



HORIZON COMPACT

HIGH CAPACITY PACKET MICROWAVE SYSTEM

GET THE HIGH PERFORMANCE TO SUPPORT NEXT-GENERATION NETWORK APPLICATIONS AND SERVICES IN THIS SIMPLE TO DEPLOY AND OPERATE ALL-OUTDOOR SYSTEM.

Horizon Compact is a high-capacity, packet microwave system with improved efficiency and simplified operations. Because the radio and modem are integrated into a single outdoor unit, Horizon Compact is a zero footprint solution – eliminating rack congestion and minimizing collocation space.

Horizon Compact's 800 Mbps capacity per link, Hitless Automatic Adaptive Modulation, and ring/mesh support mean maximum performance and throughput. Add simple installation and operation, as well as sophisticated remote management and troubleshooting, and you gain significant lifecycle cost savings.

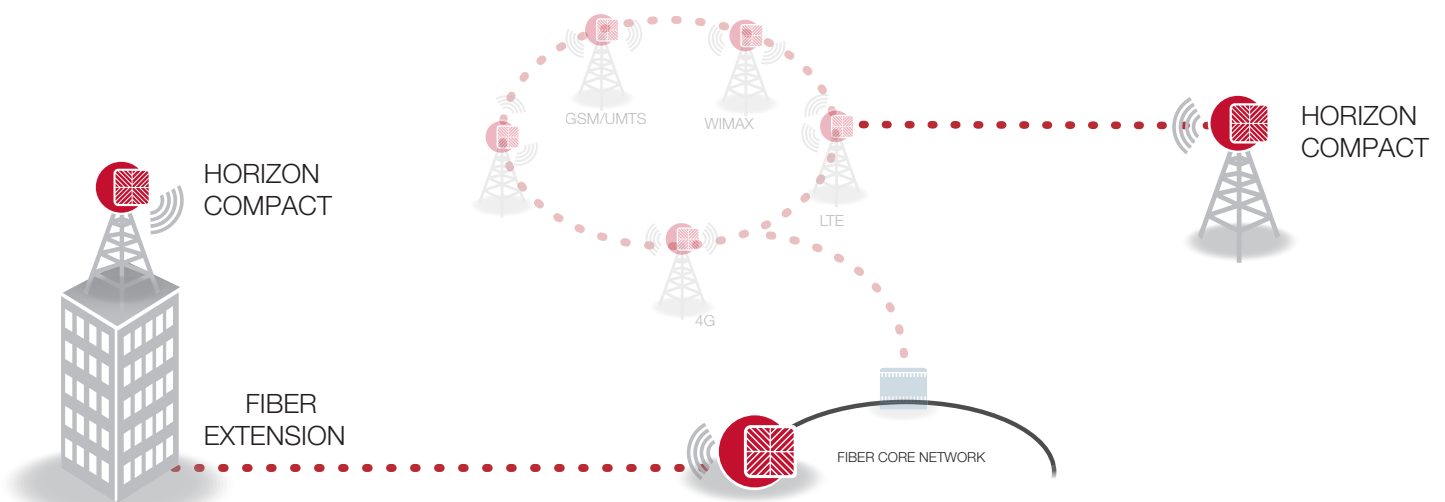
This highly integrated, carrier-grade packet microwave solution operates in licensed or unlicensed spectrum from 6 to 38 GHz.

SOLUTION HIGHLIGHTS

- Zero footprint, fully integrated all-outdoor unit
- 400 Mbps per radio, 800 Mbps with dual radio mount
- Service aware Hitless Automatic Adaptive Modulation (HAAM)
- Pay-as-you-grow with automatic remote scalability
- Comprehensive Ethernet OAM support (802.3ah, 802.1ag, Y.1731)
- Advanced QoS support with multiple levels of prioritization
- Comprehensive management and provisioning with DragonVision NMS
- Lowest total cost of ownership solution
- 6 to 38 GHz frequency support

KEY APPLICATIONS

- Mobile Backhaul
- Leased Line Replacement
- Last Mile Fiber Extension
- Private and Enterprise Networks



FREQUENCIES

6 GHz	FCC/IC/ETSI/ITU
7 GHz	ETSI/ITU/MX
8 GHz	ETSI/ITU
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
32 GHz	ETSI
38 GHz	FCC/ETSI/AUS/NZ/MX

POWER

Input	-40.5 VDC to -56 VDC
Optional Adapter	110/240 VAC
Consumption	25 Watts (per link end) 54 Watts High Power (per link end)

MECHANICAL

Radio/Modem (without antenna)	12 cm x 23.6 cm x 23.6 cm; 5.2 kg 4.75 in x 9.3 in x 9.3 in; 11.5 lbs
Power Adapter	15 cm x 7 cm x 3.5 cm 5.91 in x 2.76 in x 1.38 in
Antenna Wind Loading	112 kph (70 mph) Operational, 200 kph (125 mph) Survival
Antenna Mount Adjustment	+/- 45° Azimuth; +/- 22° Elevation

CONNECTIONS

Power	-48V, Power on Ethernet
Payload (+ Inband NMS)	RJ45 or optical LC
NMS (when out-of-band)	RJ45
CTL Port	RJ45 (RS232)

NETWORK MANAGEMENT (NMS)

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, SSL HTTP, SSH, Radius, Telnet

ENVIRONMENTAL

Operating Temperature STD Pwr With heat shield	-40°C to + 50°C (-40°F to +122° F) -40°C to + 60°C (-40°F to +140° F)
Humidity	100 % Condensing
Altitude	4500 m (14,760 ft)
Water Tightness	Nema4X, IP56 (directed hose test)
Operational Shock	ETSI 300-019-1-4; 5g 11ms
Operational Vibration	ETSI 300-019-1-4 Class 4m5, NEBS GR-63
Earthquake	NEBS GR-63



HORIZON COMPACT+

ALL-OUTDOOR HIGH CAPACITY PACKET MICROWAVE

SERVICE PROVIDERS CAN NOW DO MORE OUTDOORS WITH THE ZERO FOOTPRINT HORIZON COMPACT+ FROM DRAGONWAVE.

