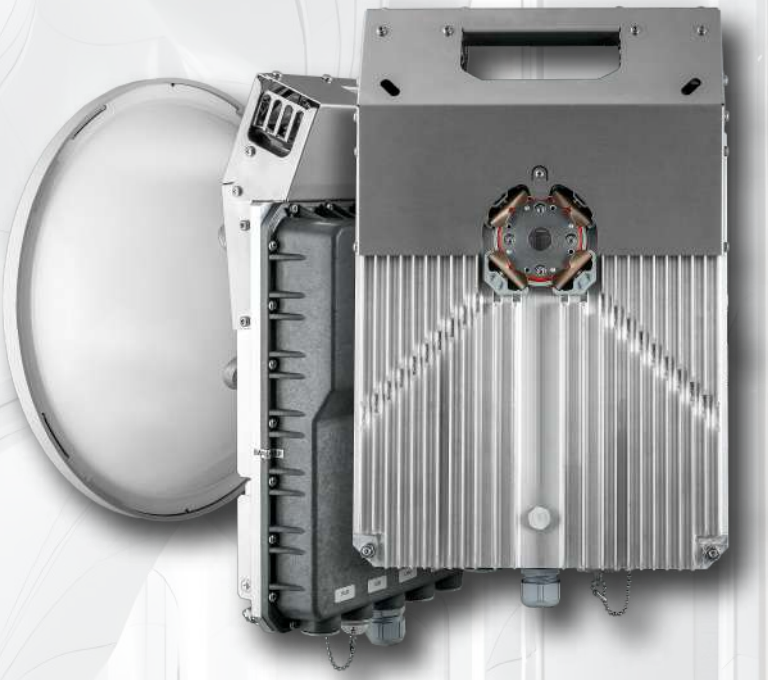
SAQR7100

Dual Transceiver XPIC-Capable Full Outdoor Microwave Radio

The SAQR7100 is a high-performance, dual-transceiver full-outdoor microwave radio built for modern backhaul networks. Designed for ultra-reliable, high-capacity links, it delivers up to 2.2 Gbps per direction and integrates dual XPIC chains into a single compact unit, simplifying deployment while maintaining robust performance.

Operating across licensed bands from 4U to 38 GHz, the SAQR7100 supports channel bandwidths up to 112 MHz, adaptive modulation up to 4096QAM, and AES-256 encryption compliant with FIPS 197. Its embedded Carrier Ethernet switch, 10 Gbps interfaces, and advanced synchronization and QoS features make it ideal for demanding use cases.

Engineered for reliability and flexibility, the SAQR7100 excels in harsh environments and complex topologies, making it a trusted choice for critical wireless infrastructure.



Key Features

• High Capacity: Up to 2.2 Gbps per direction (uncompressed), supporting even the most demanding backhaul applications.

• Dual Integrated Transceivers: Combines two fully independent RF chains with XPIC support in a single compact unit.

• Wide Channel Bandwidth: Operates with channel widths up to 112 MHz for enhanced throughput.

• Flexible Modulation: Supports adaptive modulation from 4QAM to 4096QAM, with automatic fallback.

• Advanced Performance: Integrated Adaptive Digital Pre-Distortion (ADPD) for high linearity and spectral efficiency.

• Single Antenna Interface: Integrated Orthomode Transducer (OMT) for dual carrier operation via a single antenna.

Key Highlights

- Dual transceiver XPIC-capable full-outdoor unit
- Up to 2.2 Gbps per direction, uncompressed
- Channel bandwidths up to 112 MHz
- Adaptive modulation from 4QAM to 4096QAM
- Built-in Orthomode Transducer (OMT)
- Integrated Adaptive Digital Pre-Distortion (ADPD)
- 10 Gbps SFP+ Ethernet interfaces
- Carrier Ethernet switch with 50 Gbps switching capacity
- AES-256 traffic encryption (FIPS 197 certified)
- Compatible with 4U to 38 GHz frequency bands
- Low latency: 90 µs at max throughput
- Full XPIC, 1+0, 2+0, 1+1 SD
- Built-in PoE and surge protection
- Industrial-grade design (IP66 / NEMA 4X)

Product specifications are subject to change without prior notice.
For more information, visit www.lamatel.ca or send an email to sales@lamatel.com

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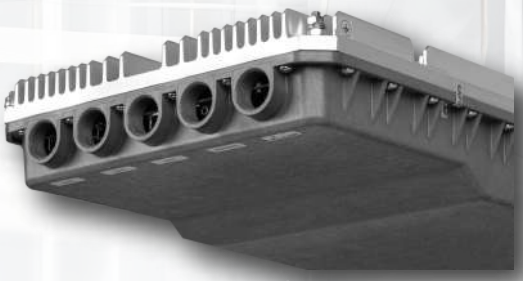
Specifications

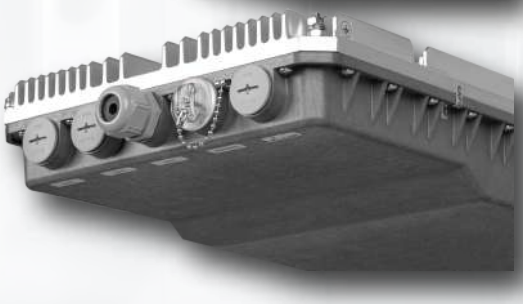
Specifications	
Concept / Form Factor	FODU with direct-mount antenna
Frequency Band	4U, 5, 6, 7, 8, 11, 13, 15, 18, 23, 26, 28, 30, and 38 GHz
Duplex Spacing	Any applicable
Frequency Stability	±10 ppm
Capacity	Up to 2.2 Gbps (1.68 Gbps in AES mode)
Max Modulation	4096QAM
Configuration	1+0, 2+0 XPIC, 2+0 ACAP/ACCP, 1+1 SD (FD, HSB)
ATPC	Yes
ACM	Adaptive Code Modulation (ACM), Hitless
Channel Bandwidth	5, 7, 10, 14, 20, 28, 30, 40, 50, 56, 60, 75, 80, 100, 112 MHz
FEC	LDPC FEC (varies by modulation scheme)
Electrical Specifications	
Power Consumption	Up to 115 W
Voltage Range	38 – 57 VDC
Surge Protection	DC port conforms to IEC EN 61000-4-5 Class 3, up to 2KV surge
Mechanical Specifications	
Stationary Use	Conforms to ETSI EN 300 019 Class 4.1, IP66, NEMA 4X
Temperature Range	-33 to +55 °C / -28 to +130 °F
Size	280 × 437 × 100 mm / 11.02” × 17.2” × 3.9”
Weight	Up to 8.5 kg / 18.7 lbs
Mount	Direct on antenna or special bracket (4U and 5 GHz models)
Antenna	External antenna, direct-mount (slip-fit)

Applications

• Telecom & ISP Backhaul
High-capacity microwave connectivity for service providers delivering fixed and mobile broadband over large coverage areas.



• Government & Public Safety Networks
Reliable and secure wireless links for mission-critical communication infrastructure, including surveillance and dispatch systems.



• Energy, Mining & Utilities
Industrial-grade wireless backhaul for energy plants, offshore rigs, mining sites, and grid infrastructure in challenging environments.

• Transportation & Smart Cities
Backbone communication for ITS, railway signaling, airport operations, and smart urban applications with real-time performance.

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