RADWIN NEO
PtMP base station series

The smartest and most affordable way to connect!

Nowadays, Fixed Wireless Access Service Providers are required to deliver reliable, high-capacity service packages to facilitate work from home, remote schooling, streamed entertainment and more.

However, Service providers using the 5GHz band, face spectrum congestion that hinders their ability to provide customers with consistent capacity and reliable connectivity.

Impacted by the ever-growing capacity demand yet eroding monthly revenue per customer, service providers continually search for ways to increase network capacity and reliability while keeping costs down.

This is where RADWIN NEO PtMP base station Series comes into play - by providing high capacity and resilient connectivity, over the 5GHz band, at a bargain price.

Best-in class PtMP doesn't always have a high price tag!

RADWIN NEO base stations series, with its powerful set of subscriber units, is changing the quality vs. price paradigm by offering best-in-class connectivity performance and excellent value for money!

RADWIN NEO series is comprised of single and dual carrier base stations with advanced bidirectional beamforming. Delivering up to 1.5Gbps, NEO encompasses best-in-class broadband solutions that provide extremely reliable connectivity in the 5GHz unlicensed spectrum.

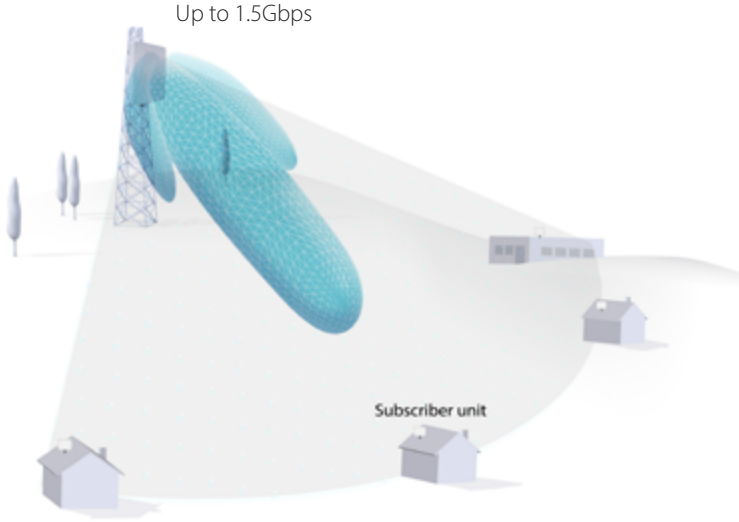
Exceeding Work from Home (WFH) service requirements, NEO base stations outperform any Access Point with a horn or uplink beamforming antenna.

NEO base station series is complemented by powerful, durable, and inexpensive Subscriber Units (SUs) that deliver up to 500Mbps and are fully interoperable with RADWIN's comprehensive PtMP base station offering.

NEO Series

Bidirectional beamforming base stations

Up to 1.5Gbps



NEO highlights

NEO base station series highlights:

- Single and dual carrier
- Up to 1.5Gbps, 6Gbps per 4 sectors
- 25° bidirectional beamforming antenna
- PrimeCarrier capabilities
- Robust connectivity in congested spectrum
- Frequency reuse -2 per network
- Over 500k PPS
- Up to 128 customers
- Built-in GPS
- WAN connectivity over SFP
- 4.9-5.8GHz

Subscriber Unit series highlights:

- Up to 500Mbps
- 22dBi integrated antenna or connectorized unit
- Up to 40 km/25 miles
- Automated installation via mobile app.
- Highly durable - IP 67
- Applicable for all RADWIN PtMP base stations

NEO DUO – 1.5Gbps

Particularly suitable for dense areas, NEO DUO is a dual carrier (radio) base station, each carrier feeding an independent beamforming antenna that provides best-in-class interference mitigation and wider coverage in areas with congested spectrum.

Light, compact, and easy to install, NEO DUO delivers up to 1.5Gbps over a 90˚sector and serves up to 128 customers.

NEO DUO features unique PrimeCarrier capabilities for ultimate downlink performance. PrimeCarrier dynamically selects the best and cleanest carrier per subscriber unit, to attain the highest possible downlink capacity, service availability and best traffic load balance between carriers.

NEO - 750Mbps

Ideal for low to moderately dense areas, NEO base station includes a single carrier and bidirectional beamforming antenna, that enables full network deployment with just two frequency channels.

Delivering 750Mbps for up to 64 customers, RADWIN NEO ensures lowest TCO, minimum spectrum usage and reliable connectivity.

