

RADWIN

NEO DUO

PtMP Base Station

Data Sheet



Product Overview

RADWIN NEO DUO is a low-priced dual-carrier Point-to-MultiPoint base station with an advanced beamforming antenna, that provides best-in-class radio interference mitigation and wide coverage, superior to any Access Points with a horn or uplink-only beamforming antenna. NEO DUO is the only PtMP base station in its price range that offers an integrated bi-directional (uplink and downlink) beamforming antenna that enables frequency reuse-2 per network.

Featuring PrimeCarrier for dynamic carrier selection per end-customer, NEO DUO ensures service reliability and high-capacity in the heavily congested unlicensed spectrum for both uplink and downlink directions.

Offering 1.5Gbps over a 90° sector, RADWIN NEO DUO ensures revenue growth with the lowest TCO and minimum spectrum usage, while delivering fiber-like residential services.

Product Highlights

- » Advanced Beamforming antenna
- » Up to 1.5Gbps, 6Gbps per 4 sectors
- » Best in class interference immunity
- » PrimeCarrier for ultimate downlink performance
- » Frequency reuse-2 per network
- » Best-effort class of service
- » Built-in GPS
- » WAN connectivity over SFP
- » 5 GHz band

Product specifications:

Configuration	
Architecture	Outdoor Unit with smart beamforming integrated antenna and built-in GPS
Wireless topology	PtMP base station
Data interfaces	10/100/1000 Mbps RJ45 PoE, 1Gbps SFP
POE and ODU interfaces	Outdoor CAT-5e; Maximum cable length: 75m for 1000BaseT
Radio	
Max capacity	1.5 Gbps (2x 750 Mbps) net aggregate throughput
Maximum Subscriber Units	Up to 128 per base station / up to 64 per each carrier
Range	Up to 40 km / 25 miles
Channel Bandwidth	Configurable: 10, 20, 40, 80 MHz *
Dynamic Channel Bandwidth selection	20/40/80 MHz
Multiplexing, Modulation	OFDM (BPSK/QPSK/16QAM/64QAM/256QAM)
Error correction	FEC k = 1/2, 2/3, 3/4, 5/6
Adaptive modulation and coding	Supported
DFS	Supported *
Duplex Technology	TDD
Diversity	Supported
Antenna modes	MIMO 2x2, diversity, adaptive MIMO/diversity
Dynamic Bandwidth management	Best Effort service level
Max TX Power	25 dBm *
Encryption	AES128
TDD synchronization	Supported via built-in GPS receiver
Uplink/Downlink allocation	Configurable: Symmetric or Asymmetric
Networking	
Sub convergence layer	Layer 2, Bridging learning of 8K MAC addresses
QoS	Packet classification to 4 priority queues according to 802.1P or Diffserv
VLAN Support	802.1Q, QinQ, 4094 VLANs
MTU size	Up to 9216 bytes
ODU Management	IPv4/IPv6 dual-stack; SNMPv1, SNMPv3; HTTP/HTTPS using web browser
802.1x	Supported
Option 82	Supported
DHCP filtering	Supported
IGMP snooping	Supported
PPPoE filtering	Supported
RADIUS Authorization	Supported
RADIUS User authentication	Supported
Syslog	Supported

Physical Specification:

Mechanical	
Dimension	32.5 (w) x 34.0(h) x 9.0 (d) cm / 12.8" (w) x 13.4" (h) x 3.5" (d)
Weight	3.51kg/7.74lbs
Power	
Power consumption	<35W
Power feeding	Power provided over ODU-IDU cable
POE nominal voltage	55V
Environmental	
Operating Temperature	-35°C to 60°C / -31°F to 140°F
Humidity	100% condensing
Enclosure protection	IP67 per EN/IEC 60529, NEMA Type 4 Enclosure

Antenna:

Integrated Antenna	
Gain	17 dBi
VSWR	2.0 : 1
3 dB Azimuth Beamwidth	24° (typical) steered over 90 ° sector
3 dB Elevation Beamwidth	12° (typical)
Polarization	Dual Linear (Vertical and Horizontal)
Sidelobes Level	-18 dB (typical)
Cross Polarization	-30dB (typical)
F/B Ratio	30 dB
Port To Port Isolation	35 dB (typical)
Lightning Protection	DC Grounded

Regulatory compliance:

Radio	
USA	FCC 47CFR Part 15.407
Canada	ISED RSS-247
EU	ETSI EN 301 893; ETSI EN 302 502
Safety	
EU/ Int'l	EN/IEC 62368-1, EN/IEC 60950-22
USA	UL/CSA-C22.2 62368-1, UL/CSA-C22.2 60950-22
Canada	cTUVus: CSA-C22.2 62368-1, CSA-C22.2 60950-22
EMC	
EU	ETSI EN 301 489-1, ETSI EN 301 489-4, ETSI 301 489-17
USA	FCC 47CFR Part 15 Subpart B, Class B
Canada	ICES-003, CISPR 32 Class B
AS/NZS	CISPR 32, Class B

Supported Bands:

Band	Occupied Bandwidth Support	Radio Compliance
5.8 GHz FCC/ISED	5.730-5.845 GHz	FCC 47CFR Part 15.407, ISED RSS-247
5.4 GHz FCC/ISED	5.480-5.715 GHz	FCC 47CFR Part 15.407, ISED RSS-247
5.2 GHz FCC/ISED	5.250-5.340 GHz	FCC 47CFR Part 15.407, ISED RSS-247
5.1 GHz FCC	5.170-5.250 GHz	FCC 47CFR Part 15.407
4.9 GHz Universal	4.900-4.995 GHz	Universal
5.1 GHz Universal	5.130-5.375 GHz	Universal
5.4 GHz Universal	5.455-5.760 GHz	Universal
5.8 GHz Universal	5.730-5.845 GHz	Universal
5.1 GHz UBR	5.130-5.875 GHz	Universal
5.9 GHz Universal	5.710-5.990 GHz	Universal
5.4 GHz ETSI	5.475-5.710 GHz	EN 301 893
5.8 GHz ETSI	5.735-5.865 GHz	EN 302 502

* List of supported bands are limited by regulation - please refer to technical datasheet for a specific part number

Product ordering:

Radio units			
Product Number	Product Name	Regulation	Default band
RW-5AG5-0L50	RW5000/HBS/5AG5/F58/FCC/NEO-DUO/INT	FCC	5.8 GHz
RW-5AG5-1L54	RW5000/HBS/5AG5/F54/IC/NEO-DUO/INT	IC/ISED	5.4 GHz
RW-5AG5-2L54	RW5000/HBS/5AG5/F54/ETSI/NEO-DUO/INT	ETSI	5.4 GHz
RW-5AG5-9L54	RW5000/HBS/5AG5/F54/UNI/NEO-DUO/INT	Universal	5.4 GHz
PoE units			
Part Number	Product Name	Product Description	
RW-9921-1049	POE/DC/GBE/HP/20-60	DC input 20V – 60V	
RW-9921-400X	POE/AC/2.5/GBE	AC input 100VAC – 240VAC See PoE datasheet for country specific power plug	
PoE switch units			
Part Number	Product Name	Product Description	
RW-7401-6006	IDU-S/HP	Managed indoor switch, 6x PoE ports, SFP/SFP+ interfaces	

Package contents:

Radio unit

Mounting Kit

IP67 Cable glands

Datasheet information can be changed by manufacturer without prior notice