

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.

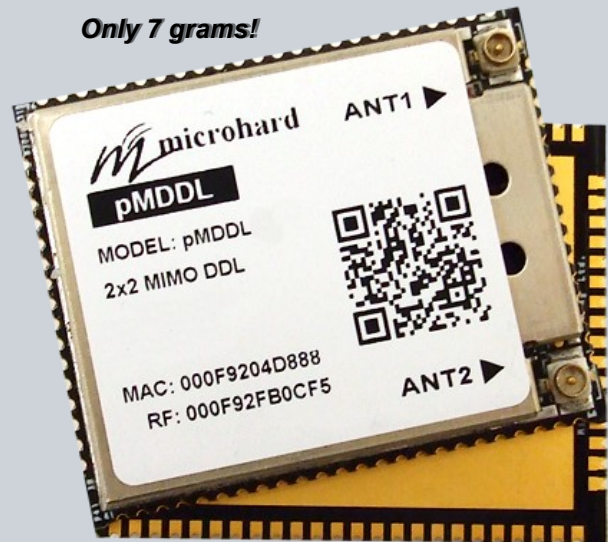
2X2 MIMO

Up to 25 Mbps

Small Footprint

Ethernet + Serial

PTP | Multipoint | Relay



Only 7 grams!

1.3" X 1.05" X 0.30"

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



Pico Motherboard

◆ Video ◆ 2X2 MIMO ◆ Ethernet ◆ Serial ◆ Security

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)	8 MHz (2X2 MIMO ON)			
Ports Serial Data/Console Ethernet USB	RS232 TTL level (300bps to 921kbps) Dual 10/100BaseT IEEE802.3 (LAN/WAN) 2.0 (Future Development)	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
		64QAM_3/4	25.5	-83.5	30dBm
Management	Local Serial Port Console, Telnet, WebUI, SNMP, FTP Upgrade, TFTP, CLI (Command Line Interface)	64QAM_5/6	27.8	-81	30dBm
		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	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 Motherboard	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
		64QAM_3/4	12.8	-86	30dBm
		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	Approx. 7 grams Approx. 50 grams	QPSK_3/4	8.6	-93	30dBm
		16QAM_1/2	11.5	-89	30dBm
		16QAM_3/4	16.9	-87	30dBm
Dimensions OEM Motherboard	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)	64QAM_2/3	22.2	-82	28dBm
		64QAM_3/4	24.7	-80.5	28dBm
		64QAM_5/6	27.4	-78	27dBm
		4 MHz (MIMO OFF)			
Order Options pMDDL2550 MHK185700	2X2 MIMO 2.5 GHz OEM DDL Module (1W)	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

Contact Information

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