

Hexa-Band Wireless Digital Data Link

The pMDDL1624-SWP is a compact, enclosed, high power, Hexa-Band wireless solution that provides the throughput and range needed for complex applications. The pMDDL1624-SWP offers software selectable operation in six frequency bands between 1.6 and 2.5 GHz. Featuring 2x2 MIMO, Maximal Ratio Combining (MRC), Maximal Likelihood (ML) decoding and Low-Density Parity Check (LDPC), the pMDDL1624-SWP delivers robust RF performance. The pMDDL1624-SWP provides simultaneous Ethernet and Serial Data Communications.



Only 59 grams!



36 x 66 x 16 mm

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

2X2 MIMO, Up to 21 Mbps

Hexa-Band Frequency

Ethernet, USB, Serial

PTP | PMP | Relay | MESH

DFS & Frequency Hopping*

Robust & Compact Enclosure

Features

- Software Selectable 1.6, 1.8, 2.0, 2.2, 2.3 or 2.4 GHz 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)
- 10/100 Ethernet Port
- Supports Point-to-Point, Point-to-Multipoint & MESH Networks
- Master, Remote, Relay & MESH Operating Modes.
- Adjustable transmit power (up to 2W* total)
- Local and remote wireless firmware upgrading through FTP



**SWP Expander Board
& Interface Cable**

* In Frequency Hopping mode power is limited to 1W

Optimal Performance Specifications

Modulation	MIMO ON					MIMO OFF				
	8MHZ Channel		4MHZ Channel		Total Tx Power +/- 1dB	8MHZ Channel		4MHZ 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)	IPerf Throughput (Mbps)	Optimal MRC Sensitivity (dBm)	
Frequency Band: 1625 - 1725 MHz										
BPSK_1/2	3.1	-99.5	1.57	-102.5	33dBm	3.1	-96.5	1.57	-99.5	30dBm
QPSK_1/2	6.0	-98	3.0	-101	33dBm	6.0	-95	3.0	-98	30dBm
QPSK_3/4	8.4	-96	4.3	-99	33dBm	8.4	-93	4.3	-96	30dBm
16QAM_1/2	10.7	-92	5.4	-95.5	33dBm	10.7	-89	5.4	-92.5	30dBm
16QAM_3/4	14.8	-90	7.4	-93	33dBm	14.8	-87	7.4	-90	30dBm
64QAM_2/3	18.1	-85	7.8	-88	32dBm	18.1	-82	7.8	-85	30dBm
64QAM_3/4	19.0	-83.5	8.0	-86	31dBm	19.0	-80.5	8.0	-83	29dBm
64QAM_5/6	21.0	-81	10.0	-83.5	30dBm	21.0	-78	10.0	-80.5	28dBm
Frequency Band: 1780 - 1850 MHz										
BPSK_1/2	3.1	-99.5	1.57	-102.5	33dBm	3.1	-96.5	1.57	-99.5	30dBm
QPSK_1/2	6.0	-98	3.0	-101	33dBm	6.0	-95	3.0	-98	30dBm
QPSK_3/4	8.4	-96	4.3	-99	33dBm	8.4	-93	4.3	-96	30dBm
16QAM_1/2	10.7	-92	5.4	-95.5	33dBm	10.7	-89	5.4	-92.5	30dBm
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64QAM_2/3	18.1	-85	7.8	-88	32dBm	18.1	-82	7.8	-85	30dBm
64QAM_3/4	19.0	-83.5	8.0	-86	31dBm	19.0	-80.5	8.0	-83	29dBm
64QAM_5/6	21.0	-81	10.0	-83.5	30dBm	21.0	-78	10.0	-80.5	28dBm
Frequency Band: 2020 - 2110 MHz										
BPSK_1/2	3.1	-99.5	1.57	-102.5	33dBm	3.1	-96.5	1.57	-99.5	30dBm
QPSK_1/2	6.0	-98	3.0	-101	33dBm	6.0	-95	3.0	-98	30dBm
QPSK_3/4	8.4	-96	4.3	-99	33dBm	8.4	-93	4.3	-96	30dBm
16QAM_1/2	10.7	-92	5.4	-95.5	33dBm	10.7	-89	5.4	-92.5	30dBm
16QAM_3/4	14.8	-90	7.4	-93	33dBm	14.8	-87	7.4	-90	30dBm
64QAM_2/3	18.1	-85	7.8	-88	32dBm	18.1	-82	7.8	-85	30dBm
64QAM_3/4	19.0	-83.5	8.0	-86	31dBm	19.0	-80.5	8.0	-83	29dBm
64QAM_5/6	21.0	-81	10.0	-83.5	30dBm	21.0	-78	10.0	-80.5	28dBm
Frequency Band: 2200 - 2300 MHz										
BPSK_1/2	3.1	-99.5*	1.57	-102.5*	30dBm	3.1	-96.5*	1.57	-99.5*	30dBm
QPSK_1/2	6.0	-98*	3.0	-101*	30dBm	6.0	-95*	3.0	-98*	30dBm
QPSK_3/4	8.4	-96*	4.3	-99*	30dBm	8.4	-93*	4.3	-96*	30dBm
16QAM_1/2	10.7	-92*	5.4	-95.5*	30dBm	10.7	-89*	5.4	-92.5*	28dBm
16QAM_3/4	14.8	-90*	7.4	-93*	30dBm	14.8	-87*	7.4	-90*	28dBm
64QAM_2/3	18.1	-85*	7.8	-88*	28dBm	18.1	-82*	7.8	-85*	25dBm
64QAM_3/4	19.0	-83.5*	8.0	-86*	28dBm	19.0	-80.5*	8.0	-83*	25dBm
64QAM_5/6	21.0	-81*	10.0	-83.5*	27dBm	21.0	-78*	10.0	-80.5*	24dBm
Frequency Band: 2300 - 2390 MHz										
BPSK_1/2	3.1	-99.5*	1.57	-102.5*	30dBm	3.1	-96.5*	1.57	-99.5*	30dBm
QPSK_1/2	6.0	-98*	3.0	-101*	30dBm	6.0	-95*	3.0	-98*	30dBm
QPSK_3/4	8.4	-96*	4.3	-99*	30dBm	8.4	-93*	4.3	-96*	30dBm
16QAM_1/2	10.7	-92*	5.4	-95.5*	30dBm	10.7	-89*	5.4	-92.5*	28dBm
16QAM_3/4	14.8	-90*	7.4	-93*	30dBm	14.8	-87*	7.4	-90*	28dBm
64QAM_2/3	18.1	-85*	7.8	-88*	28dBm	18.1	-82*	7.8	-85*	25dBm
64QAM_3/4	19.0	-83.5*	8.0	-86*	28dBm	19.0	-80.5*	8.0	-83*	25dBm
64QAM_5/6	21.0	-81*	10.0	-83.5*	27dBm	21.0	-78*	10.0	-80.5*	24dBm
Frequency Band: 2400 - 2500 MHz										
BPSK_1/2	3.1	-99.5*	1.57	-102.5*	30dBm	3.1	-96.5*	1.57	-99.5*	30dBm
QPSK_1/2	6.0	-98*	3.0	-101*	30dBm	6.0	-95*	3.0	-98*	30dBm
QPSK_3/4	8.4	-96*	4.3	-99*	30dBm	8.4	-93*	4.3	-96*	30dBm
16QAM_1/2	10.7	-92*	5.4	-95.5*	30dBm	10.7	-89*	5.4	-92.5*	28dBm
16QAM_3/4	14.8	-90*	7.4	-93*	30dBm	14.8	-87*	7.4	-90*	28dBm
64QAM_2/3	18.1	-85*	7.8	-88*	28dBm	18.1	-82*	7.8	-85*	25dBm
64QAM_3/4	19.0	-83.5*	8.0	-86*	28dBm	19.0	-80.5*	8.0	-83*	25dBm
64QAM_5/6	21.0	-81*	10.0	-83.5*	27dBm	21.0	-78*	10.0	-80.5*	24dBm

