

Miniature OEM Wireless Digital Data Link

The Pico MIMO Digital Data Link is a miniature OEM, high power, 2x2 MIMO 2.3GHz 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.

Only 7 grams!

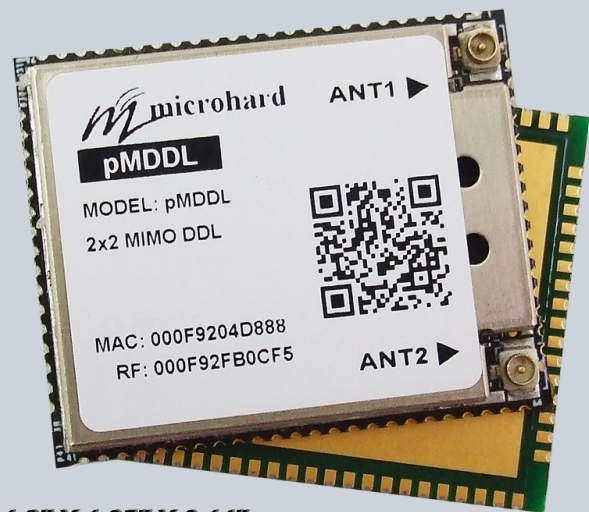
> 50km Range

Up to 25Mbps

36dBm (4W)

Ethernet + Serial + USB

Mesh | Multipoint | Relay



1.3" X 1.05" X 0.14"

pMDDL2350 Features

- Robust 2X2 MIMO 2.3GHz Operation
- Adjustable total transmit power (up to 36dBm)
- Maximal Ratio Combining (MRC), Maximal Likelihood (ML) decoding
- Low-Density Parity Check (LDPC)
- Up to 25Mbps Iperf Throughput @ 8MHz channel (-78dBm)
Up to 2Mbps IPerf Throughput @ 4MHz channel (-102dBm)
- Extremely small foot print and very lightweight
- Serial Communication Port
- Dual 10/100 Ethernet Ports (LAN/WAN)
- Supports Point-to-Point, Point-to-Multipoint and Mesh Networks
- Master, Remote, Relay, Mesh Operating Modes.
- Interface through local console, telnet, and web browser
- Local and remote wireless firmware upgrading through FTP

Interface Options



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

Specifications

Frequency		2.304 - 2.39GHz	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 (300bps - 230kbps) Dual 10/100BaseT IEEE802.3 (LAN/WAN) 2.0		BPSK_1/2	3	-99.5	36dBm		
			QPSK_1/2	5.9	-98	36dBm		
		QPSK_3/4	8.8	-96	36dBm			
Firewall		Port Forwarding, Access Control, IP/MAC List.	16QAM_1/2	11.6	-92	36dBm		
Operating Modes		Point-to-Point, Point-to-Multipoint, Relay, Mesh	16QAM_3/4	17.1	-90	33dBm		
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	36dBm		
Input Voltage	OEM Enclosed/MB	Digital Voltage = 3.3V / RF Voltage = 5V 7 - 30VDC	QPSK_1/2	2.98	-101	36dBm		
			QPSK_3/4	4.4	-99	36dBm		
			16QAM_1/2	5.8	-95.5	36dBm		
Connectors:		Antenna: UFL x2 (ANT1, ANT2) Data: 80 Pin SMT Antenna: RP-SMA Female x2 Data: RJ-45 x2 (Ethernet) USB Type A Micro-AB USB (Console) 4 PIN Interlock (Vin)	16QAM_3/4	8.6	-93	33dBm		
OEM Enclosed			64QAM_2/3	11.4	-88	30dBm		
			64QAM_3/4	12.8	-86	30dBm		
OEM Enclosed				64QAM_5/6	14	-83.5	30dBm	
				Environmental		Temperature Humidity	-40°F to 185°F (-40°C to +85°C) 5-95%, non-condensing	8 MHz (MIMO OFF)
Weight	OEM Motherboard Enclosed		~ 7 grams ~ 75 grams ~ 230 grams	BPSK_1/2	3			-96.5
		QPSK_1/2		5.8	-95	33dBm		
Dimensions	OEM Motherboard Enclosed	~1.05 x 1.3 x 0.15" (27 x 33 x 4mm) ~2.75 x 3.25 x 0.90" (70 x 83 x 23mm) ~3.2 x 3.5 x 1.15" (81 x 88 x 29mm)	QPSK_3/4	8.6	-93	33dBm		
			16QAM_1/2	11.5	-89	33dBm		
			16QAM_3/4	16.9	-87	30dBm		
Dimensions	OEM Motherboard Enclosed		64QAM_2/3	22.2	-82	28dBm		
			64QAM_3/4	24.7	-80.5	28dBm		
			64QAM_5/6	27.4	-78	27dBm		
Order Options		MHK185600 MHK185650	4 MHz (MIMO OFF)					
MHK185600 MHK185650	2X2 MIMO 2.3 GHz OEM Digital Data Link 2X2 MIMO 2.3 GHz Enclosed Digital Data Link		BPSK_1/2	1.5	-99.5	33dBm		
			QPSK_1/2	2.9	-98	33dBm		
			QPSK_3/4	4.3	-96	33dBm		
			16QAM_1/2	5.7	-92.5	33dBm		
			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

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