SU AIR 500Mbps – Low visual impact outdoor Subscriber Units

Compact, light, and powerful, SU -AIR delivers up to 500Mbps and is available with either a 22dBi integrated antenna or N-type connectors. SU AIR provides impressive packet switching power to guarantee capacity, regardless of traffic packet size. It also ensures consistent connectivity with fixed latency using RADWIN's field proven air interface. Highly durable for reduced truck roll, SU AIR complies with the IP 67 standard and is interoperable with RADWIN's entire 5GHz base station offering for unmatched flexibility.

Base Station Series:
- NEO DUO 1.5Gbps
- NEO 750Mbps

SU AIR 500Mbps
Integrated Subscriber Unit

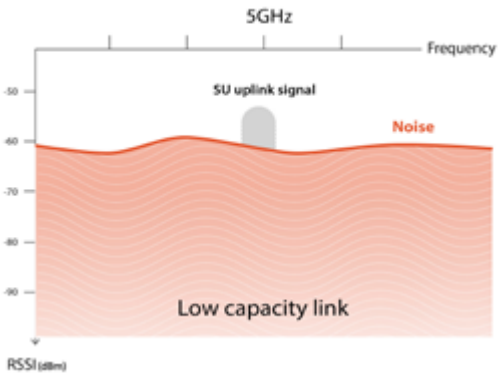
SU AIR 500Mbps
Connectorized Subscriber Unit

The value of NEO Series

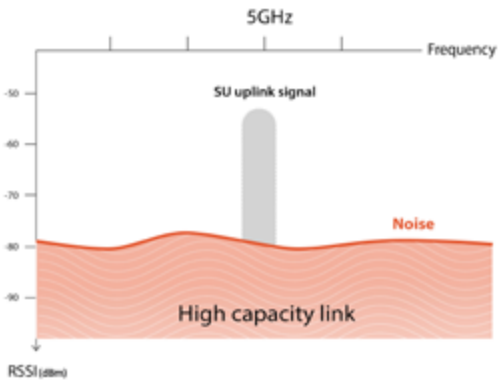
Reliable & consistent uplink connectivity

Rejecting interference by 18dB, NEO beamforming antenna dramatically improves signal reception in locations with congested spectrum to assure higher capacity and wider coverage than any passive antenna.

Signal to interference ratio in a congested area using a typical antenna



Signal to interference ratio in a congested area using NEO beamforming antenna



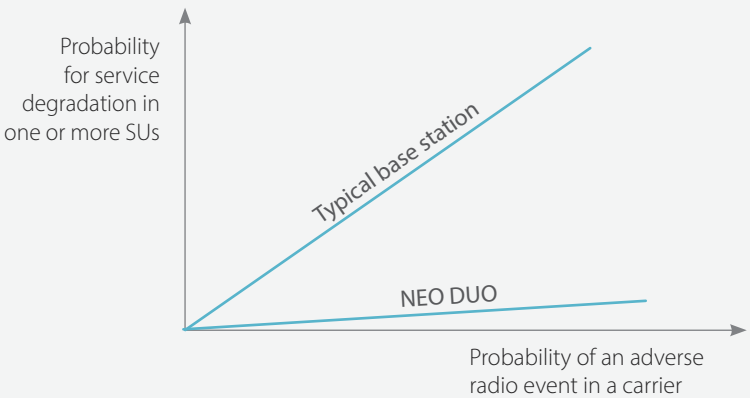
Imagine that your network area has an interference level of -60dBm but performs as though it was -80dBm

NEO DUO PrimeCarrier for ultimate downlink performance

PrimeCarrier dynamically selects the best and cleanest carrier **per Subscriber Unit** to achieve highest possible downlink capacity and availability, in case of deteriorated capacity due to:

- Interference
- carrier traffic overload
- radar detection.

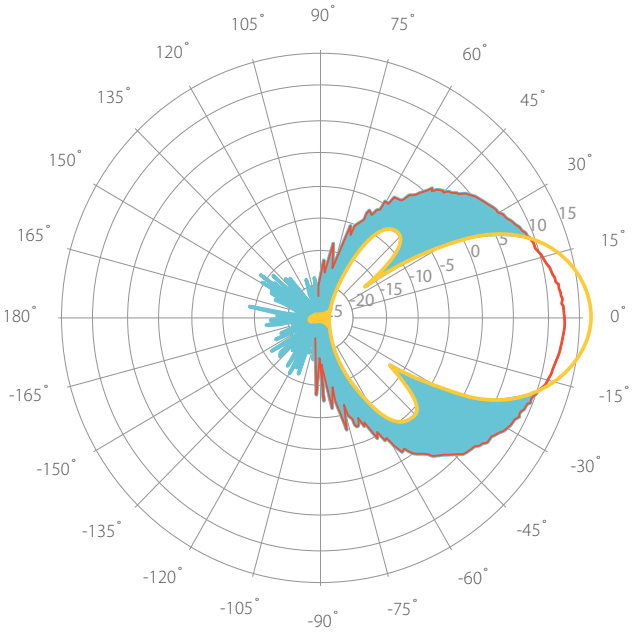
NEO DUO PrimeCarrier assures service reliability and availability



