

Miniature OEM Wireless Digital Data Link

The all new Pico MIMO Digital Data Link is a miniature OEM, high power, 2x2 MIMO 2.4 GHz wireless OEM solution that provides the bandwidth and range needed for complex data intensive applications. 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 pMDDL features secure & simultaneous Ethernet, USB and Serial Data communications.

2X2 MIMO

Up to 25 Mbps

Small Footprint

Ethernet + Serial + USB

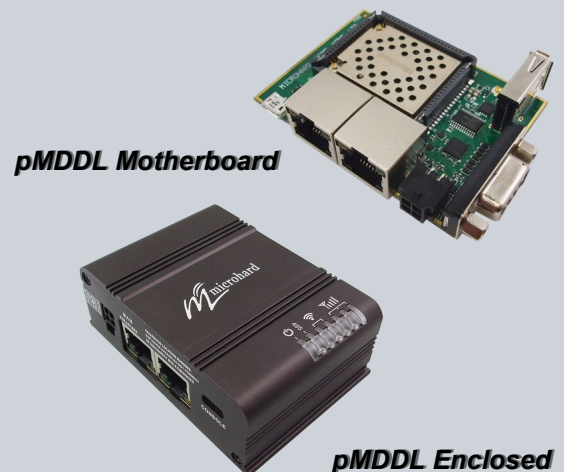
Multipoint | Relay | Mesh



pMDDL Features

- Robust 2X2 MIMO 2.4 GHz Operation
- Maximal Ratio Combining (MRC), Maximal Likelihood (ML) decoding
- Low-Density Parity Check (LDPC)
- Up to 25 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 & USB Ports
- Dual 10/100 Ethernet Ports (LAN/WAN)
- Supports Point-to-Point, Point-to-Multipoint, Mesh Networks
- Master, Remote, Relay, Mesh 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



Specifications

Frequency		2.402 - 2.478 GHz	Optimal Performance Specifications				
Error Detection		32 bits of CRC, ARQ	Modulation	IPerf Throughput (Mbps)	Optimal MRC Sensitivity (dBm)	Total Tx Power (dBm) +/- 1dB	
Encryption (Requires Export Permit)		128-bit AES (Optional 256-bit AES)					
Ports		Serial Data/Console Ethernet USB	8 MHz (2X2 MIMO ON)				
Serial Data/Console Ethernet USB	RS232 TTL level (300 bps - 230 kbps) Dual 10/100BaseT IEEE802.3 (LAN/WAN) 2.0		BPSK_1/2	3	-99.5	30dBm	
			QPSK_1/2	5.9	-98	30dBm	
		QPSK_3/4	8.8	-96	30dBm		
Firewall		Port Forwarding, Access Control, IP/MAC List.	16QAM_1/2	11.6	-92	30dBm	
Operating Modes		Point-to-Point, Point-to-Multipoint, Relay	16QAM_3/4	17.1	-90	30dBm	
Diagnostics		Remote Diagnostics, Ping, Traceroute, ARP table, DHCP active leases, IPerf, RSSI	64QAM_2/3	22.8	-85	30dBm	
Diagnostics			64QAM_3/4	25.5	-83.5	30dBm	
			64QAM_5/6	27.8	-81	30dBm	
Management		Local Serial Port Console, Telnet, WebUI, SNMP, FTP Upgrade, TFTP, CLI (Command Line Interface)	4 MHz (2X2 MIMO ON)				
Rejection		Excellent strong signal interference & rejection characteristics	BPSK_1/2	1.51	-102.5	30dBm	
Rejection			QPSK_1/2	2.98	-101	30dBm	
			QPSK_3/4	4.4	-99	30dBm	
			16QAM_1/2	5.8	-95.5	30dBm	
Input Voltage		Digital Voltage = 3.3V / RF Voltage = 5V 7 - 30 VDC	16QAM_3/4	8.6	-93	30dBm	
Connectors:		Antenna: UFL x2 (ANT1, ANT2) Data: 80 Pin SMT Antenna: UFL x2 (ANT1, ANT2) Data: RJ-45 x2 (Ethernet) Female DB9 (Serial) USB Type A Micro-AB USB (Console) 4 PIN Interlock (Vin)	64QAM_2/3	11.4	-88	30dBm	
OEM Motherboard			64QAM_3/4	12.8	-86	30dBm	
			64QAM_5/6	14	-83.5	30dBm	
Environmental			Temperature Humidity	8 MHz (MIMO OFF)			
Temperature Humidity	-40°F to 185°F (-40°C to +85°C) 5-95%, non-condensing			BPSK_1/2	3	-96.5	30dBm
			QPSK_1/2	5.8	-95	30dBm	
Weight		Approx. 7 grams Approx. 50 grams Approx. 165 grams	QPSK_3/4	8.6	-93	30dBm	
OEM Motherboard Enclosed			16QAM_1/2	11.5	-89	30dBm	
			16QAM_3/4	16.9	-87	30dBm	
Dimensions		Approx. 1.05" x 1.3" x .15" (27mm x 33mm x 4mm) Approx. 2.0" x 3.0" x 0.70" (50mm x 76mm x 18mm) Approx. 3.05" x 2.2" x 1.1" (77mm x 55mm x 28mm)	64QAM_2/3	22.2	-82	28dBm	
OEM Motherboard Enclosed			64QAM_3/4	24.7	-80.5	28dBm	
			64QAM_5/6	27.4	-78	27dBm	
Approvals		FCC Industry Canada CE	4 MHz (MIMO OFF)				
Approvals			BPSK_1/2	1.5	-99.5	30dBm	
			QPSK_1/2	2.9	-98	30dBm	
			QPSK_3/4	4.3	-96	30dBm	
			16QAM_1/2	5.7	-92.5	30dBm	
			16QAM_3/4	8.4	-90	30dBm	
			64QAM_2/3	11.3	-85	28dBm	
Approvals			64QAM_3/4	12.5	-83	28dBm	
			64QAM_5/6	14	-80.5	27dBm	

Order Options

pMDDL2450	MHK185500	2X2 MIMO 2.4 GHz OEM DDL Module (1W)	64QAM_2/3	11.3	-85	28dBm
pMDDL2450-ENC	MHK185550	2X2 MIMO 2.4 GHz Enclosed DDL (1W)	64QAM_3/4	12.5	-83	28dBm
			64QAM_5/6	14	-80.5	27dBm

Contact Information

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