3-pin terminal block for AC power input
- 1 USB female connector installation kit
- 1 RJ45 female connector installation kit
- Quick installation guide
- Documentation and software DVD
- Warranty card

Optional Accessories (some parts sold separately)

Type	Model Name or P/N	Description
Available model w/o stroage and OS		
RJ45 female installation kit, for S3 models	1490917110010 1701050200013 1402102000026	Includes: • RJ45 female connector (1490917110010) • Ethernet cable (1701050200013) • RJ45 connector cap (1402102000026) One unit is included with your EXPC-1519 purchase; it comes preinstalled on the EXPC-1519 paneal computer.
USB female installation kit, for S3 models	1490917110011 1701030100111 1402102000027	Includes: • USB female connector (1490917110011) • USB cable (1701030100111) • USB connector cap (1402102000027) One unit is included with your EXPC-1519 purchase; it comes preinstalled on the EXPC-1519 panel computer.
RJ45 male plug for S3 models	1490911260026	IP67-rated male-to-female plug that can be mated with the RJ45 female installation kit's RJ45 female connector. Sold separately.
USB male plug for S3 models	1490911260027	IP67-rated male-to-female plug that can be mated with the USB female installation kit's USB female connector. Sold separately.
Cable gland	1402199000034	Two cable glands are in included with your EXPC-1519 purchase. Additional parts can be purchased as needed.
EXPC-1519-IO-Door-Chamfer (angle-adjustable I/O plate)	3095200000161	Use this accessory to change the I/O angle from 90 degree to 80 degrees for easier installation. Sold separately.
Desktop mounting kit	3095200000141	For mounting the EXPC-1519 on a desktop. Sold separately.
Panel mounting kit	3095200000131	For mounting the EXPC-1519 on a cabinet. Sold separately.
Wall mounting kit	3095200000151	For mounting the EXPC-1519 on a wall. Sold separately.
Handle kit	3095200000171	Handle to make it easier to carry the EXPC-1519. Sold separately.