



RADWIN JET SERIES

RADWIN JET series features a range of unique sub 6 GHz Point-to-MultiPoint base stations, each equipped with a superior beamforming antenna to provide unmatched connectivity, even in the highly congested unlicensed 5GHz band

JET series beamforming antenna is exceptionally narrow and electronically steered, covering a sector width of up to 90° and capable of radio interference rejection by more than 100 times (20dB). JET eliminates the need to deploy many radios with narrow beam antennas on a tower to achieve a wide sector with interference-free transmission.

JET base station series facilitates the deployment of large and scalable networks, providing ultra-high capacity for up to 1000 customers per tower. It is ideal for a range of applications, including fixed wireless access for enterprise and residential customers, Mission critical applications in private networks and everyday data connectivity and surveillance applications. JET series is the ultimate solution to achieve reliable connectivity similar to Point-to-Point at economical budget.

The JET series utilizes RADWIN's cloud-based holistic OSS (Operational System Support) for cost-performance radio planning, seamless customer acquisition and efficient mass deployment to facilitate rapid network growth and high-quality service.



JET series - beamforming base station

JET series highlights

- » Superior beamforming antenna
- » Single carrier (radio) per unit, up to 750 Mbps
- » Dual carrier (radio) per unit, up to 1.5 Gbps
- » Industry-leading interference immunity
- » Excellent spectrum utilization:
 - › Full network deployment using only 2 frequency channels.
 - › A frequency channel can be reused up to 4⁽¹⁾ times in a site
 - › Up to 36⁽¹⁾ bps/Hz/cell
- » Dynamic⁽¹⁾ carrier selection per subscriber unit
- » SLA⁽¹⁾ (CIR) and Best-Effort service level
- » Fixed latency and low Jitter
- » Built-in GPS for TDD network synchronization
- » WAN connectivity over SFP or PoE
- » 5 GHz, 3.5 GHz band

Note 1: product dependent

The JET series offers two distinct base station categories, each tailored to specific deployment scenarios. The first is designed for high-end applications, while the second offers the best price- performance ratio.

HIGH-END BEAMFORMING BASE STATION SERIES

For SLA enterprise customers or mission-critical data connectivity & surveillance

JET PRO

A high-end single carrier base station with superior beamforming capabilities, delivering 750 Mbps over a 90° sector with SLA (CIR) or best-effort service levels. Available in the 5 GHz and 3.5 GHz bands.

JET DUO 5 GHz

A high-end dual carrier base station with a superior beamforming antenna, offering 1.5 Gbps to 128 customers with SLA or best-effort service levels over a configurable 90°, 45° or 60° sector width. JET DUO enables ultra-site capacity of up to 12 Gbps with exceptional frequency efficiency of 36 bps/Hz/cell and frequency reuse of up to 4 times per site. JET DUO's unique PrimeCarrier feature further improves service reliability and availability.

JET DUO 3.5 GHz

A high-end, dual band, 3.5 GHz and 5 GHz Point-to-MultiPoint base station with a superior beamforming antenna, assuring reliable connectivity in both frequency bands. JET DUO 3.5 GHz delivers up to 1.5 Gbps with SLA or best-effort service levels.



BEST PRICE-PERFORMANCE BEAMFORMING BASE STATION SERIES

For residential customers or every everyday data connectivity & surveillance

JET AIR

A best price performance, single carrier base station with a superior beamforming antenna, delivering 750 Mbps over a 90° sector and available only in the 5 GHz band.

JET AIR DUO

A best price performance, dual-carrier base station with a superior beamforming antenna. Its unique PrimeCarrier feature further improves service reliability and availability. JET AIR DUO delivers up to 1.5 Gbps over a 90° sector and is available only in the 5 GHz band.



The following table outlines the main features supported by each product in the JET series.

