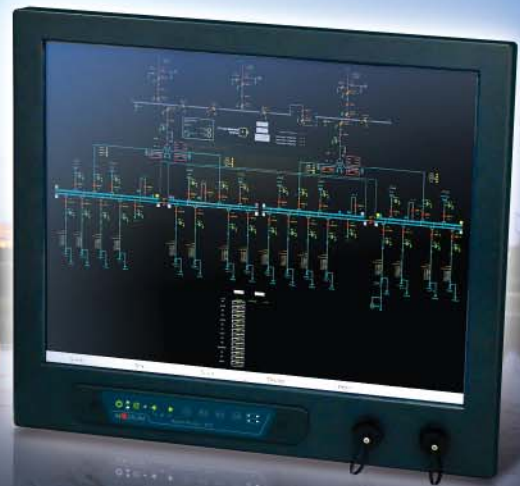


# TUFF PANEL PC MPP-1900 19"

## Rugged Rack Mount Panel PC

- Powerful and fast processing platform.
- 2x LAN, 4x USB, 4x Configurable serial ports.
- Fully IP-65 (NEMA-4) sealed (against water and dust): front, back and sides.
- 19-inch rack mountable or 100mm VESA bracket for desktop or wall mounting.
- Fanless operation, up to +50C.
- Multi-stage watchdog timer.
- Low power consumption.
- Shock and vibration damping on the LCD panel.
- Real backlight control: no night-blindness issues.



The MPP-1900 TUFF PANEL PC is a full-featured, high performance, rugged, fanless, IP-65 sealed (water and dust proof) Panel PC with a 19-inch LCD Panel and 5-wire touch screen.

The Panel PC is designed to be mounted in an industry standard 19-inch equipment rack, alternatively it can also be mounted on a desk or wall via its 100mm VESA mount.

With a maximum of a 1.86GHz Intel Core 2 Duo, dual-core processor, 8GBytes of DDR3 RAM and 2x raid configurable Serial ATA 2.5-inch hard disk drive (HDD) or solid-state drive (SSD) the MPP-1900 has the grunt to get the job done.

Interfacing with the Panel PC is simple with the four USB2.0 ports (two on the front and two on the rear panel), two 10/100/1000 GigaBit LAN ports and four serial ports, which can be easily configured for RS232, RS422 and RS485 (with either RTS or auto-turn-around).

The unit can be powered from 9 to 60 VDC. It includes reverse polarity protection, transient protection, intelligent power on/off control (in battery powered applications) and includes automotive transient protection, allowing for use in 12V, 24V and 42V vehicles, without any power filters or voltage reducers.

The MPP-1900's efficient power supply design, coupled with the ultra-low power 1.86GHz Core2Duo processor, results in system power consumption between 14 watts (Windows XP in idle, with LCD backlight off) and 56 watts (both CPU cores running at 100% and LCD backlight at maximum brightness)

### Key Markets

- In-vehicle Display
- Cars
- Trucks
- Mining equipment
- Buses
- Marine
- Trains
- Aircraft
- Industrial Automation



