



DRAGONWAVE HORIZON

NEXT GENERATION MASSIVE CAPACITY
PACKET MICROWAVE

TAKE BACKHAUL TO A NEW LEVEL

WIRELESS NETWORKS ARE UNDER PRESSURE TO EVOLVE AS QUICKLY AS THE BANDWIDTH INTENSIVE APPLICATIONS THEY MUST SUPPORT. SATISFY RAPIDLY INCREASING CAPACITY NEEDS IN A SIMPLE, COST EFFECTIVE AND TIMELY FASHION. TRANSFORM YOUR NETWORK WITH HORIZON® PACKET MICROWAVE SOLUTIONS FROM DRAGONWAVE®.

Horizon packet microwave solutions take wireless backhaul to a new level, offering the capacity, spectral efficiency, reliability and operational simplicity demanded by tomorrow's wireless networks.



**BACKHAUL
EVOLVED**

- Massive capacity – up to 4 Gbps per link with DragonWave's Bandwidth Accelerator
- Ultra-high spectral efficiency
- Intelligent nodal ring and mesh switching
- Zero footprint, all-outdoor options
- Optimized for 4G networks
- Automatic remote scaling to multi-gigabit speeds with DragonWave's Flex bandwidth
- Advanced radio features including XPIC and hitless Automatic Adaptive Modulation
- Pseudowire capability integrates Ethernet and TDM over a single packet-based network
- Network synchronization with SynchE and 1588v2
- Advanced security and encryption

PRODUCT PORTFOLIO

HORIZON COMPACT

Zero Footprint



Get the high performance to support next-generation network applications and services, without the hefty price tag. 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, hitless Automatic Adaptive Modulation (AAM), and ring/mesh support mean maximum performance and throughput. Add in 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.

HORIZON QUANTUM

Massive Capacity
in a Small Package



With up to 4 Gbps per link, Horizon Quantum delivers the next generation in packet microwave technology. Quantum is a step change in capacity, nodal intelligence, spectral efficiency and operational simplicity; all while occupying only half a rack unit and consuming the lowest power per bit of any solution today. As a result, operators can stay thin in the air and in the rack as they launch new IP-based services. Ultra-low latency, hitless AAM and support for SynchE and XPIC mean that Quantum is optimized for tomorrow's high capacity networks. With 8 GigE ports and integrated Ethernet switching, Horizon Quantum can provide aggregation and restoration in a single unit. As the next evolution of DragonWave's split-mount radio, Quantum offers a seamless upgrade path for existing Duo and AirPair deployments.

PSEUDOWIRE SERVICE DELIVERY UNIT

Converge Your Network



DragonWave's Service Delivery Unit (SDU) is a convenient, compact solution for merging high-capacity TDM and Carrier Ethernet transport over a single packet-based network. It combines 6 switched GbE ports and Pseudowire functionality into a single box, while occupying only one third of a rack unit. Available in a 16-port T1/E1 version, and an OC3/STM1 version, the SDU can be cascaded to provide additional ports. This solution offers true clock fidelity, meeting the most stringent network synchronization requirements. DragonWave's SDU-16 & SDU-155 products offer standards-compliant TDM delivery over Ethernet, enabling simple evolution to IP networks.

THE HORIZON ADVANTAGE



Unparalleled Capacity

- DragonWave's Bandwidth Accelerator drives up to 4 Gbps full duplex capacity
- Highest capacity XPIC
- Maximum throughput at the lowest cost per bit

Flexible Deployment

- Available in full indoor, full outdoor or split-mount implementations
- Licensed and unlicensed deployment options from 6 to 38 GHz
- Horizon Quantum occupies only half a rack unit of space

Spectral Efficiency

- 2.5x spectral efficiency improvement
- 7 to 56 MHz channel size options
- XPIC enables channel reuse

Extended Reach

- Hitless Automatic Adaptive Modulation for longer link spans, smaller antennas and fewer sites
- Provides up to 98 dB system gain in standard power configuration or 111 dB in high power configuration, enabling link lengths beyond 50 km (30 mi)

Eco-Friendly

- Zero footprint
- No trenching or traffic disruption required
- Lowest power consumption per bit

Advanced Security

- Narrow beamwidth, directional point-to-point communications
- Bit-level data stream with Horizon synchronization and framing
- Horizon authentication
- Proven interoperability with 3rd party 256-bit AES encryption
- Leading network management security

Network Intelligence and Protection

- Intelligent nodal switching for simplified operation
- Advanced ring and mesh configurations with 50 ms switching enables carrier class availability and services
- Active use of both working and protection channels eliminates wasted capacity
- Offers 1+0, 1+1, space diverse, and frequency diverse options
- Integrated bandwidth management features include advanced prioritization and flow control
- Plug-and-play integration between Horizon Compact and Quantum

Converged IP and TDM

- Pseudowire allows for true network convergence—no need to manage TDM connections at intermediate network points
- Integrated bandwidth management
- Simplified operations and management
- Full support for Synchronous Ethernet (SynchE)

DRAGONWAVE SOLUTION

WiMAX Backhaul

DragonWave offers a high-capacity, carrier-grade, integrated packet solution perfectly suited to WiMAX Ethernet services. DragonWave Horizon products enable rapid network expansion using either licensed or unlicensed spectrum, and deliver remote scalability from 10 Mbps up to 4 Gbps per link. Horizon is ideally suited for greenfield deployments, offering zero footprint options and minimized antenna size through hitless Automatic Adaptive Modulation (AAM).