Better interference immunity than dual horn antennas with less TCO

RADWIN's steerable antenna uses a narrower beam with notably smaller side lobes than a dual 60° horn antenna for greater interference immunity.

When covering 360° only 4 NEO base stations are required instead of 6 radios for a typical horn antenna.



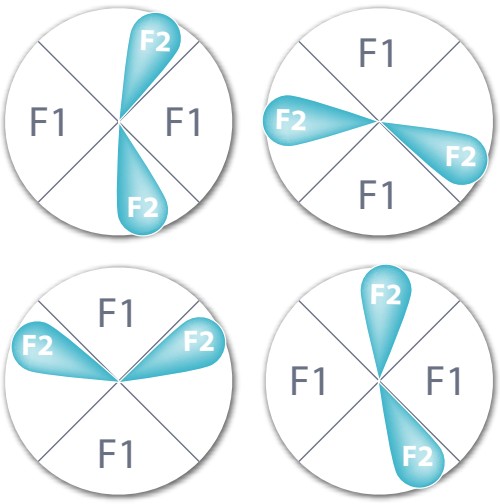
- Dual horn antenna
- NEO antenna
- Extra immunity of NEO vs. horn antenna

Reduced Network TCO

- Less towers are required due to extended sector-edge, enabled by beamforming.
- Common SUs for all 5GHz RADWIN base stations:
  - Remove inventory burden.
  - No need for SU rip and replace when adding or switching base stations to address dynamic network requirements.
- Reliable connectivity and equipment durability greatly reduce helpdesk call-in rates and truck roll.

More capacity, minimum spectrum usage

Less spectrum is required to yield network capacity, due to Frequency reuse 2. Only two frequency channels for each carrier are required for multi-tower deployments, enabling greater network capacity per available spectrum.



