

3.2GHz to 4.8GHz S-Band + C-Band Wireless Digital Data Link

The pMDDL4000 combines both S and C bands covering 3200 to 4800 MHz. This includes a Dual Synthesizer Architecture which allows for independent Uplink and Downlink frequency. Very Robust off channel filtering with Frequency Hopping allow maximum RF immunity in Harsh RF environments. 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 pMDDL4000 features secure and simultaneous Ethernet, USB and Serial Data Communications.

Only 15 grams!



1.05" X 2.0" X 0.22"

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

3.2 to 4.8 GHz (Software PGM)

Independent Uplink & Downlink Frequency

2X2 MIMO, > 40 Mbps

High Power (2W)

PTP | PMP | Relay | MESH

DFS + Frequency Hopping

MANET MESH / Advanced MESH

Features

- Software Selectable 3.2 - 4.8 GHz Frequency Operation
- Selectable Channel Bandwidth - 18MHz, 8MHz, 4MHz
- Maximal Ratio Combining (MRC), Maximal Likelihood (ML) decoding
- Low-Density Parity Check (LDPC)
- Optional AES256 (Permit Required)
- 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 2W total)

Available only to Qualified Customers under NDA

Enclosed



Motherboard

SWP Series

Specifications



Frequency (Software Selectable)	3200 to 4800 MHz	Connectors:	OEM	Antenna: UFL x2 (ANT1, ANT2) Data: 116 Pin SMT
Error Detection	32 bits of CRC, ARQ		Enclosed	Antenna: SMA Female x2 Data: RJ-45 x2 (Ethernet) Female DB9 (Serial) USB Type A Micro-AB USB (Console) 4 PIN Interlock (Vin)
Encryption (Requires Export Permit)	256-bit AES		SWP	Antenna: 2x MMCX Power, Data: 10-Pin (GHR-10V-S)
Ports	Serial Data/Console Ethernet USB	RS232 TTL level (300bps to 230kbps) Dual 10/100 IEEE802.3 (LAN/WAN) 2.0	Environmental	Temperature Humidity
Firewall	Port Forwarding, Access Control, IP/MAC List.			-40°F to 185°F (-40°C to +85°C) 5-95%, non-condensing
Operating Modes	Point-to-Point, Point-to-Multipoint, Repeater, MANET Mesh		Weight	OEM SWP Enclosed
Diagnostics	Remote Diagnostics, Ping, Traceroute, ARP table, DHCP active leases, IPerf, RSSI			~15 grams ~59 grams ~275 grams
Management	Local Serial Port Console, Telnet, WebUI, SNMP, FTP Upgrade, TFTP, CLI (Command Line Interface)		Dimensions	OEM SWP Enclosed
Rejection	Excellent strong signal interference & rejection characteristics			26.5 x 51 x 5.6mm 36 x 66 x 16 mm 81 x 88 x 35mm
Input Voltage	OEM Enclosed/SWP	Digital Voltage = 3.3VDC RF Voltage = 4.2VDC 8-30 VDC	Order Options	
			pMDDL4000 pMDDL4000-ENC pMDDL4000-SWP	3.2-4.8 GHz 2x2 2W MIMO DDL OEM 3.2-4.8 GHz 2x2 2W MIMO DDL Enclosed 3.2-4.8 GHz 2x2 2W MIMO DDL Miniature

Optimal Performance Specifications

Modulation	MIMO ON						Total Tx Power* +/- 1dB
	18 MHz Channel		8 MHz Channel		4 MHz Channel		
	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	33dBm
QPSK_1/2	12	-95	6.0	-98	3.0	-101	33dBm
QPSK_3/4	17	-93	8.4	-96	4.3	-99	33dBm
16QAM_1/2	21	-89	10.7	-92	5.4	-95.5	32dBm
16QAM_3/4	29	-87	14.8	-90	7.4	-93	32dBm
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

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