This high capacity packet microwave system delivers big performance in a small package. Because the radio and modem are integrated into a single highly compact outdoor unit, Horizon Compact+ is a zero footprint solution – eliminating rack congestion and minimizing collocation space. Equipped with DragonWave’s Bandwidth Accelerator technology, the Horizon Compact+ achieves the highest degree of spectral efficiency, delivering more capacity per channel than any other all-outdoor microwave system.

With unmatched radio performance, simple installation and operation, as well as sophisticated remote management capability, the Horizon Compact+ delivers significant lifecycle cost savings for service providers and enterprises alike.

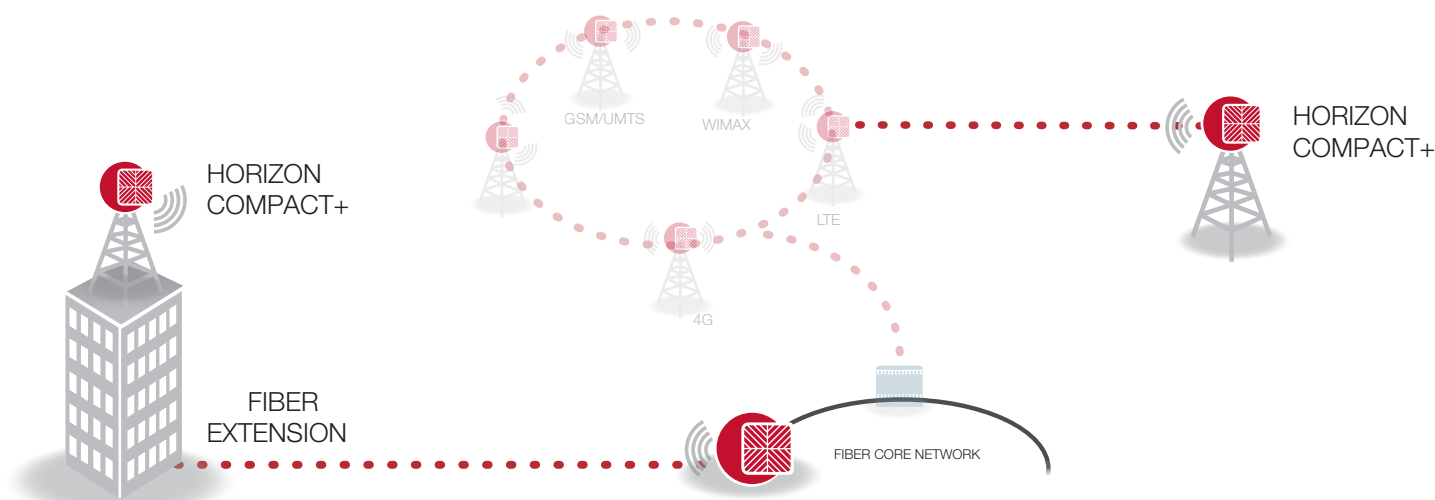
This innovative, carrier-grade packet microwave solution operates in licensed or unlicensed spectrum from 6 to 60 GHz.

SOLUTION HIGHLIGHTS

- Zero footprint, fully integrated all-outdoor unit
- 1 to 2 Gbps capacity with DragonWave’s Bandwidth Accelerator
- Up to 2048QAM modulation support
- Service aware Hitless Automatic Adaptive Modulation (HAAM)
- SyncE support and optimized transport of 1588v2
- Pay-as-you-grow with automatic remote scalability
- Advanced security with integrated 256-bit AES encryption
- Comprehensive Ethernet OAM support (802.3ah, 802.1ag, Y.1731)
- Advanced QoS support with 8 levels of prioritization
- Comprehensive management and provisioning with DragonVision NMS
- Lowest total cost of ownership solution

KEY APPLICATIONS

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28 GHz	FCC/ETSI
32 GHz	ETSI
38 GHz	FCC/ETSI/AUS/NZ/MX
60 GHz	UNLICENSED

FEATURES

Capacity w/Accelerator	Variable from 10 to 1000 Mbps full duplex CIR 2x capacity up to 2 Gbps with Dual Pole Radio Mount (DPRM)
Base Capacity	Variable from 10 to 500 Mbps full duplex CIR 2x capacity up to 1000 Mbps with DPRM
Interface	Software selectable: 2xGE or 4 x10/100bT or 1xGE + 2x10/100bT
Latency GigE	120µs @ 256QAM, 50 MHz
Packet Size	64 to 9600 Bytes
Flow Control	Yes
Prioritization	8 levels served by 8 hardware queues, based on 802.1p/q, MPLS, DSCP ToS Bits
Modulations	QPSK to 2048QAM
Modulation Shifting	Yes, Hitless
Loopback	Yes, Radio loopback
Synchronization	Synchronous Ethernet ready
Encryption	Integrated 256-bit AES encryption

POWER

Input	-40.5 VDC to -56 VDC or +40.5 VDC to +56 VDC	
Optional Adapter	110/240 VAC	
Consumption*	6 GHz	55W
	7/8 GHz	80W
	13/15 GHz	47W
	18 GHz	49W
	23 GHz	48W
38 GHz	43W	
*Measured at the radio with 30M of CAT5E cable and 48V input to PoE.		

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