

HORIZON DUO

Multi-Channel High Capacity Wireless Ethernet System



Frequencies

11 GHz	FCC/IC/ETSI/ITU
13 GHz	ETSI/AUS/NZ/ITU
15 GHz	IC/ETSI/AUS/NZ/MX/ITU
18 GHz	FCC/IC /ETSI/AUS/NZ/ITU
23 GHz	FCC/IC/ETSI/AUS/NZ/ITU/MX
24 GHz UL	FCC/IC/ETSI
24 GHz DEMS	FCC/IC
26 GHz	ETSI
28 GHz	FCC/ETSI
38 GHz	FCC/ETSI/AUS/NZ/MX

Power

Input	-36 VDC to -60 VDC or +18 VDC to +36 VDC (Optional)
Optional Adapter	110/240 VAC
Consumption	
Single Channel, SP	75 W
Dual Channel, SP	95W
Single Channel, HP	102W
Dual Channel, HP	122W

Note: above power consumption estimates do not include integrated TDM modules

Payloads

Capacity	Variable from 10 to 900 Mbps full duplex CIR (Min Packet); 10 to 770 Mbps (@ average Packet) 2x capacity up to 1.8 Gbps with DPRM
Interface	1000/100/10 BaseT or Optical GigE
Optional Interface modules	16xT1/E1+ 4 x wire-Fast/GigE + 2 x optical- FastE/GigE, 2xDS3, OC3/STM1
Latency 100 BT	< 400µs, Typical < 200µs FastE
Latency GigE	< 200µs, Typical 120µs GigE
Packet Size	64 to 9600 Bytes
Flow Control	Yes (GigE mode only)
802.1p	Yes – 8 levels served by 4 queues
802.1q	Yes
Modulation Shifting	Yes

Connections IDU

Power	Dual 24V or Dual 48V
Payload (+ Inband NMS)	RJ45 (1000/100 BaseT) or SFP with LC optical connector
Craft Terminal	RS 232
IF Cable	N-Type Connector (1 or 2)
NMS (when out-of-band)	RJ45 (10 BaseT)
TDM (Optional)	(16XE1/T1, DS3, OC3/STM-1)

Network Management (NMS)

Management Access	In or out of band
Alarm Management	SNMP Traps, Enterprise MIB
NMS Compatibility	Any SNMP based network manager SNMP v1, v2c and v3
Security	3 Level Authentication
EMS	Web Based Management System, SSL HTTP,SSH, Radius

Mechanical

Modem (IDU)	4.3 cm x 30.5 cm x 43.8 cm; 5.6 kg 1.7 in x 12 in x 16.7 in; 12.3 lbs
Radio (without antenna)	12 cm x 19 cm (diameter); 3.2 kg 4.7 in x 7.5 in (diameter); 7 lbs
Antenna Wind Loading	110 kph (70 mph) Operational 200 kph (125 mph) Survival
Antenna Mount Adjustment	+/- 45° Az; +/- 22° El

Environmental

Radio Operating Temperature	
High Power + Standard Power	-40°C to +45°C (-40°F to +113° F)
Standard Power + Solar Shield	-40°C to +60°C (-40°F to +140° F)
IDU Operating Temperature	0°C to +50°C (0°F to +122° F)
ODU Humidity	100 % Condensing
IDU Humidity	95% Non-Condensing
Altitude	4500 m (14,760 ft)
NEB-3 Compliant	Yes

Channel Bandwidth	Modulation Schemes	RX Sensitivity	Single Modem		Dual Modem	
			Throughput	TX Power	Throughput	TX Power
56 MHz	QPSK / 32QAM / 256QAM	-80/-70/-59	65/216/385	27/21/19.5	130/432/770	23/17/15.5
50 MHz	QPSK / 64QAM / 256QAM	-81/-68/-59	67/215/371	27/22.5/19.5	134/430/742	23/18.5/15.5
40 MHz	QPSK / 64QAM / 256QAM	-81/-69/-60	57/181/277	27/20.5/19.5	114/362/554	23/16.5/15.5
30 MHz	32QAM / 128QAM / 256QAM	-75/-65/-62	107/165/212	23/20/19.5	214/330/424	19/16/15.5
28 MHz	QPSK / 32QAM / 256QAM	-84/-75/-64	48/100/190	23.5/21/19.5	96/200/380	19.5/17/15.5
14 MHz	QPSK / 32QAM / 256QAM	-87/-80/-68	23/47/95	23.5/23/19.5	46/94/190	19.5/19/15.5
7 MHz	QPSK / 64QAM / 128QAM	-88/-78-74	11/33/39	27/20.5/20	22/66/78	23/16.5/16

Note: Not all Horizon DUO modes shown in the above table:
 - DUO supports: 7, 10, 13.75, 14, 27.5, 28, 30, 40, 50, 55 & 56 MHz channels
 - DUO supports: QPSK; 16, 32, 64, 128 & 256 QAM modes
 - SP available in 18 & 23 GHz: Subtract 10 dB to Tx power

Connect with us today!

600-411 Legget Drive
 Ottawa, Ontario, Canada, K2K 3C9
 Tel: 613-599-9991 | Fax: 613-599-4225
nasales@dragonwaveinc.com
 March 2008 V1.2

www.dragonwaveinc.com