Future	JET DUO	JET DUO	JET PRO	JET AIR DUO	JET AIR
Carrier bands	3.5+5 GHz	5+5 GHz	3.5 GHz, 5 GHz	5+5 GHz	5 GHz
Maximum unit capacity	1.5 Gbps	1.5 Gbps	750 Mbps	1.5 Gbps	750 Mbps
Maximum number of SUs per unit	128	128	64	128	64
Maximum site capacity (@ 4 x 80MHz)	6 Gbps	12Gbps	6Gbps	6Gbps	6Gbps
Maximum number of SUs per site (@ 4 x 80MHz)	512	1024	512	512	512
Superior beamforming & industry best interference mitigation	●	●	●	●	●
Dual carrier base station	●	●		●	
Frequency reuse 2 per site and multi sites network	●	●	●	●	●
CIR (Committed Information Rate) per SU, Jumbo Frame (9600 bytes)	●	●	●		
Software Define Sector (SDS) – Configurable sector width		●			
Ultra base station site capacity using ultra spectrum efficiency		●			
PrimeCarrier (dynamic selection of carrier per SU)		●		●	
Built-in GPS and TDD synchronization	●	●	●	●	●
Dynamic channel bandwidth	●	●	●	●	●
SFP & POE	●	●	●	●	●
Max customer peak capacity @ 40 MHz -350 Mbps	●	●	●	●	●

RADWIN Subscriber Units (SUs)

Outdoor radio units with low visual impact, delivering up to 500 Mbps.

RADWIN Subscriber Units are compact, lightweight, and powerful. Available in the 5 GHz and 3.5 GHz bands, they are equipped with either an integrated antenna or N-type connectors².

RADWIN SUs have impressive packet switching power that ensures maximum capacity, regardless of traffic packet size.

Adhering to the IP 67 standard, the RADWIN SUs are highly durable and can be provided with marine grade coat.

Fully interoperable with RADWIN's entire range of base stations, the SU provides unparalleled flexibility for network deployments.



RADWIN offers two types of SUs:

SU PRO

For bandwidth-demanding enterprise and mission critical applications. The unit supports SLA (CIR) or best-effort service levels.

SU AIR

For residential access, data connectivity and surveillance. The unit supports a best-effort service level only.

SU automated installation

RADWIN SU installation is automated using the WINTouch mobile application. This application handles work order reception, SU antenna alignment, configuration, installation validation, documentation upload, and more.

The SU supports effortless installation through zero-touch service activation, with or without RADIUS, minimizing installation efforts.



Note 2 : Only in 5GHz



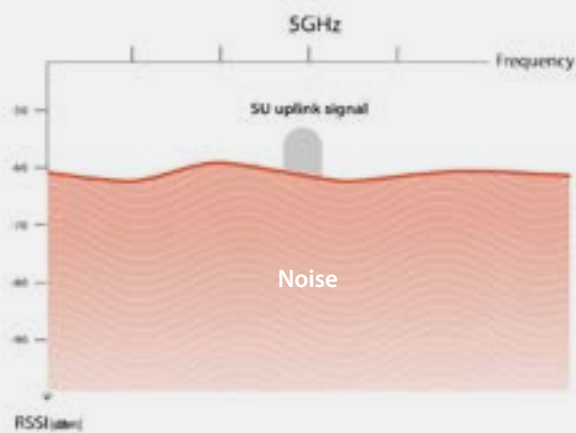
The value of JET base station series

Reliable & consistent uplink connectivity

Rejecting interference by 20 dB or more, JET beamforming antenna dramatically improves signal reception in locations with congested spectrum to assure higher capacity and wider coverage than any passive antenna.