Notes:

* Rx Sensitivity for frequency bands starting at 2280 MHz and higher, subtract 1.5 ~ 3 dBm (-1.5 @ 2280 MHz, -2 @ 2290 MHz, -3 @ 2300 MHz)

pMDDL1624-SWP Specifications



Frequency (Software Selectable)	1625 to 1725 MHz 1780 to 1850 MHz 2020 to 2110 MHz 2200 to 2300 MHz 2300 to 2390 MHz 2400 to 2500 MHz
Error Detection	32 bits of CRC, ARQ
Encryption (Requires Export Permit)	256-bit AES
Ports Serial Data/Console Ethernet USB	RS232 (300bps to 230kbps) 10/100 IEEE802.3 2.0
Firewall	Port Forwarding, Access Control, IP/MAC List.
Operating Modes	Point-to-Point, Point-to-Multipoint, Repeater, 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 (AT Command Line Interface)
Rejection	Excellent strong signal interference & rejection characteristics
Input Voltage	9 - 30 V _{DC}
Mating Connectors	Power, Data: 10-Pin (GHR-10V-S) Antenna(s): 2x MMCX
Environmental Temperature Humidity	-40°F to 185°F (-40°C to +85°C) 5-95%, non-condensing

Weight	~59 grams
Dimensions	~36 x 66 x 16 mm
Order Options	
pMDDL1624-SWP	2X2 MIMO Hexa-Band ENC Data Link

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Preliminary



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