**TUFF VIEW MPP-1900 RUGGED RACK MOUNT 19" PANEL PC****SPECIFICATIONS**

Processing	
<b>Processor</b>	Intel® Core™ 2 Duo SL9400, 1.86GHz (64-Bit, 6M cache, 1066MHz FSB, 45nm). Intel® Core™ 2 Duo SU9300, 1.20GHz (64-Bit, 3M cache, 800MHz FSB, 45nm). Intel® Celeron® M Processor ULV 722, 1.20GHz (64-Bit, 1MB cache, 800MHz FSB, 45nm). Intel® Atom™ N270, 1.6GHz with (32-Bit with Hyper Thread, 512 kB cache, 533MHz FSB, 45nm). Other processors available based on order quantity.
<b>RAM</b>	1GB, 2GB, 4GB, 6GB or 8GB.
<b>System Chipset</b>	Intel GS45 North-bridge. Intel ICH9-SFF South-bridge. Winbond 83627HG I/O Controller. SCH3114 Quad serial port controller.
<b>BIOS</b>	AMI BIOS. Green PC and PnP compliant. Flash ROM.
<b>Operating System</b>	Drivers available for Windows 7, Windows Vista, Windows XP, Windows 2000, Windows Embedded, XP Embedded. QNX and Linux operating system drivers are also available
Mass Storage and Media	
<b>HDD</b>	Up to two 2.5-inch SATA Solid-State Drive (SSD) or Hard Disk Drive (HDD).
<b>Optical Drive</b>	Supports external USB Optical Drive: CD-ROM, DVD-ROM, etc.
<b>Floppy Disk</b>	Supports external USB 3.5-inch floppy disk drive or USB thumb drive.
<b>Boot Source</b>	The MPP-1900 can be booted from the following sources: <ul style="list-style-type: none"> <li>• The internal SATA disk drive/RAID Array</li> <li>• An external USB thumb drive.</li> <li>• An external USB optical drive, HDD or FDD.</li> </ul>
Video and Audio	
<b>Video</b>	Mobile Intel® Graphics Media Accelerator 4500MHD, graphics core speeds up to 533 MHz, improved graphics and 3D rendering performance. Intel® Dynamic Video Memory Technology (Intel® DVMT 5.0) OpenGL 2.0 and DirectX10 support. High Definition Hardware motion compensation for high bit-rate MPEG-2 decoding (DVD playback). Up and down scaling of video content, high definition content decode, HDTV (1080i/p) support.
<b>Audio</b>	Integrated HDA (High Definition Audio)/digital audio interface with support for multiple codecs, with integrated speaker and optional internal microphone.
Standard Interfaces	
<b>Network</b>	Two 10/100/1000 Fast Ethernet compatible LAN ports. (Intel® I/O Controller Hub 82801IUX-SFF and RTL8111C.)
<b>Serial</b>	Four RS232-F serial ports (RJ45), with +/-15kV transient protection. <ul style="list-style-type: none"> <li>• Each port can be configured for RS232-F, RS422 or RS485 operation.</li> <li>• RS485 can be with RTS controlled turn-around or auto-turn-around.</li> <li>• The DSR pin on each serial port can be configured for DSR, or RI, or to supply either +5V or +12V. (Each voltage is current limited to a total of 100mA across all the serial ports.)</li> </ul>
<b>USB</b>	Four OHCI-compliant USB2.0 ports. Two on the Front Panel, and two on the Rear Panel.
<b>PCI</b>	One internal PCI slot.
<b>Mini PCI Express Card</b>	Two internal slots, one with SIM card. Typically used for wireless LAN and 3G data cards.
<b>Front Panel</b>	Two USB 2.0 Ports. Plus Front Panel controls: <p>Buttons:</p> <ul style="list-style-type: none"> <li>• Power on/off.</li> <li>• Reset.</li> <li>• Brightness Control (Up and Down).</li> </ul> <p>LED Indicators:</p> <ul style="list-style-type: none"> <li>• Power On.</li> <li>• Disk Activity.</li> <li>• Link and Activity for each LAN port (4 LEDs total).</li> </ul>
<b>Rear Panel I/O Ports</b>	<ul style="list-style-type: none"> <li>• Two USB 2.0 Ports.</li> <li>• Four RS232-F / RS422 / RS485 compatible serial ports.</li> <li>• Two 10/100/1000 GigaBit LAN Ports.</li> <li>• One DC Power In connector.</li> </ul>

Specifications are subject to change without notice.



**TUFF VIEW MPP-1900 RUGGED RACK MOUNT 19" PANEL PC****SPECIFICATIONS CONT'D**

Display Characteristics	
<b>Viewable area</b>	19-inch (diagonal). 4:3 aspect ratio. 376.3mm wide x 301mm high.
<b>Native Resolution</b>	1280 x 1024 Dot pitch: 0.294mm x 0.294mm.
<b>Contrast Ratio</b>	1000 : 1 Typical.
<b>Colours</b>	24-Bit (16.7 million).
<b>Response Time</b>	8ms GTG typical average. 20ms typical on/off
<b>Brightness</b>	300 nits, typical
<b>Viewing Angle</b>	Horizontal: 178° typ, 150° min Vertical: Up: 89° typ and 75° min. Down: 89° typ and 75° min.
Physical Characteristics	
<b>Mounting</b>	19-Inch rack mounting, or 100mm VESA mount.
<b>Dimensions</b>	434mm W (482.6mm including rack wings) x 396mm H x 83mm D (131.6mm including connectors with caps fitted).
<b>Weight</b>	6.6kg. 6.85kg including rack wings. Measured with SSD fitted and no internal cards.
<b>Shipping</b>	Shipping dimensions: 535mm W x 510mm H x 170mm D Shipping weight: 7.6Kg
<b>Ambient Temperature</b>	Operating: 0° C to +50° C
<b>Humidity</b>	10% to 90% RH, non condensing.
<b>Sealed</b>	IP65 (water and dust) for the entire unit.
<b>Certification</b>	C-tick (CE and FCC upon request)
Power	
<b>Power supply</b>	Input voltage range 9V to 60V DC
<b>Power consumption</b>	60W maximum.
<b>Digital input</b>	The panel PC has a digital input for power on and off control. This input is different to the Power On/Off button. Using this input results in zero off-state power consumption.
<b>Transient protection</b>	Load dump and other transients specified in ISO-7367.

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Full specifications can be found on Motium's web site at [www.motium.com](http://www.motium.com)**ORDERING OPTIONS**

All MPP-1900s are made to order. Because of the large number of different configuration options, we do not have specific ordering codes.

To obtain a quotation, use the tables above as a guide, and send us an email specifying the configuration to be quoted.

Refer to Motium's web site for specific information.