Base station performance in congested spectrum

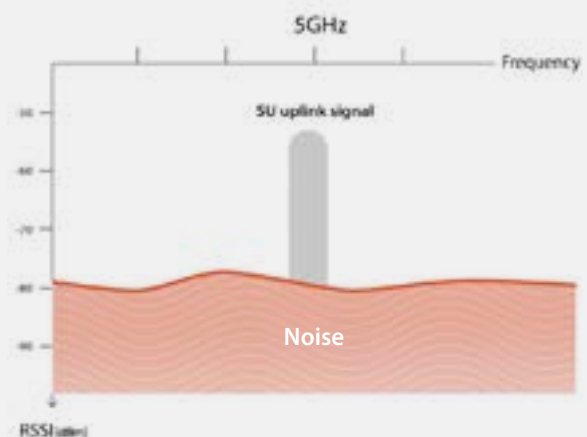
Typical base stations



Low capacity link

In congested spectrum a base station with a typical wide antenna, receives the remote SUs with low signal-to-interference ratio, resulting in reduced capacity links.

JET series base stations



High capacity link

In congested spectrum, JET base station mitigates the interference and receives the remote SUs signal with a high signal-to-interference ratio, resulting in high-capacity links.

Consider that your network is experiencing an interference level of -60 dBm. However, thanks to the beamforming antenna, the transmission performs as though the interference level is -80 dBm.

Reduced network Total Cost of Ownership (TCO)

- » Less towers are needed for a given coverage requirement, thanks to beamforming interference mitigation.
- » Inventory burden is eliminated as SUs can be used across all RADWIN base stations.
- » No SU rip and replacement is required when adding or switching base stations to accommodate dynamic network requirements.
- » Less help-desk calls and customer churn thanks to reliable connectivity.
- » Optimal radio planning for minimal infrastructure and efficient SUs mass deployment process is assured by RADWIN holistic cloud-based OSS (Operational Support System)

Secured SLA

RADWIN's air interface enables a Committed Information Rate (CIR) for bandwidth demanding applications.

Dual carrier base stations for increased unit capacity and reliability

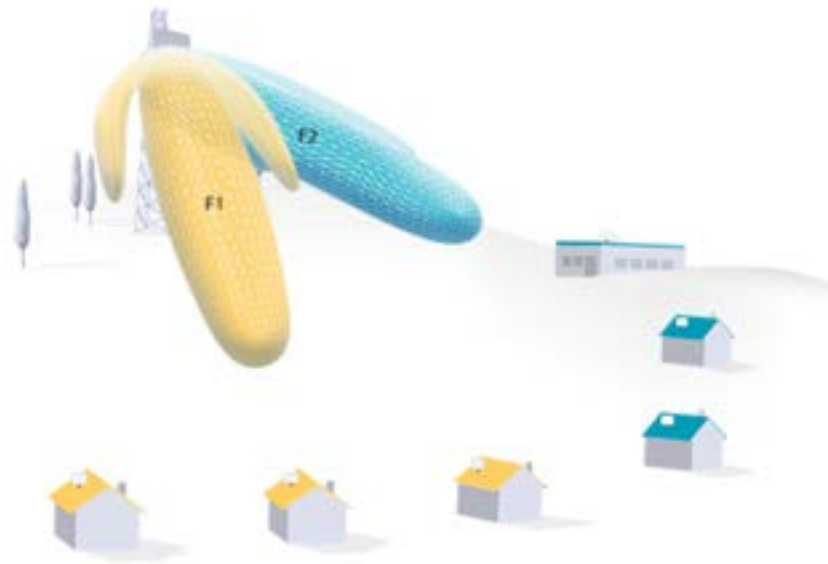
Equipped with dual radios, both JET DUO, and JET AIR DUO provide double the capacity per unit, saving upon tower space and rental costs.

Leveraging the dual carrier topology, RADWIN PrimeCarrier dynamically selects the best carrier per Subscriber Unit, to maintain highest possible downlink capacity and availability, in case of the following adverse scenarios:

 Downlink capacity deterioration

 Downlink traffic carrier overload

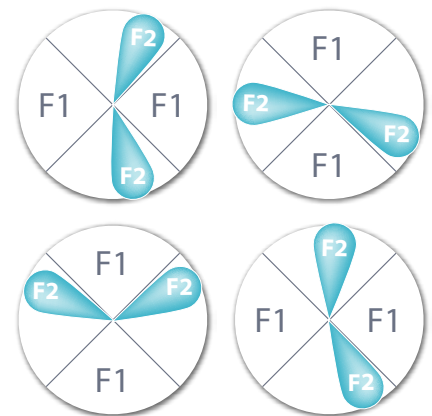
 RADAR detection



Increased capacity with minimum spectrum usage

Less spectrum is required to achieve network capacity, due to Frequency reuse 2.

