pMDDL1624

Hexa-Band Wireless Digital Data Link

The all new pMDDL1624 is a miniature OEM, high power, Hexa-Band wireless OEM solution that provides the throughput and range needed for complex data intensive applications. The pMDDL1624 offers software selectable operation in the 1.6, 1.8, 2.0, 2.2, 2.3 or 2.4 GHz frequency ranges. 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 pMDDL1624 features secure and simultaneous Ethernet and Serial Data Communications.

2X2 MIMO

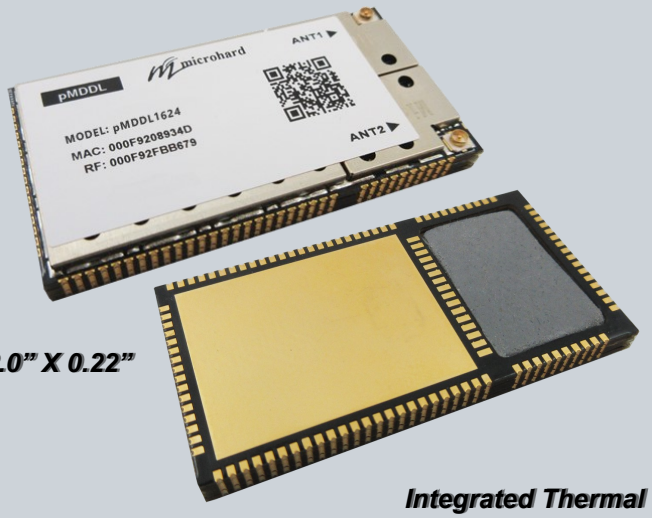
Up to 21 Mbps

Hexa-Band

Ethernet + Serial

PTP | PMP | Relay | MESH

Only 15 grams!



1.05" X 2.0" X 0.22"

Integrated Thermal Pad!

pMDDL1624 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
- Up to 21 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, Point-to-Multipoint & MESH Networks
- Master, Remote, Relay & MESH 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

pMDDL1624 Motherboard

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

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	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	30dBm
16QAM_3/4	14.8	-90	7.4	-93	30dBm	14.8	-87	7.4	-90	30dBm
64QAM_2/3	18.1	-85	7.8	-88	30dBm	18.1	-82	7.8	-85	30dBm
64QAM_3/4	19.0	-83.5	8.0	-86	30dBm	19.0	-80.5	8.0	-83	30dBm
64QAM_5/6	21.0	-81	10.0	-83.5	30dBm	21.0	-78	10.0	-80.5	30dBm
Frequency Band: 1780 - 1850 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	30dBm
16QAM_3/4	14.8	-90	7.4	-93	30dBm	14.8	-87	7.4	-90	30dBm
64QAM_2/3	18.1	-85	7.8	-88	30dBm	18.1	-82	7.8	-85	30dBm
64QAM_3/4	19.0	-83.5	8.0	-86	30dBm	19.0	-80.5	8.0	-83	30dBm
64QAM_5/6	21.0	-81	10.0	-83.5	30dBm	21.0	-78	10.0	-80.5	30dBm
Frequency Band: 2020 - 2110 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	30dBm
16QAM_3/4	14.8	-90	7.4	-93	30dBm	14.8	-87	7.4	-90	30dBm
64QAM_2/3	18.1	-85	7.8	-88	30dBm	18.1	-82	7.8	-85	27dBm
64QAM_3/4	19.0	-83.5	8.0	-86	30dBm	19.0	-80.5	8.0	-83	27dBm
64QAM_5/6	21.0	-81	10.0	-83.5	29dBm	21.0	-78	10.0	-80.5	26dBm
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: 2402 - 2478 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)

Specifications

Frequency (Software Selectable)	1625 to 1725 MHz 1780 to 1850 MHz 2020 to 2110 MHz 2200 to 2300 MHz 2300 to 2390 MHz 2402 to 2478 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 921kbps) 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, Mesh
Diagnostics	Remote Diagnostics, Ping, Trac-eroute, ARP table, DHCP active leas-es, 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	 Digital Voltage = 3.3V / RF Voltage = 5V
Connectors: OEM	 Antenna: UFL x2 (ANT1, ANT2) Data: 116 Pin SMT
Environmental Temperature Humidity	 -40°F to 185°F (-40°C to +85°C) 5-95%, non-condensing

Weight OEM	 Approx. 15 grams
Dimensions OEM	 Approx. 1.05” x 2.0” x .22” (26.5mm x 51mm x 5.6mm)

Order Options

pMDDL1624	2X2 MIMO Hexa-Band OEM Data Data Link

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