LTE-Optimized Backhaul

LTE networks demand much greater backhaul capacity than most existing deployments can provide. Operators also want a fully packet-based architecture, Synchronous Ethernet and ultra-low latency. Engineered for the requirements of tomorrow's networks, DragonWave's Horizon solutions respond to the needs of LTE service providers with sub 0.1 ms latency, native Ethernet, wire speeds up to 4 Gbps and convergence of existing TDM traffic. The Horizon product line offers intelligent networking with integrated switching, hitless AAM, and integrated prioritization.

Leased Line Replacement

For many businesses, the only option for last mile access is an aging copper infrastructure with long MTTR. Horizon can replace leased services and eliminate expensive, recurring telecom costs. At the same time, businesses can improve availability and scale their capacity for new services over an IP network.

Last Mile Fiber Extension

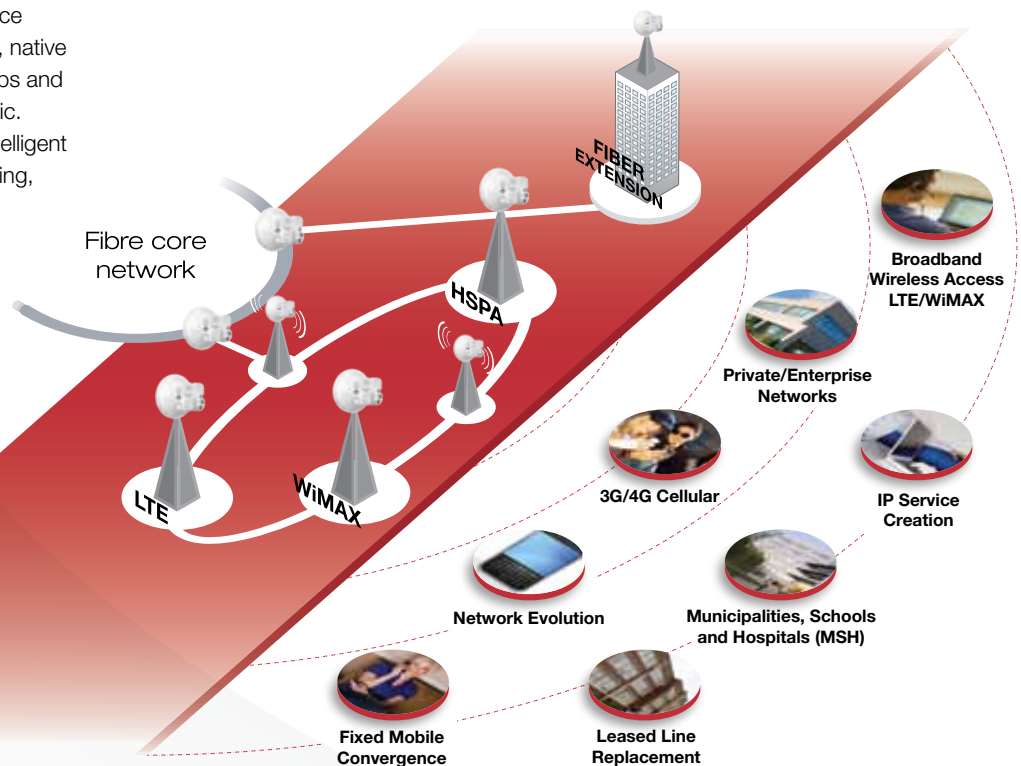
Horizon delivers a superior method of rapidly extending high-speed IP services from locations already in the service provider's network. DragonWave products are ideal for network hardening and disaster recovery, as well as applications that require both legacy TDM services and carrier-grade, high-capacity native Ethernet.

Private and Enterprise Networks

Municipalities, healthcare facilities, schools, government institutions and other organizations can build carrier-grade private networks, achieving payback within the first year. DragonWave's Horizon software-scalable GigE wireless mesh connectivity means no capacity constraints, and because it is licensed, there is no interference.

Network Evolution

Enable your existing network to carry emerging IP applications and services. DragonWave's converged IP backbone offers a simple solution for evolving to an IP-optimized network while seamlessly carrying legacy TDM services.





Connect with us today!

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