

Powering the NexGen of All-Terrain Broadband Solutions

RAPTOR^{XR}

Extended Range

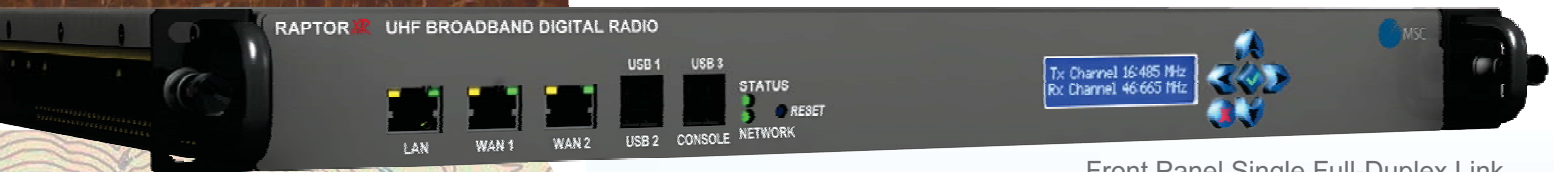
HIGH-SPEED VHF/UHF
PEER-TO-PEER & MESH
WHITE SPACE RADIO

APPLICATIONS

- Cellular and WISP Backhaul
- Remote Industrial and business links
- Emergency Networks
- Agribusiness and energy infrastructure
- Secure and reliable utility Infrastructure and Backhaul
- In-building, Tunnel, Mining, Connectivity
- Public safety trunking backhaul

The Raptor^{XR} broadband white space radio system outperforms WiMAX, cellular, and microwave systems both indoors and outdoors using locally available unlicensed TV channels (7-51).

A Raptor^{XR} VHF/UHF white space broadband infrastructure solution delivers superior range, coverage, and reliability unattainable using microwave-based WiMAX, WiFi, and cellular systems.



Front Panel Single Full-Duplex Link
(VHF or UHF)

MAJOR CAPABILITIES

- Up to 30+ Mbps full-duplex links
- Highest legally authorized VHF and UHF EIRP output power
- Choice of VHF or UHF operating bands for extended range, coverage, and NLOS Penetration
- Robust suite of physical security and data encryption services
- End-to-end redundancy and fault tolerant configurations
- Scalable: point-to-point and Multi-point mesh solutions



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Raptor^{XR}
Domestic Version
170606
MADE IN USA

RAPTOR XR[®]

Extended Range

HIGH-SPEED VHF/UHF
PEER-TO-PEER & MESH
WHITE SPACE RADIO



Raptor XR Standard
Single Link Configuration



VHF and UHF front panels are identical

TECHNICAL SPECIFICATIONS

GENERAL

Standard Frequency Range

VHF High-Band (Chs 7–13) 174–216 MHz

UHF (Chs 14–51) 470–698 MHz

PHYSICAL

Weight 6.0 lbs (2.72 kg)

Dimensions 14 in. D x 19 in. W x 1.75 in. H
(355.6 mm x 482.6 mm x 44.45 mm)

Operating temperature Standard: -10° to +65°C

RECEIVER/TRANSMITTER MINIMUM SPECIFICATIONS

Modulation Modes and payload data rates	Minimum Rx Signal Level (dBm)	Minimum Rx Required SNR (dB)	Full-Duplex Link Rate (Mbps)
QPSK (4 QAM)	-90	10	12
16 QAM	-85	12	25
64 QAM	-80	18	31
Adjacent channel rejection (6 MHz channel VHF/UHF)	> 50 dB (6 MHz off-channel)		
Image rejection	> 70 dB		
Average conductive RF power output per VHF/UHF 6 MHz channel	28.4 dBm		

POWER

AC Input: 110/240 VAC 50/60 Hz

Power consumption 60 Watts

SECURITY

Encryption (optional) 128/256-bit Advanced Encryption Standard (AES)

Authorization and Accounting Protects against unauthorized administration/maintenance and over-the-air access

System access/authentication capabilities Multi-factor authentication. Remote access token-based authentication

System access/authentication capabilities Integrated firewall and Information Assurance tools

NETWORK ARCHITECTURE

VLAN Supports multiple VLANs; static and dynamic

Firewall Robust rule support and encrypted download

Dynamic ad hoc network Adaptive, self-forming, self-healing network

Network size Limited only by available RF channels

Network capabilities/single channel Point-to-point, point-to-multipoint, mesh

Maintenance/diagnostics Over-the-air programming, integrated web-based administration, monitoring, and reconfiguration

System logs System. security, authentication, information flow, traffic monitoring, and intrusion detection

Network timing Multiple network timing protocol options (NTP)

STANDARD ANTENNA INTERFACES

VHF External duplexer required

UHF Internal duplexer

FREQUENCY STABILITY

Internal (standard) ±2.5 ppm, ±25 Hz

SUPPORT ACCESSORIES

Antennas Directional, omni or sector

The Raptor XR White Space Advantage

- Unlicensed use of valuable prime VHF and UHF spectrum
- Excellent connectivity in mid-range of terrains and environments
- Plenty of channels in suburban, rural, and wilderness areas
- Lowest cost, highest value, all-terrain, broadband solution
- Carrier-grade, high-reliability, indoor and outdoor, revenue solution
- Ideal for streaming, over-the-top, video applications



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