

Miniature OEM Wireless Digital Data Link

The all new Pico MIMO Digital Data Link is a miniature OEM, high power, 2x2 MIMO 2.5 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 and Serial Data communications.

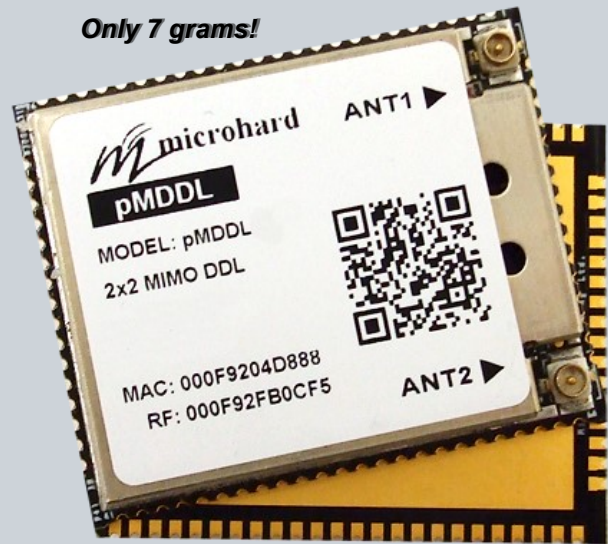
2X2 MIMO

Up to 25 Mbps

Small Footprint

Ethernet + Serial

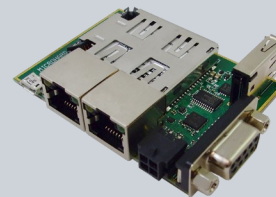
PTP | Multipoint | Relay



pMDDL Features

- Robust 2X2 MIMO 2.5 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 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



Specifications

Frequency		2.500 - 2.570 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)								
Ports	Serial Data/Console Ethernet USB	RS232 TTL level (300bps to 921kbps) Dual 10/100BaseT IEEE802.3 (LAN/WAN) 2.0 (Future Development)	8 MHz (2X2 MIMO ON)							
			BPSK_1/2	3	-99.5	30dBm				
			QPSK_1/2	5.9	-98	30dBm				
Firewall	Port Forwarding, Access Control, IP/MAC List.		QPSK_3/4	8.8	-96	30dBm				
			16QAM_1/2	11.6	-92	30dBm				
Operating Modes	Point-to-Point, Point-to-Multipoint, Relay		16QAM_3/4	17.1	-90	30dBm				
			64QAM_2/3	22.8	-85	30dBm				
Diagnostics	Remote Diagnostics, Ping, Traceroute, ARP table, DHCP active leases, IPerf, RSSI		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				
			QPSK_1/2	2.98	-101	30dBm				
Input Voltage	OEM Motherboard/ENC	Digital Voltage = 3.3V / RF Voltage = 5V 7 - 30 VDC	QPSK_3/4	4.4	-99	30dBm				
			16QAM_1/2	5.8	-95.5	30dBm				
			16QAM_3/4	8.6	-93	30dBm				
Connectors:	OEM	Antenna: UFL x2 (ANT1, ANT2) Data: 80 Pin SMT	64QAM_2/3	11.4	-88	30dBm				
			64QAM_3/4	12.8	-86	30dBm				
	Motherboard/ENC	Antenna (ENC): RP-SMA Female Data: RJ-45 x2 (Ethernet) Female DB9 (Serial) USB Type A Micro-AB USB (Console) 4 PIN Interlock (Vin)	64QAM_5/6	14	-83.5	30dBm				
			Modulation		IPerf Throughput (Mbps)		Optimal MRC Sensitivity (dBm)		Total Tx Power (dBm) +/- 1dB	
			8 MHz (MIMO OFF)							
Environmental	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	OEM Motherboard Enclosed	Approx. 7 grams Approx. 50 grams Approx. 175 grams	QPSK_3/4	8.6	-93	30dBm				
			16QAM_1/2	11.5	-89	30dBm				
			16QAM_3/4	16.9	-87	30dBm				
			64QAM_2/3	22.2	-82	28dBm				
Dimensions	OEM Motherboard Enclosed	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_3/4	24.7	-80.5	28dBm				
			64QAM_5/6	27.4	-78	27dBm				
			4 MHz (MIMO OFF)							
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						
64QAM_3/4		12.5	-83	28dBm						
64QAM_5/6		14	-80.5	27dBm						

Order Options

pMDDL2550 MHK185700 2X2 MIMO 2.5 GHz OEM DDL Module (1W)

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