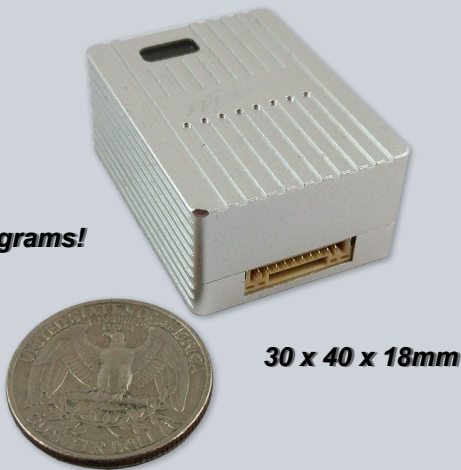


## Femto Hexa-Band Digital Data Link

The fDDL1624-SWP is a compact, enclosed, high power, Hexa-Band wireless solution that delivers the throughput and range needed for complex data intensive applications. The fDDL1624-SWP offers software selectable operation in six frequency bands between 1.6 and 2.5 GHz. The fDDL1624-SWP uses Maximal Ratio Combining (MRC), Maximal Likelihood (ML) decoding and Low-Density Parity Check (LDPC) to achieve robust RF performance. The fDDL1624-SWP features secure and simultaneous Ethernet and Serial Data Communications.

**Only 32 grams!**



**30 x 40 x 18mm**

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

### 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)
- Up to 21 Mbps Iperf Throughput @ 8 MHz channel (-78 dB)
  - Up to 2 Mbps IPerf Throughput @ 4 MHz channel (-100 dB)
- Serial Data/Console Communication Ports
- 10/100 Ethernet Port
- Point-to-Point, Point-to-Multipoint & MANET MESH Networks
- Master, Remote, Relay & MESH Operating Modes
- Adjustable total transmit power (up to 1W)
- FIPS140-2 Compliant Pending
- NDAA Compliant

