

Hexa-Band Wireless Digital Data Link

The pMDDL2280 is a miniature OEM, high power, Hexa-Band wireless OEM solution that provides the throughput and range needed for complex data intensive applications. The pMDDL2280 offers software selectable operation in six frequency bands between 2.2 and 2.8 GHz. The Pico MIMO DDL features 2x2 MIMO, using Maximal Ratio Combining (MRC), Maximal Likelihood (ML) decoding and Low-Density Parity Check (LDPC) to achieve robust RF performance. The pMDDL2280 features secure and simultaneous Ethernet, USB and Serial Data Communications.

Only 8 grams!



1.05" X 2.0" X 0.11"

New Dynamic Frequency Selection on OFDM overlay provides robust interference and antijam immunity!

Features

- Software Selectable 2.2 - 2.8 GHz Frequency Operation
- Maximal Ratio Combining (MRC), Maximal Likelihood (ML) decoding
- Low-Density Parity Check (LDPC)
- FIPS140-2 Compliant Pending
- Up to 21 Mbps Iperf Throughput @ 8 MHz channel (-78 dBm)
Up to 2 Mbps IPerf Throughput @ 4 MHz channel (-102 dBm)
- Dual 10/100 Ethernet Ports (LAN/WAN)
- Point-to-Point, Point-to-Multipoint & MANET MESH Networks
- Master, Remote, Relay & MESH Operating Modes.
- Adjustable transmit power (up to 6W total)
- Local and remote wireless firmware upgrading through FTP

2X2 MIMO, > 40 Mbps

Hexa-Band Frequency

High Power (6W)

PTP | PMP | Relay | MESH

DFS - Robust Interference Immunity

MANET MESH / Advanced MESH

Dual Ethernet, USB, Serial



SWP

Enclosed

Specifications



Frequency (Software Selectable)	2200 to 2300 MHz 2300 to 2400 MHz 2400 to 2500 MHz 2500 to 2600 MHz 2600 to 2700 MHz 2700 to 2800 MHz
Error Detection	32 bits of CRC, ARQ
Encryption (Requires Export Permit)	256-bit AES
Ports Serial Data/Console Ethernet USB	RS232 TTL level (300bps to 230kbps) Dual 10/100 IEEE802.3 (LAN/WAN) 2.0
Firewall	Port Forwarding, Access Control, IP/MAC List.
Operating Modes	Point-to-Point, Point-to-Multipoint, Repeater, MANET Mesh
Diagnostics	Remote Diagnostics, Ping, Traceroute, ARP table, DHCP active leases, IPerf, RSSI
Management	Local Serial Port Console, Telnet, WebUI, SNMP, FTP Upgrade, TFTP, CLI (Command Line Interface)
Rejection	Excellent strong signal interference & rejection characteristics
Input Voltage OEM Enclosed/SWP	Digital Voltage = 3.3VDC RF Voltage = 5VDC 8-30 VDC
Connectors: OEM Enclosed SWP	Antenna: UFL x2 (ANT1, ANT2) Data: 116 Pin SMT Antenna: SMA Female x2 Data: RJ-45 x2 (Ethernet) Female DB9 (Serial) USB Type A Micro-AB USB (Console) 4 PIN Interlock (Vin) Antenna: 2x MMCX Power, Data: 10-Pin (GHR-10V-S)
Environmental Temperature Humidity	-40°F to 185°F (-40°C to +85°C) 5-95%, non-condensing
Weight OEM SWP Enclosed	~8 grams ~59 grams ~275 grams
Dimensions OEM SWP Enclosed	26.5 x 51 x 5.6mm 36 x 66 x 16 mm 81 x 88 x 35mm
Order Options	
pMDDL2280 pMDDL2280-ENC pMDDL2280-SWP	2.2-2.8GHz 2x2 6W MIMO DDL OEM 2.2-2.8GHz 2x2 6W MIMO DDL Enclosed 2.2-2.8GHz 2x2 6W MIMO DDL Miniature

Optimal Performance Specifications

Modulation	MIMO ON						
	18 MHz Channel		8 MHz Channel		4 MHz Channel		Total Tx Power* +/- 1dB
	IPerf Throughput (Mbps)	Optimal MRC Sensitivity (dBm)	IPerf Throughput (Mbps)	Optimal MRC Sensitivity (dBm)	IPerf Throughput (Mbps)	Optimal MRC Sensitivity (dBm)	
BPSK_1/2	6	-96	3.1	-99.5	1.57	-102.5	38dBm
QPSK_1/2	12	-95	6.0	-98	3.0	-101	38dBm
QPSK_3/4	17	-93	8.4	-96	4.3	-99	37dBm
16QAM_1/2	21	-89	10.7	-92	5.4	-95.5	35dBm
16QAM_3/4	29	-87	14.8	-90	7.4	-93	35dBm
64QAM_2/3	36	-52	18.1	-85	7.8	-88	32dBm
64QAM_3/4	40	-80	19.0	-83.5	8.0	-86	32dBm
64QAM_5/6	43	-78	21.0	-81	10.0	-83.5	31dBm

Microhard - Confidential



Microhard Systems Inc.
150 Country Hills Landing N.W.
Calgary, AB, Canada T3K 5P3

www.microhardcorp.com
info@microhardcorp.com
1-855-353-0028