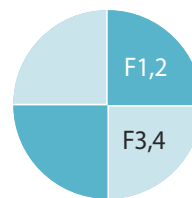
Only two frequency channels per carrier are required for multi-tower deployments, enabling greater network capacity per available spectrum.



Software Define Sector for ultra capacity and spectrum efficiency

JET DUO 5 GHz offers network owners the flexibility to reconfigure the sector width from 90° to 60° or 45°, effectively doubling tower capacity up to 12 Gbps and accommodating as many as 1024 customers. This capacity increase is achieved through greater frequency reuse; allowing use of the same channel up to four times on a single tower, resulting in spectrum efficiency of 36 bps/Hz/cell.

90° sector width

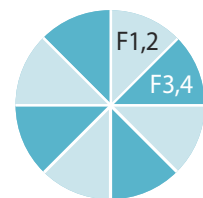


4 sector site

2.6 Gbps

512 customers

45° sector width



8 sector site

5 Gbps

1024 customers

JET DUO site capacity @ 4 Channels of 40 MHz

F1, F2, F3, F4 - Frequency Channels

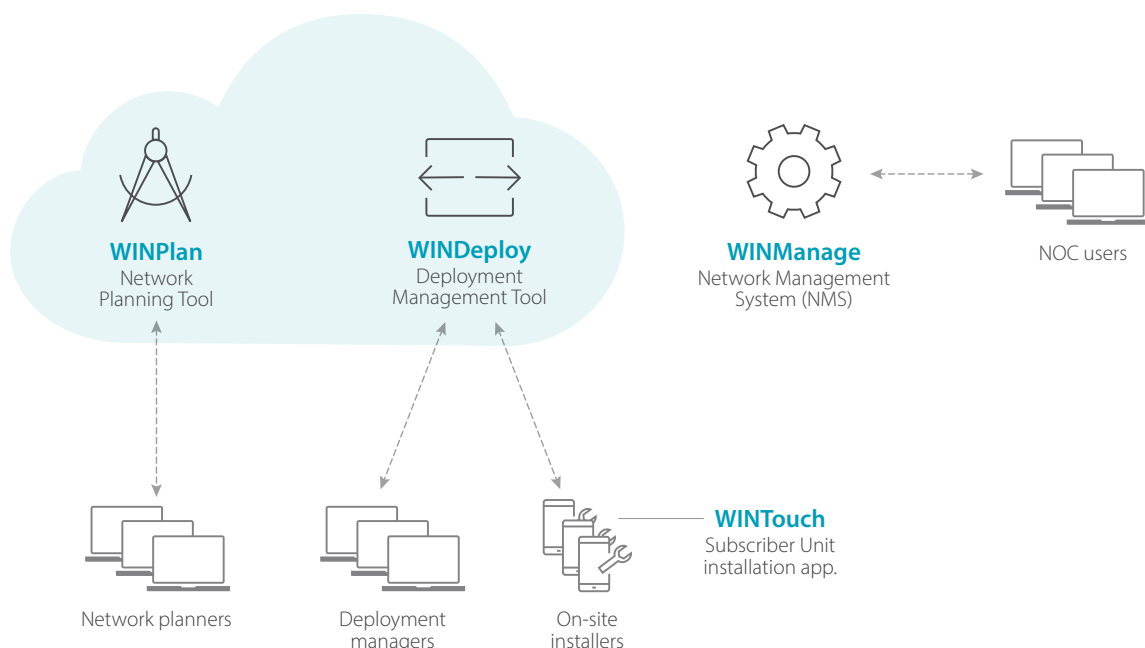
Simplified operation, facilitated by RADWIN OSS

RADWIN's OSS provides a set of cloud-based tools that support all operational aspects of the network lifecycle, such as radio planning, mass deployment management and SU installations.