Up to 21 Mbps

Hexa-Band Frequency

Ethernet & Serial

DFS & Frequency Hopping

PTP | PMP | Relay | MESH

MANET MESH / Advanced MESH

Real Time Spectrum Analyzer



**SWP Expander Board  
& Interface Cable**

### Optimal Performance Specifications

Modulation	8MHZ Channel		4MHZ Channel		Total Tx Power +/- 1dB
	IPerf Throughput (Mbps)	Optimal MRC Sensitivity* (dB)	IPerf Throughput (Mbps)	Optimal MRC Sensitivity* (dB)	
<b>Frequency Band: 1625 - 1725 MHz</b>					
BPSK_1/2	3.1	-96.5	1.57	-100	30dBm
QPSK_1/2	6.0	-95	3.0	-98	30dBm
QPSK_3/4	8.4	-93	4.3	-96	30dBm
16QAM_1/2	10.7	-89	5.4	-92.5	30dBm
16QAM_3/4	14.8	-87	7.4	-90	30dBm
64QAM_2/3	18.1	-82	7.8	-85	30dBm
64QAM_3/4	19.0	-80.5	8.0	-83	30dBm
64QAM_5/6	21.0	-78	10.0	-80.5	30dBm
<b>Frequency Band: 1780 - 1850 MHz</b>					
BPSK_1/2	3.1	-96.5	1.57	-100	30dBm
QPSK_1/2	6.0	-95	3.0	-98	30dBm
QPSK_3/4	8.4	-93	4.3	-96	30dBm
16QAM_1/2	10.7	-89	5.4	-92.5	30dBm
16QAM_3/4	14.8	-87	7.4	-90	30dBm
64QAM_2/3	18.1	-82	7.8	-85	30dBm
64QAM_3/4	19.0	-80.5	8.0	-83	30dBm
64QAM_5/6	21.0	-78	10.0	-80.5	30dBm
<b>Frequency Band: 2020 - 2110 MHz</b>					
BPSK_1/2	3.1	-96.5	1.57	-100	30dBm
QPSK_1/2	6.0	-95	3.0	-98	30dBm
QPSK_3/4	8.4	-93	4.3	-96	30dBm
16QAM_1/2	10.7	-89	5.4	-92.5	30dBm
16QAM_3/4	14.8	-87	7.4	-90	30dBm
64QAM_2/3	18.1	-82	7.8	-85	28dBm
64QAM_3/4	19.0	-80.5	8.0	-83	28dBm
64QAM_5/6	21.0	-78	10.0	-80.5	27dBm
<b>Frequency Band: 2200 - 2300 MHz</b>					
BPSK_1/2	3.1	-96.5	1.57	-100	30dBm
QPSK_1/2	6.0	-95	3.0	-98	30dBm
QPSK_3/4	8.4	-93	4.3	-96	30dBm
16QAM_1/2	10.7	-89	5.4	-92.5	28dBm
16QAM_3/4	14.8	-87	7.4	-90	28dBm
64QAM_2/3	18.1	-82	7.8	-85	28dBm
64QAM_3/4	19.0	-80.5	8.0	-83	28dBm
64QAM_5/6	21.0	-78	10.0	-80.5	27dBm
<b>Frequency Band: 2300 - 2390 MHz</b>					
BPSK_1/2	3.1	-96.5	1.57	-100	30dBm
QPSK_1/2	6.0	-95	3.0	-98	30dBm
QPSK_3/4	8.4	-93	4.3	-96	30dBm
16QAM_1/2	10.7	-89	5.4	-92.5	28dBm
16QAM_3/4	14.8	-87	7.4	-90	28dBm
64QAM_2/3	18.1	-82	7.8	-85	28dBm
64QAM_3/4	19.0	-80.5	8.0	-83	28dBm
64QAM_5/6	21.0	-78	10.0	-80.5	27dBm
<b>Frequency Band: 2400 - 2500 MHz</b>					
BPSK_1/2	3.1	-96.5	1.57	-100	30dBm
QPSK_1/2	6.0	-95	3.0	-98	30dBm
QPSK_3/4	8.4	-93	4.3	-96	30dBm
16QAM_1/2	10.7	-89	5.4	-92.5	28dBm
16QAM_3/4	14.8	-87	7.4	-90	28dBm
64QAM_2/3	18.1	-82	7.8	-85	28dBm
64QAM_3/4	19.0	-80.5	8.0	-83	28dBm
64QAM_5/6	21.0	-78	10.0	-80.5	27dBm

\*RX Sensitivity +/- 1.5 dB. Bands starting at 2280 MHz and higher, subtract 1.5~3 dB.

# fDDL1624-SWP Specifications



<b>Frequency (Software Selectable)</b>	1625 to 1725 MHz 1780 to 1850 MHz 2020 to 2110 MHz 2200 to 2300 MHz 2300 to 2390 MHz 2400 to 2500 MHz
<b>Error Detection</b>	32 bits of CRC, ARQ
<b>Encryption (Requires Export Permit)</b>	256-bit AES
<b>Ports</b> Serial Data/Console Ethernet USB	RS232 (300bps to 921kbps) 10/100 IEEE802.3 2.0
<b>Firewall</b>	Port Forwarding, Access Control, IP/MAC List.
<b>Operating Modes</b>	Point-to-Point, Point-to-Multipoint, Repeater, MANET Mesh
<b>Diagnostics</b>	Remote Diagnostics, Ping, Traceroute, ARP table, DHCP active leases, IPPerf, RSSI
<b>Management</b>	Local Serial Port Console, Telnet, WebUI, SNMP, FTP Upgrade, TFTP, AT Command Interface
<b>Rejection</b>	Excellent strong signal interference & rejection characteristics
<b>Input Voltage</b>	9-30 V <sub>DC</sub>
<b>Mating Connector</b>	Power, Data: 10-Pin (GHR-10V-S) Antenna: MMCX
<b>Environmental</b> Temperature Humidity	-40°F to 185°F (-40°C to +85°C) 5-95%, non-condensing

<b>Weight</b>	~32 grams
<b>Dimensions</b>	~30 x 40 x 18 mm
<b>Approvals/Compliance</b>	NDAA Compliant FIPS140-2 Compliant Pending

## Order Options

Model	Part Number	Description
fDDL1624-SWP	MHK185360	fDDL1624 FEMTO Hexa-Band ENC Digital Data Link

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