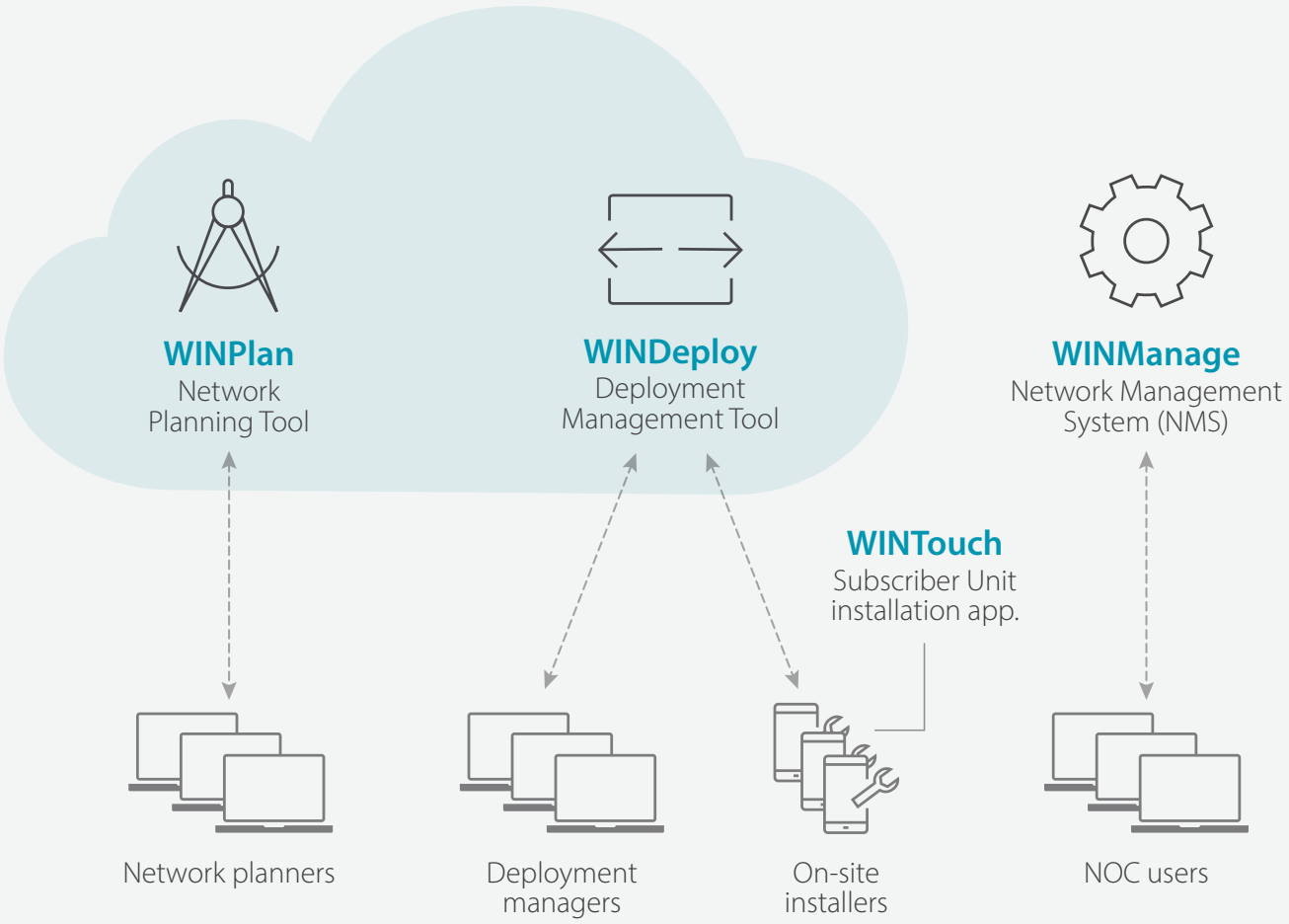
Easy installation

Exceptionally compact and light, NEO consumes low power and incorporates an integrated antenna, built-in GPS and SFP for Fiber WAN connection.

In addition, the SU allows for a simplified, fast, and quality installation utilizing RADWIN's automated WINTouch smartphone application.

Simplified operation, facilitated by RADWIN OSS

RADWIN OSS provides a set of cloud-based tools that support the operational aspects of the network lifecycle, such as radio planning, mass deployment and unit installations. Service commissioning, network management and maintenance is provided through a powerful and scalable on-premises NMS.



Product Specifications:

	Base Station		Subscriber unit	
	NEO DUO	**NEO**	**SU AIR Integrated**	**SU AIR Connectorized**
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	1.5Gbps	750Mbps	500Mbps	500Mbps
Frequency bands & regulations	FCC (5.1, 5.2, 5.4, 5.8), ISED (5.2, 5.4, 5.8) ETSI (5.4, 5.8), Universal (4.9-6.0), NCC		FCC (5.1, 5.2, 5.4, 5.8), ISED (5.4, 5.8) ETSI (5.8, 5.4), Universal (4.9-6.0)	
Data interfaces	100/1000 Mbps RJ45 PoE, 1Gbps Full duplex SFP		100/1000 Mbps RJ 45	
Radio				
Subscriber Units support	Up to 128	Up to 64		
Range	Up to 40 km / 25 miles			
Modulation	OFDM (BPSK/QPSK/16QAM/64QAM/256QAM)			
Antenna modes	MIMO 2x2, diversity, adaptive MIMO/diversity per SU			
Duplex Technology	TDD, Configurable Symmetric or Asymmetric			
TDD intra & Intra site Sync.	Supported via built-in GPS receiver			
Encryption	AES128			
Channel Bandwidth	Configurable: 10, 20, 40, 80 MHz			
Dynamic bandwidth selection	20, 40, 80 MHz			
Dynamic Bandwidth management	Best Effort service level			
Max TX Power per port	25 dBm		26 dBm	
Antenna gain	17dBi		22dBi	
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			
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 cables		Provided over PoE-ODU cable	
Power consumption	< 35W		<25W	<13W
Mechanical				
ODU Dimensions (W x H x D)	32.5 x 34.0x 9.0 cm / 12.8″ x 13.4″ x 3.5″		32.5x 32.5 x 6.4cm / 12.8″ x 12.8″ x 2.5″	19.5 x 12.5 x 4.0 cm / 7.7″ x 4.9″ x 1.6″
ODU Weight	3.51kg / 7.74lbs		1.22Kg / 2.69lbs	0.5Kg / 1.1lbs
Environmental				
Operating Temperature	-35°C to 60°C / -31°F to 140°F			
Humidity	100% condensing			
Safety	EN/IEC, UL/CSA, CTUVus			
EMC	ETSI/EN, FCC, ICES			

RADWIN

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