

WITELCOM – Javelin TDM LINK



Javelin – Radio Link System High Speed and long range 2x2 MIMO Unit

The Witelcom Javelin links are specially developed for secure high capacity and low latency/jitter backhauling for everything from 2G to LTE/WiMAX networks, offering operators an attractive price/performance options. Javelin is available in both 100 Mbps and Gigabit versions. With its OFDM and Mimo technology the products have improved nLos capabilities and can operate in nLos environment.

Javelin offers a simple and intuitive user interfacing to allow the operator to easily deploy, monitor and operate the systems.

System Highlights

- Real aggregated throughput of up to 250 Mbps full duplex – 500 Mbps aggregated.
- Gigabit Ethernet interface
- Fiber optic and E1/T1 expansion option
- 2 x 2 MIMO 802.11a/n with 300 Mbps “over the air” data rates
- Ultra low latency and jitter performance
- Telco power – AC and 48V
- Available in 2.3 GHz, 2.4 GHz, 4.9 GHz, 5.2-5.8 GHz and 6 GHz
- Up to 23 dBm aggregated TX-power for long range capability
- Adaptive Link Rates, TPC & DFS support (iaw ETSII regulation)

The Javelin supports all the carrier grade requirements related to telecommunication deployments, and provides professional installation kits for mounting. The Javelin is developed for outdoor environment and includes an outdoor panel antenna unit with IEC529/IP67 water tightness Vlan management and Vlan Switch functionality

Javelin System Description

The Javelin consists of an Indoor Unit (IDU) and Outdoor Unit (ODU), and a single RJ45 CAT5E outdoor cable connecting the units together at a distance of up to 100 meters. The IDU can be powered with 110-230V AC or directly from 48VDC (AF) Telco power. Javelin can be expanded with optional E1/T1 and fiber optic interfaces.

The 5GHz Javelin (JL-55) RF specifications

Standard Frequencies (UNII, UNII-2, 802.11a):

5.180 – 5.350 - 8 channels available in ETSI (& UNII)

5.470 - 5.725 - 11 channels available in ETSI

5.725 – 5.850 – Depending on Regulatory Domain

Modulation technique:

2 x 2 MIMO OFDM. Selectable channel width of 40MHz, 20MHz, 10MHz and 5MHz

RF Access Protocols:

Both TDMA and CSMA/CA options

OFDM: BPSK, QPSK, 16-QAM, 64-QAM

System Security: AES 128

RF Output Power:

Selectable for regulatory domain: up to 23 dBm aggregated TX power

IP Operation Mode: Transparent Bridge mode

Transfer Data Rate (Link Speed): Up to 300 Mbps (link speed).

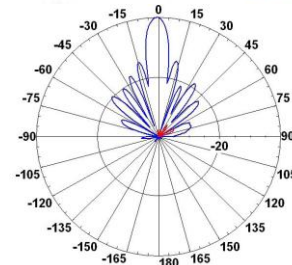
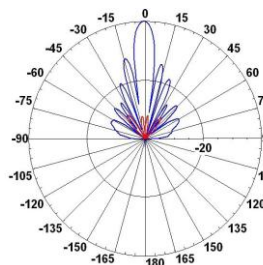
Supported Link rates:

MIMO Data Rates & RX-sensitivity

MCS 15 – 300 Mbps	-74 dBm	MCS 7 - 150 Mbps	-77 dBm
MCS 14 – 270 Mbps	-76 dBm	MCS 6 - 135 Mbps	-79 dBm
MCS 13 – 240 Mbps	-78 dBm	MCS 5 - 120 Mbps	-80 dBm
MCS 12 – 180 Mbps	-82 dBm	MCS 4 - 90 Mbps	-84 dBm
MCS 11 – 120 Mbps	-84 dBm	MCS 3 - 60 Mbps	-87 dBm
MCS 10 - 90 Mbps	-87 dBm	MCS 2 - 45 Mbps	-92 dBm
MCS 9 - 60 Mbps	-90 dBm	MCS 1 - 30 Mbps	-94 dBm
MCS 8 - 30 Mbps	-92 dBm	MCS 0 - 15 Mbps	-97 dBm

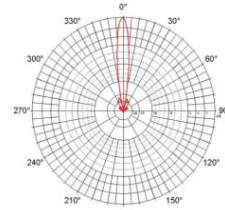
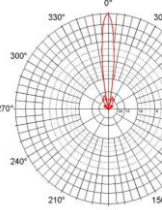


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JL-55-23 & JLG-55-23 Specifications

Unit Size	ODU: 370 x 370 x 70 mm (housing) IDU: 1U Rack Unit
Integrated Antenna	Flat panel 23dBi 5GHz Wide Band (5.1–5.9 GHz) - 370x370mm, Dual Linear (V&H) polarization, 8x8 degrees beam with (at -3dBm) – recommended up to 40 km
Ethernet	JL-55-23: 10/100 Mbps, JLG-55-23: 10/100/1000 Mbps & IDU fiber optic option
Mode	Bridge mode, router mode, NAT mode with DHCP client, PPPoE and static WAN. Static or DHCP server for LAN. VLAN for management and VLAN Switch Web browser configuration
E1/T1 option	Unframed (transparent), ITU-T G.703, G.826. 1U rack mount unit
Power source	IEEE 803.af 48V dc (AF)
Weight	4Kg
External Connectors	Weather sealed RJ45
Enclosure Material	Aluminum
Fasteners	Stainless Steel & aluminum
Heat Dissipation	20W max
External Color	RAL 9002
Mounting	Both wall and pole mount
AZ/EL control	Both
Pole Size	1¾÷3" Ø (45-75mm Ø)
Temperature	-20°C to 75°C
Humidity	100%
Water Tightness	IEC 529 / IP67
Wind Load (Survival)	Operational: 160 Kmph with front/side thrust 47/6 Kg (220 Kmph)



JL-55-29 & JLG-55-29 Specifications

Unit Size	ODU: 300 x 300 x 70 mm (housing) IDU: 1U Rack Unit
Antenna	Parabolic 29dBi 5GHz Wide Band (5.1–5.9 GHz) - 900x900mm, Dual Linear (V&H) polarization, 5x5 degrees beam with (at -3dBm)
Ethernet	JL-55-23: 10/100 Mbps, JLG-55-23: 10/100/1000 Mbps & IDU fiber optic option
Mode	Bridge mode, router mode, NAT mode with DHCP client, PPPoE and static WAN. Static or DHCP server for LAN. VLAN for management and VLAN Switch Web browser configuration
E1/T1 option	Unframed (transparent), ITU-T G.703, G.826. 1U rack mount unit
Weight	10Kg (total)
External Connectors	Weather sealed RJ45
Enclosure Material	Aluminum
Fasteners	Stainless Steel & aluminum
Heat Dissipation	20W max
External Color	RAL 9002
Mounting	Both wall and pole mount
AZ/EL control	Both
Pole Size	1¾÷3" Ø (45-75mm Ø)
Temperature	-20°C to 75°C
Humidity	100%
Water Tightness	IEC 529 / IP67
Wind Load (Survival)	Operational: 120 Kmph with front/side thrust 113 lbs (@100 mph)