SPECIFICATIONS

Model	M1F	M1D
Performance		HSPA+, GPS/Glonass
Frequency Bands (MHz)	900 Ultra Long Range LoRa or DigiMesh	800/ 850, 900, AWS1700, 1900, 2100
Processor & Memory	ARM9 processor with 32-Bit ARM & 16-Bit Thumb instruction sets • 400MHz • 16K Data Cache • 16K Instruction Cache • 64X16M DDR RAM • 16 MB Flash Memory	
Packet Data	9600 bps	21 Mbps downlink, 5.76 Mbps uplink
Radio Frequency	FSK, GFSK, MSK, GMSK OOK and LoRa – a proprietary Digital Spread Spectrum technique	
WiFi	802.11 b/g/n (RP-SMA) 2.4GHz	
Input Voltage/Current	9V to 24VDC / 150ma	
Connectors		
Ethernet	1 RJ-45 Ethernet 10/100 port	
RS232	3 Wire(RX,TX, Ground)	
RS485	3 Wire(RX,TX, Ground)	
Antenna	Female SMA, 2dBi detachable antennas	
SIM	SIM/USIM	
Digital Inputs (2)	2 optically isolated inputs (+12V)	
Analog Inputs (4)	4 analog inputs (0 - 24V)	
Relay (1)	1 relay output (2 A at 30 VDC / 500 mA at 125 VAC)	
Digital Outputs (4)	4 digital MOSFET outputs (50V 1A)	
1 Wire	1-wire port (4V)	
Current Loop	Current Loop input (4-20mA)	
Physical Description		
Dimensions (L x W x H)	4.87" x 4.80" x 1.63" (With DIN Rail Mount: 4.87" x 4.80" x 2.05")	
Weight	1.01 lbs (16.2 oz)	
Chassis Type	Plastic	
Environmental		
Operating Temperature	-30° to +70° C	
Storage Temperature	-40° to +85° C	
Relative Humidity	20% to 90%, non-condensing	
Certifications		
EMC Compliance	US: FCC Part 15 Class B. EU: EN 55022 Class B, EN 55024. Canada: ICES-003	
Radio Compliance	FCC Part 22,24,27	
Safety	UL 60950-1 2nd Ed., cUL 60950-1 2nd Ed., IEC 60950-1 2nd Ed	
Network Approvals	PTCRB, GCF certified module, AT&T, T-Mobile, Pending: Rogers, Bell, Telus	
Quality	UL Pending Class 1 Div 2	

Optional power must be UL Listed ITE power supply marked LPS or Class 2 rated 12VDC, 5A. Certification does not apply or extend to voltages outside certified range, and has not been evaluated by UL for operating voltages beyond tested range.