

# TUFF Panel PC **MPP-1020**

## Enhanced Sunlight Readable Panel PC

IP65, Fully Rugged, High Performance, 10.4" Display

- 1,200 nit truly sunlight readable LCD with touch
- High Performance Fanless Processor
- Real automatic backlight control (no night-blindness)
- Completely water and dust proof to IP65
- Optional: GPS, Diversity WiFi, 3G, LTE and MESH Networking



Motium's range of Rugged, High Quality in Vehicle Computing products are designed for operation in the harshest environments. With design driven by long term reliability, our products are the industry standard for durability and overall product quality.

Motium's TUFF View MPP-1020 Panel PC is compact, robust, lightweight and has been engineered to ensure successful vehicle deployment in rugged environments such as mining, automotive, and the transportation industry.

Each aspect of the design guarantees reliable operation under conditions such as extreme heat, harsh vibration, glaring sunshine, dark of night, water, dust or even the remotest of locations.

The MPP-1020 TUFF Panel PC features Motium's unique sunlight readable touch LCD technology including an ultra-efficient, high brightness 1,200nit LED Backlight. Standard features also include; automatic backlight control and a selection of field replaceable touch surface protection films.

With connectivity including: 2x CAN Bus, 3x RS-232, 3x USB 2.0, 2x Digital I/O, Composite Video Input, 10/100 Ethernet, and an extensive range of wireless options, the MPP-1020 is feature packed and offers unrivalled flexibility allowing integration into any vehicle for maximum productivity.

The MPP-1020 also boasts industry standard VESA mounting points, fanless operation, water and dust resistance to IP65, wide operating temperature range and low power consumption. An optional battery pack is available, offering up to 30 minutes of run time.

With intelligent, innovative design the MPP-1020 TUFF Panel PC is an outstanding high quality inclusion for any vehicle installation. For further information about the entire TUFF Panel PC range, visit our website or contact us at [sales@motium.com](mailto:sales@motium.com).

### Key Markets

- Mining
- Automotive
- Transportation
- Emergency Services
- Municipal Services
- Trucks



## TUFF PANEL PC MPP-1020 ENHANCED SUNLIGHT READABLE 10.4" PANEL PC

### SPECIFICATIONS

<b>Display</b>	
<b>Viewable Area</b>	4:3 aspect ratio. 210.4 mm (W) x 157.8 mm (H) 10.4-inch (26.416 cm) diagonal.
<b>Native Resolution</b>	1024 x 768; dot pitch: 0.2055 mm x 0.2055 mm.
<b>Brightness</b>	1,200 nits typical. This value only applies to indoor performance, the effective outdoor performance is greater than 1,400 nits. (1 nit = 1 Cd/m <sup>2</sup> ) The panel PC also supports automatic backlight control using an inbuilt light sensor and is configurable through a PC utility.
<b>Viewing Angle</b>	Horizontal: 176° typ, 160° minimum. Vertical: Up: 176° typ and 160° minimum.
<b>Touch</b>	5-wire resistive on 1.8mm glass. Supplied with surface protection film fitted.
<b>PC</b>	
<b>Processor</b>	Intel® Atom™ E3845 1.91Ghz. Intel® Atom™ E3825 1.33Ghz.
<b>Instruction Set</b>	64-Bit.
<b>Memory</b>	2GB DDR3L 1333 RAM. Optional 4GB RAM available in some configurations.
<b>System Chipset</b>	Intel® Bay Trail E3800 Series.
<b>BIOS</b>	AMI Aptio UEFI. Multi Stage Watchdog.
<b>Operating System</b>	Windows 8, Windows 7, Windows Vista, Windows XP, Windows 2000, Windows Embedded, XP Embedded. Linux also supported
<b>Mass Storage and Media</b>	
<b>SSD</b>	512MB to 128GB.
<b>External Device</b>	USB Optical Drive: CD-ROM, DVD, Blu-Ray., USB Floppy Drive, USB Flash Drive.
<b>Boot Source</b>	Internal SSD. Internal MicroSD. External USB flash drive. External USB floppy drive. External optical drive.
<b>Video and Audio</b>	
<b>Video</b>	Intel® Graphics Core with 2D and 3D hardware accelerator. Support for high performance hardware MPEG-2 decoding, WMV9 (VC-1) and H2.264 (AVC) support Blu-ray support @ 40 MB/s, hardware motion compensation.
<b>Sound</b>	High Definition Audio Interface with dual integrated stereo speakers.
<b>Wireless Connectivity</b>	
<b>GPS</b>	Optional 72-Channel UBlox NEO-M8 GPS receiver. Supports: GPS/QZSS L1 C/A, GLONASS L10F, BeiDou B1, SBAS L1 C/A: WAAS, EGNOS, MSAS. External SMA connector, with Active Antenna support for enhanced GPS reception.
<b>Bluetooth</b>	Optional Class 2 Bluetooth V2.0 support with suitable WiFi combo card.
<b>3G</b>	Optional Quad Band 3G /4G 900/1800/850/1900/2100 module with Micro SIM and external SMA antenna support.
<b>Wireless LAN</b>	Optional IEEE 802.11 AC/a/b/g/n module with dual external SMA antennas.
<b>Other</b>	Other Full Length Mini PCIe compliant wireless cards can be fitted at time of manufacture. Contact motium for more information.
<b>Interfaces</b>	
<b>COM</b>	Three RS-232 ports available with <i>QuickConnect 2</i> interface cable. Three full function USB 2.0 ports.
<b>USB</b>	One full function USB 2.0 port available with <i>QuickConnect 4</i> interface cable. Two full function USB 2.0 TYPE A ports available on the rear and front edge.
<b>LAN</b>	One 10/100 Base-T LAN port available with <i>QuickConnect 4</i> interface cable.
<b>Digital I/O</b>	Two independent digital inputs and two independent digital outputs with <i>QuickConnect 1</i> break out cable. Two CAN Bus2.0b with J1939 protocol with <i>QuickConnect 3</i> interface cable.
<b>CAN / Vehicle / Power</b>	Two 12v DC internally fused outputs to power CAN devices (up to 100mA per device). Other CAN Bus protocols available. Contact Motium for more information.
<b>Video Input</b>	One Composite Video Capture: NTSC, PAL-B, PAL-D, PAL-G, PAL-I, PAL-K through Connector 1 with <i>QuickConnect 1</i> cable.
<b>Function Keys</b>	Power on/off, backlight brightness up/down, and volume up/down. Function keys can be re assigned in software. Custom labelling of buttons available, minimum order quantities may apply.
<b>Physical Characteristics</b>	
<b>Mounting</b>	75mm VESA mount.
<b>Dimensions</b>	262mm x 229mm x 55mm.
<b>Weight</b>	Up to 2.3kg
<b>Shipping</b>	Up to 2.5kg
<b>Environmental</b>	Operating: -40°C to +65°C. Storage: -40°C to +85°C. 10% to 90% RH, non-condensing.
<b>Certification</b>	C-tick. Other certifications available upon request.
<b>Protection</b>	IP65 front and rear.
<b>Power</b>	
<b>Power Supply</b>	Input voltage range 8 VDC to 39 VDC.
<b>Power Consumption</b>	33w Max. 20w Nominal.
<b>Accessory Control</b>	The panel PC has an accessory input for power on/off control through the <i>QuickConnect 1</i> break out cable.
<b>UPS</b>	Internal 7.2wh Uninterruptible Power Supply (UPS) providing up to 30minutes of run time.
<b>Transient protection</b>	Load dump and other transients specified in ISO-7367.