

## DIGITAL MICROWAVE LINK DMWL 1000



### MAIN CHARACTERISTICS

- Up to 2Gbps aggregate capacity.
- Available modulation schemes: QPSK/16QAM/32QAM/64QAM/128QAM/256QAM/512QAM/1024QAM.
- Available channel bandwidth: ETSI standards 7/14/28/40/56/80/112MHz; ANSI standards 10/20/25/30/40/50/60/80/120MHz.
- Up to 1Gbps throughput over a single channel at 1024QAM.
- Integrated XPIC mechanism.
- Customer network data interface: 3 x RJ Gigabit Ethernet (100/1000 base-T), 4 x SFP (1000 base SX/LX).
- Two USB ports for connecting USB-flash disk or PC.
- "In-band"/"out-of-band" management.
- Support of RADIUS server authentication for users remote access.
- FEC: Forward Error Correction with RS coding.
- Hitless and errorless adaptive coding & modulation (ACM) with dynamic capacity allocation and priority data transmission (PBPS: packet based priority system).
- Online Ethernet packet compression with reduced length of frames allowing throughput efficiency increase up to 25%.
- NAT, PROXY ARP support for effective IP management setup.
- Large range of system and Ethernet counters.
- Adaptive power control ATCP.
- Built in network management system (NMS): http, https, SNMP v1/2/3, TELNET, SSH.
- Built in bit error rate (BER) tester and built in spectrum analyzer.
- Integrated synchronization solution optional.
- AES-128/256 encryption for data confidentiality optional.

## SYSTEM ADVANTAGES

- Point to point fixed and mobile links carrying data, voice and HD video.
- Telco and broadcasting transport networks.
- Enterprise and private MW networks: OIL&GAS – WISP – UTILITIES – HEALTHCARE – DISASTER RECOVERY.
- High capacity backhaul and backbone critical communications infrastructures.
- Ultra high speed MW links.

## SYSTEM PARAMETERS

FREQUENCY	4GHz	5GHz	6GHz	7/8GHz	10GHz	11GH	13GHz
<b>WORKING FREQUENCY (GHz)</b>	3.6-4.2	4.4-5	5.9-7.1	7.1-8.5	10-10.7	10.7-11.7	12.75-13.25
<b>TX POWER (dBm)</b>	SP/HP	SP/HP	SP/HP	SP/HP	SP/HP	SP/HP	SP/HP
<b>QPSK</b>	+27/+32	+27/+32	+27/+32	+27/+32	+26/+31	+26/+31	+26/+31
<b>16, 32, 64QAM</b>	+24/+29	+24/+29	+24/+29	+24/+29	+23/+28	+23/+28	+23/+28
<b>128QAM</b>	+22/+27	+22/+27	+22/+27	+22/+27	+21/+26	+21/+26	+21/+26
<b>256QAM</b>	+20/+25	+20/+25	+20/+25	+20/+25	+19/+24	+19/+24	+19/+24
<b>512QAM</b>	+19/+24	+19/+24	+19/+24	+19/+24	+18/+23	+18/+23	+18/+23
<b>1024QAM</b>	+18/+23	+18/+23	+18/+23	+18/+23	+17/+22	+17/+22	+17/+22
<b>RX SENSITIVITY (dBm) 10<sup>-6</sup>BER</b>							
<b>QPSK (28/56MHz)</b>	-88/-85	-88/-85	-88/-85	-88/-85	-88/-85	-88/-85	-88/-85
<b>32QAM (28/56MHz)</b>	-78/-74	-78/-74	-78/-74	-78/-74	-78/-74	-78/-74	-78/-74
<b>128QAM (28/56MHz)</b>	-70/-66	-70/-66	-70/-66	-70/-66	-70/-66	-70/-66	-70/-66
<b>256QAM (28/56MHz)</b>	-67/-63	-67/-63	-67/-63	-67/-63	-67/-63	-67/-63	-67/-63
<b>512QAM (28/56MHz)</b>	-64/-60	-64/-60	-64/-60	-64/-60	-64/-60	-64/-60	-64/-60
<b>1024QAM (28/56MHz)</b>	-61/-57	-61/-57	-61/-57	-61/-57	-61/-57	-61/-57	-61/-57
<b>ANTENNA PORT INTERFACE</b>	N	N	UDR70	UDR84	UBR100	UBR100	CIRC WG

  

FREQUENCY	15GHz	17GHz UL	18GHz	23GHz	24GHz UL	26GHz	38GHz
<b>WORKING FREQUENCY (GHz)</b>	14.4-15.35	17.1-17.3	17.7-19.7	21.2-23.6	24-24.25	24.55-26.45	37-39.5
<b>TX POWER (dBm)</b>	SP	SP	SP	SP	SP	SP	SP
<b>QPSK</b>	+25	+13	+23	+22	+10	+25	+18
<b>16, 32, 64QAM</b>	+22	+10	+20	+19	+7	+22	+15
<b>128QAM</b>	+20	+8	+18	+17	+5	+20	+13
<b>256QAM</b>	+18	+6	+16	+15	+3	+18	+11
<b>512QAM</b>	+17	+5	+15	+14	+2	+17	+10
<b>1024QAM</b>	+16	+4	+14	+13	+1	+16	+9
<b>RX SENSITIVITY (dBm) 10<sup>-6</sup>BER</b>							
<b>QPSK (28/56MHz)</b>	-88/-85	-87/-84	-87/-84	-87/-84	-87/-84	-87/-84	-86/-83
<b>32QAM (28/56MHz)</b>	-78/-74	-77/-73	-77/-73	-77/-73	-77/-73	-77/-73	-76/-72
<b>128QAM (28/56MHz)</b>	-70/-66	-69/-66	-69/-66	-69/-66	-69/-66	-69/-66	-68/-65
<b>256QAM (28/56MHz)</b>	-67/-63	-64/-61	-64/-61	-64/-61	-64/-61	-64/-61	-63/-60
<b>512QAM (28/56MHz)</b>	-64/-60	-61/-57	-61/-57	-61/-57	-61/-57	-61/-57	-60/-56
<b>1024QAM (28/56MHz)</b>	-61/-57	-58/-54	-58/-54	-58/-54	-58/-54	-58/-54	-57/-53
<b>ANTENNA PORT INTERFACE</b>	CIRCULAR WB						
<b>STANDARD COMPLIANCE</b>	RADIO ETSI EN 302 217, EN 301 216, EN 301 128, EN 300 198 POWER SUPPLY ETSI EN 300 132-2 EMC/SAFETY ETSI EN 301 489/IEC EN 60950						

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## NETWORK MANAGEMENT

<b>SUPPORT</b>	SNMP, WEB based GUI, TELNET, ASCII console
<b>LOCAL ACCESS</b>	Ethernet 10/100 base-T/RJ-45, RS232, USB-A, USB-B
<b>OUT OF BAND MANAGEMENT</b>	115Mbps
<b>IN BAND MANAGEMENT</b>	Via LAN
<b>IP ADDRESSES</b>	Primary and secondary
<b>IP OPTION</b>	NAT, Proxy ARP
<b>IP UTILITIES</b>	Ping, TELNET

## MECHANICAL CHARACTERISTICS

<b>WEIGHT</b>	IDU: 2Kg ODU: 6Kg
<b>WORKING TEMPERATURE</b>	IDU: -5 to +45°C ODU: -33 to +45°C
<b>ALTITUDE</b>	Up to 4.500 metres
<b>HUMIDITY</b>	IDU: 95% with condensation ODU: 100%

*\* The images and/or technical specifications are subject to change without previous notice.*

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