

Miniature OEM Wireless Digital Data Link

The all new pMDDL1621 is a miniature OEM, high power, wireless OEM solution that provides the bandwidth and range needed for complex data intensive applications. The pMDDL1621 offers software selectable operation in the 1.6 GHz, 1.8 GHz or 2.0 GHz frequency ranges. The Pico MIMO DDL features 2x2 MIMO Digital Data Link, using Maximal Ratio Combining (MRC), Maximal Likelihood (ML) decoding and Low-Density Parity Check (LDPC) to achieve robust RF performance. The pMDDL1621 features secure and simultaneous Ethernet and Serial Data Communications.

2X2 MIMO

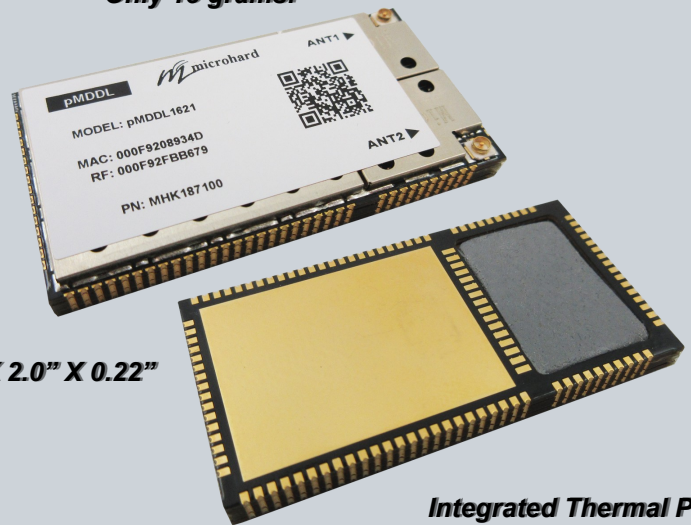
Up to 21 Mbps

Small Footprint

Ethernet + Serial

PTP | Multipoint | Relay

Only 15 grams!



1.05" X 2.0" X 0.22"

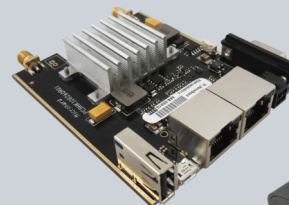
Integrated Thermal Pad!

pMDDL Features

- Robust 2X2 MIMO 1.6 GHz, 1.8 GHz or 2.0 GHz Operation
- Maximal Ratio Combining (MRC), Maximal Likelihood (ML) decoding
- Low-Density Parity Check (LDPC)
- Up to 21 Mbps Iperf Throughput @ 8 MHz channel (-78 dBm)
Up to 2 Mbps IPerf Throughput @ 4 MHz channel (-102 dBm)
- Extremely small foot print and very lightweight
- Serial Communication Port
- Dual 10/100 Ethernet Ports (LAN/WAN)
- Supports Point-to-Point and Point-to-Multipoint Networks
- Master, Remote, Relay Operating Modes.
- Adjustable total transmit power (up to 1W)
- Interface through local console, telnet, and web browser
- Local and remote wireless firmware upgrading through FTP

Interface Options

pMDDL1621 Motherboard



pMDDL1621 Enclosed



Specifications

Frequency (Software Selectable)	1625 to 1725 MHz 1780 to 1850 MHz 2015 to 2110 MHz		Optimal Performance Specifications			
			Modulation	IPerf Throughput (Mbps)	Optimal MRC Sensitivity (dBm)	Total Tx Power (dBm) +/- 1dB
Error Detection	32 bits of CRC, ARQ		8 MHz (2X2 MIMO ON)			
Encryption (Requires Export Permit)	256-bit AES		BPSK_1/2	3.1	-99.5	30dBm
Ports Serial Data/Console Ethernet USB	RS232 TTL level (300bps to 921kbps) Dual 10/100BaseT IEEE802.3 (LAN/WAN) 2.0 (Future Development)		QPSK_1/2	6.0	-98	30dBm
			QPSK_3/4	8.4	-96	30dBm
			16QAM_1/2	10.7	-92	30dBm
			16QAM_3/4	14.8	-90	30dBm
			64QAM_2/3	18.1	-85	30dBm
Firewall	Port Forwarding, Access Control, IP/MAC List.		64QAM_3/4	19.0	-83.5	30dBm
Operating Modes	Point-to-Point, Point-to-Multipoint, Relay		64QAM_5/6	21.0	-81	30dBm
Diagnostics	Remote Diagnostics, Ping, Traceroute, ARP table, DHCP active leases, IPerf, RSSI		4 MHz (2X2 MIMO ON)			
Management	Local Serial Port Console, Telnet, WebUI, SNMP, FTP Upgrade, TFTP, CLI (Command Line Interface)		BPSK_1/2	1.57	-102.5	30dBm
			QPSK_1/2	3.0	-101	30dBm
			QPSK_3/4	4.3	-99	30dBm
			16QAM_1/2	5.4	-95.5	30dBm
Rejection	Excellent strong signal interference & rejection characteristics		16QAM_3/4	7.4	-93	30dBm
			64QAM_2/3	7.8	-88	30dBm
			64QAM_3/4	8.0	-86	30dBm
Input Voltage	OEM Enclosed	Digital Voltage = 3.3V / RF Voltage = 4.2V 7 - 30 V _{DC}	64QAM_5/6	10.0	-83.5	30dBm
Connectors:	OEM	Antenna: UFL x2 (ANT1, ANT2) Data: 116 Pin SMT	Modulation			
	Enclosed	Antenna: RS-SMA Female x2 Data: RJ-45 x2 (Ethernet) Female DB9 (Serial) USB Type A Micro-AB USB (Console) 4 PIN Interlock (Vin)	IPerf Throughput (Mbps)			
Environmental Temperature Humidity	-40°F to 185°F (-40°C to +85°C) 5-95%, non-condensing		Optimal MRC Sensitivity (dBm)			
			Total Tx Power (dBm) +/- 1dB			
			8 MHz (MIMO OFF)			
			BPSK_1/2	3.1	-96.5	30dBm
			QPSK_1/2	6.0	-95	30dBm
			QPSK_3/4	8.4	-93	30dBm
			16QAM_1/2	10.7	-89	30dBm
16QAM_3/4	14.8	-87	30dBm			
Weight	OEM Enclosed	Approx. 15 grams Approx. 240 grams	64QAM_2/3	18.1	-82	28dBm
	Approx. 1.05" x 2.0" x .22" (26.5mm x 51mm x 5.6mm) Approx. 3.20" x 3.50" x 1.15" (81mm x 88mm x 29mm)		64QAM_3/4	19.0	-80.5	28dBm
			64QAM_5/6	21.0	-78	27dBm
Dimensions	OEM Enclosed	Approx. 1.05" x 2.0" x .22" (26.5mm x 51mm x 5.6mm) Approx. 3.20" x 3.50" x 1.15" (81mm x 88mm x 29mm)	4 MHz (MIMO OFF)			
	Order Options		BPSK_1/2	1.57	-99.5	30dBm
QPSK_1/2			3.0	-98	30dBm	
QPSK_3/4			4.3	-96	30dBm	
16QAM_1/2			5.4	-92.5	30dBm	
16QAM_3/4			7.4	-90	30dBm	
64QAM_2/3			7.8	-85	28dBm	
64QAM_3/4			8.0	-83	28dBm	
64QAM_5/6	10.0	-80.5	27dBm			

Contact Information

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