Service commissioning, network management and maintenance are provided through a powerful and scalable on-premises NMS.

Main OSS benefits:

- » Secure network performance while minimizing capital expenditure with RADWIN's advanced planning tool.
- » Facilitate efficient mass deployment while securing installation quality and assuring a maintenance free network



Product specifications:

	JET Base Station					Subscriber unit			
	DUO	DUO	AIR DUO	PRO	AIR	Integrated		Connectorized	
	5 GHz	3.5 GHz	5 GHz	5 GHz /3.5 GHz	5 GHz	SU AIR¹	SU PRO	SU AIR¹	SU PRO
Architecture	Outdoor Unit with smart beamforming integrated antenna and built-in GPS					Outdoor unit with Integrated antenna		Outdoor unit with 2 N-type connectors	
Max net aggregate capacity	1.5 Gbps			750 Mbps		500 Mbps²		500 Mbps²	
Data interfaces	100/1000 Mbps RJ45 PoE, 1Gbps Full duplex SFP					100/1000 Mbps RJ 45 PoE			
Radio									
Subscriber Units support	Up to 128			Up to 64					
Range	Up to 40 km / 25 miles								
Modulation	OFDM (BPSK / QPSK / 16 QAM / 64 QAM / 256 QAM)								
Antenna modes	MIMO 2x2, diversity, adaptive MIMO/diversity per SU								
Duplex Technology	TDD, Configurable Symmetric or Asymmetric								
TDD Inter & Intra site Sync.	Supported via built-in GPS receiver								
Encryption	AES 128								
Channel Bandwidth	Configurable: 10, 20, 40, 80 MHz								
Dynamic bandwidth selection	20, 40, 80 MHz								
Sector width	Configurable 90°,60°,45°		90°						
Max Tx Power per port 5GHz	25 dBm	25 dBm	24 dBm	25 dbm	24 dbm	26 dBm			
Max Tx Power per port 3.5GHz		28 dBm		28 dbm					
Antenna gain 5GHz	19 dBi	19 dBi	18 dBi	20 dBi	18 dBi	22 dBi			
Antenna gain 3.5GHz		16 dBi		17 dBi		19 dBi			
DFS	Supported								
Networking									
Sub convergence layer	Layer 2, Bridging learning of 8K MAC addresses								
QoS	Packet classification for 4 priority queues according to 802.1p or Diffserv								
VLAN Support	802.1q, QinQ, 4094 VLANs								
MTU	JET PRO, JET DUO, SU PRO: 9600 bytes. Other: 2047 bytes.								
Management									
ODU Management	IPv4/IPv6 dual stack; SNMPv1, SNMPv3; HTTP/HTTPS using web browser								
NMS Applications	RADWIN NMS (WINManage) or integration with 3rd party NMS system via standard MIBs								
Power									
Power feeding	Provided over PoE / RADWIN PoE switch					Provided over PoE-ODU			
Max Power consumption	55w			30w	35w	13w		13w	
Mechanical									
ODU Weight	4.9Kg	4.5lbs	3.6 kg	3.6kg		2Kg		0.5Kg	
	10.8lbs	9.9lbs	7.9 lbs	7.9lbs		4.4lbs		1.1lbs	
Environmental									
Operating Temperature	-35°C to 60°C			-40°C to 60°C					
	-31°F to 140°F			-40°F to 140°F					
Humidity	100% condensing								
Safety	EN/IEC, UL/CSA, CTUVus								
EMC	ETSI/EN, FCC, ICES								

Please refer to the product data-sheets to obtain detailed information and committed specs per product.

Note 1: Available only in 5GHz | Note 2: 100Mbps in 3.5GHz

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