FTS

EXTREME ENVIRONMENTS
EXTREMELY RELIABLE

MICROHARD
CELLULAR MODEM

Reliable Cellular Connection

The Microhard cellular modem provides a cellular solution for any serial, Ethernet, or wireless device. Connect the Microhard cellular modem to 4G/HSPA+/LTE/CDMA networks to get your data where it needs to go.

Key Features:

- Connects your serial or Ethernet device to your local cellular provider
- Wide operating temperature: -40°C to +85°C (-40°F +185°F)
- Low power consumption
- Secure data with advanced firewalls and VPN tunneling

SPECIFICATIONS	BulletPlus	IPn4Gii-V1G
CARRIER APPROVALS	AT&T, Telus, Bell and Rogers Public Static IP Preferred	Verizon Wireless
CELLULAR SUPPORTED BANDS North America	LTE FDD (Bands 1-5,7,8,13,17,18,19,20) UMTS | DC-HSPA+ (Bands 1,2,4,5,8) GSM | GPRS | EDGE (Bands 2,3,5,8) 3GPP Protocol Stack Release 9	Category 3 50 Mb/s UL,100 Mb/s DL FDD Bands 4, 13 3GPP Release 9 FDD channel bandwidth 1.4 - 20 MHz MIMO 2x2 Rx diversity
CELLULAR DATA FEATURES* North America	LTE: DL 100 Mbps, UL 50 Mbps HSPA+: DL 42 Mbps, UL 5.7 Mbps HSPA+: DL 21 Mbps, UL 5.7 Mbps WCDMA: DL/UL 384 kbps EDGE Class 33: DL/UL 236.8 kbps GPRS Class 33: DL/UL 85.6kbps *Module Standalone Laboratory Performance	
SERIAL INTERFACE	RS232 Serial Data Port	1 x RS232 Data (Full Support) 1 x RS232 Console/Data (TX/RX) 1 x RS485 Data (2/4 wire)
ETHERNET	2x LAN 10/100, Auto - MDI/X IEEE 802.3 1x WAN 10/100, Auto - MDI/X IEEE 802.3	2x 10/100 BaseT, Auto - MDI/X IEEE 802.3
SMS	SMS to/from Ethernet via Telnet SMS Alerts SMS Remote Control	SMS to/from Serial RS232/485 SMS to/from Ethernet via Telnet SMS Alerts SMS Remote Reboots
DIAGNOSTICS	RSSI, Ec/No, Voltage, Temperature, Remote diagnostics, UDP Event Reporting, SMS Alerts, Netflow	RSSI, Ec/No, Voltage, Temperature, Remote diagnostics, UDP Event Reporting, SMS Alerts, Netflow, Watchdog
INPUT VOLTAGE	7 - 30VDC or Passive PoE	
CURRENT CONSUMPTION (@12VDC)	Idle (LTE Connected): 120 mA Transmitting: 142mA WiFi (AP mode+LTE): 170 mA Peak: 230mA	
CONNECTORS		
Physical	3x SMA Female (Cell, Div, GPS) 1x RPSMA Female (WiFi) 3x RJ-45 (Ethernet)	3x SMA Female (Cell, Cell Div, GPS) 1x RP-SMA Female (Ant3) 2x RJ-45 (Ethernet)
SIM	2x 1.8 / 3.0V (2FF)	2x 1.8 / 3.0V
ENVIRONMENTAL		
Operating Temperature	-40°C to +85°C(-40°F to +185°F)	
Humidity	5-95%, non-condensing	
Vibration	MIL-STD-810G	
WEIGHT	Approx. 175 grams	Approx. 225 grams
DIMENSIONS	Approx. 3.05" x 2.2" x 1.1" (77mm x 55mm x 28mm)	Approx. 2.25" x 3.85" x 1.5" (57mm x 98mm x 45mm)
APPROVALS	FCC / IC PTCRB	FCC, IC

For complete technical specifications, please visit microhardcorp.com

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GSA
Management System registered to ISO 9001 QMI-SAI Global
ISO-SM-8-337.08.25.16