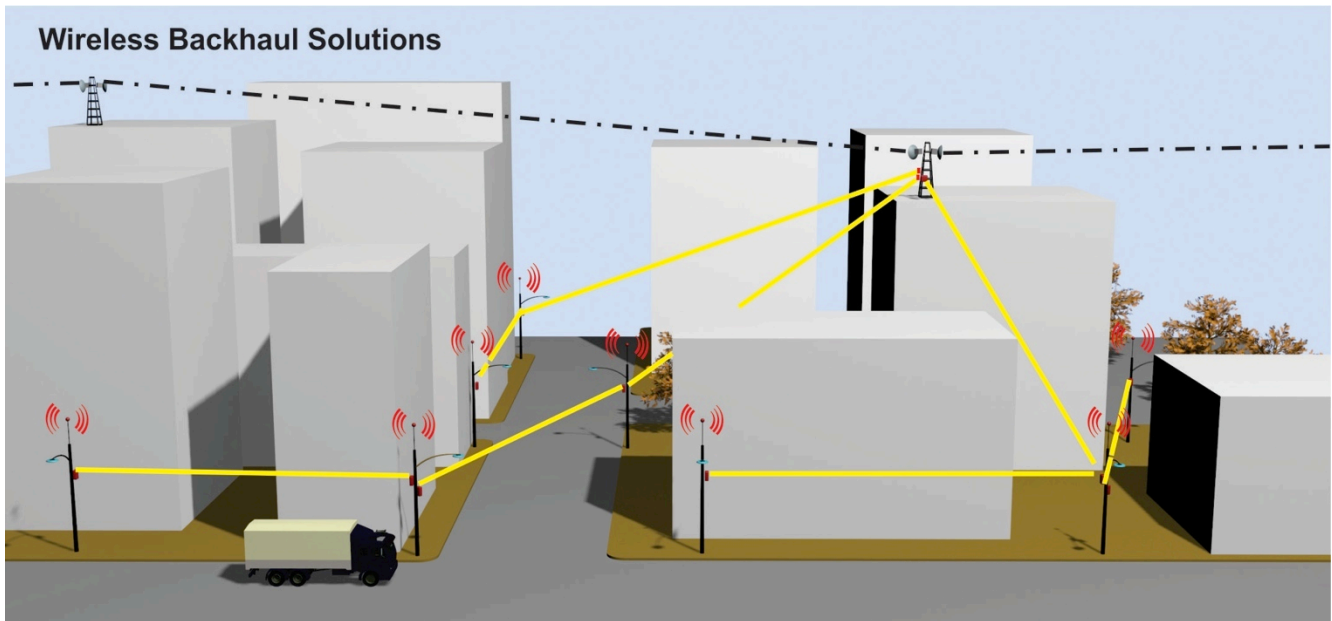




# Janus 23 / 24G AirDuplex™

Ultra High Capacity Carrier Ethernet Radio



Janus provides multi-Gigabit throughput with high spectral efficiency using MIMOtech's Air-Duplex™ Technology packaged into a Software Defined Radio.

### The Backhaul Problem

Network Operators require fiber-like backhaul and metro/carrier ethernet transport to satisfy the increasing demand placed on their networks.

The backhaul solution must address the total cost of ownership by ensuring that Capital costs are affordable whilst optimizing Operating costs (including spectrum fees, tower leasing and maintenance costs).

### The Janus Solution

Janus AirDuplex™ is an Ultra High Capacity backhaul radio providing multi-Gigabit throughput capacity.

Janus reduces Capex and Opex costs with high spectral efficiency and software definability giving downstream cost savings in fees, maintenance and upgrade costs.

### Applications

- Ultra High Capacity Backhaul for Small, Medium and Large Cell Mobile deployments (such as LTE/LTE-A, WiMAX and other 4G technologies)
- Cost-effective Alternative for Fiber and Millimeterwave links.

### Key Differentiators

- Patented Air-Duplex™ technology gives superior throughput performance with Air-Division Duplexing (ADD).
- High Spectral Efficiency achieved with spatial diversity (MIMO) and modulation up to 1024QAM.
- Supports Advanced Carrier Ethernet (CE 2.0) requirements for applications such as E-Line and E-LAN.

The Janus provides full-duplex backhaul throughput greater than 1 Gbps\* in a 28 MHz channel or 2 Gbps in a 56 MHz channel allocation

### Specifications for Janus 23G / 24G

Parameter	Specification	
Application	High Capacity Carrier Ethernet backhaul in selected traditional <sup>1</sup> and non-traditional <sup>2</sup> microwave bands	
Frequency	23 GHz licensed and 24 GHz unlicensed bands	
Channel BW	20, 28, 40 or 56 MHz	
Channel Plan	ETSI and ANSI	
Modulation	QPSK to 1024QAM	
Transmit Power	Up to 18dBm licensed, Up to -10 dBm unlicensed	
Full Duplex	Up to 2 Gbps User Rate with 56 MHz and 1024QAM <sup>3</sup>	
Data Rate <sup>5</sup>	> 1 Gbps <sup>4</sup> User Rate with 28 MHz and 1024QAM <sup>3</sup>	
IP Traffic	Optimized for Carrier Ethernet E-LINE and E-LAN services. Supports SyncE and IEEE1588 TC. MPLS-TP ready. CE 2.0 Compliance <sup>4</sup>	
Interfaces	2 x 1000BASE-SX (SFP)	
Network Management	SNMP Management with v3 support, Published MIB and MIB-II supported for standard statistical monitoring.	
User Interface	GUI for setup, status, software update and security.	
Power Supply	-48V DC supply (N-Type coax connector)	
Power Consumption	80 Watts per terminal	
Protection	Surge Protection	
Physical Dimensions	400 x 871 x 284 mm (H x W x D) (With 0.3m Antenna)	Weight 15 kg (With 0.3m Antenna)
Environmental	Operating Temperature: -30 to +55°C; All weather operation	

Footnotes	<p><sup>1</sup>Licensed microwave bands between 15 to 40 GHz</p> <p><sup>2</sup>Non-traditional licensed/unlicensed bands at 17, 24, 28-31, 42 GHz</p> <p><sup>3</sup>Throughputs shown with Intelligent Header Compression enabled.</p> <p><sup>4</sup>Available Q4 2015</p> <p><sup>5</sup>Air-Division Duplexing (or Air-Duplex™) is the patented method whereby the radio transmits and receives on the same frequency simultaneously</p>
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\* Throughput of 1 Gbps achieved with Intelligent Header Compression.





## Product Highlights

- Data Throughput up to 2 Gbps Full Duplex in a 56 MHz Co-channel Dual Polarized (CCDP) channel allocation (go + return frequency pair for FDD or 2 x 56 MHz frequencies for TDD allocation).

- Throughput Summary for CCDP channels:

Channel BW (CCDP)	56 MHz	28 MHz
Full Duplex Throughput	2 Gbps	> 1 Gbps*

\*Throughput of > 1 Gbps in 28 MHz with Intelligent Header Compression enabled.

- High Spectral Efficiency up to 16 bps per Hz.

- IP Traffic optimized:
  - Carrier Ethernet with MPLS-TP support
  - CE 2.0 Compliance
  - SyncE support
- Network Management
  - Easy configuration from embedded Web interface and SNMP v3 network management
- All Outdoor construction for optimum site footprint

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