

RADWIN JET NLOS

PtP/PtMP HSU - Data Sheet



RW-55S0-0530

Product Description

Part of the RADWIN JET NLOS portfolio, RADWIN RW-55S0-0530 is a carrier class remote unit which is used for PtP and PtMP solutions, supporting 3.5 GHz. The RW-55S0-0530 is designed to comply with FCC/IC regulations.

The solution provides carrier class transmission in dense urban environments where there is high radio interference, no line-of-sight, and severe multipath conditions.

The RW-55S0-0530 has an integrated smart beam-forming antenna that enables enhanced performance, auto-alignment, and interference rejection.

Product Highlights

- High Capacity Subscriber Unit (Remote) - Up to 350Mbps throughput in a single channel
- Available in licensed sub 6GHz bands (3.xGHz)
- Advanced MIMO 2x2/3x3, OFDM and Diversity technologies
- Smart beam-forming antenna
- Automatic antenna alignment
- Advanced NLOS planning and deployment tools to simplify deployment and reduce costs
- Short and constant latency
- Robust and reliable: can operate in harsh environments and extreme temperatures
- 1588v2-TC and Sync-E support
- Dual GBE ports (Data)
- Embedded GPS for synchronization & location
- Ease of operation and maintenance

RADWIN's Innovative Technologies

- Optimized air interface ensuring highest throughput in harsh conditions
- Low latency and jitter in NLOS conditions
- High modulation and 3x3 MIMO
- Smart beam-forming antenna technology enabling enhanced performance (includes advanced multipath aggregation, interference mitigation by spatial filtering, and antenna auto-alignment)
- Dynamic bandwidth allocation enables remote radios in the PtMP system to instantly attain peak full sector capacity when bandwidth is not used or required by other remote radios

Benefits of RADWIN NLOS Solutions

- Carrier-grade transmission in non line-of-sight
- Overcomes interference in dense urban zones
- Robust performance in dynamic multipath and severe propagation conditions
- Advanced NLOS planning & deployment tools that provide accurate NLOS performance prediction: Significantly simplify installations at street level
- RADWIN's set of engineering practices for NLOS deployment reduces small cell network rollout times

Product Specifications:

Configuration				
Architecture	Outdoor Unit with a smart beamforming integrated antenna with embedded GPS			
Configuration	Remote Unit for Point to Point and Point to Multipoint			
PoE to ODU Interface	Outdoor CAT-5e; Maximum cable length: 100m for 10/100BaseT and 75m for 1000BaseT			
Radio				
Maximum Air Capacity	Up to 450Mbps @ 40MHz for single carrier			
Maximum Throughput	Up to 350Mbps @ 40MHz for single carrier			
Antenna	Smart Beam Forming Antenna			
Radio Carriers	Single carrier			
Air interface	Unique proprietary air interface (MAC) - ensuring robust performance in NLOS and severe multipath conditions			
Range	Up to 40 km / 25 miles			
Channel Bandwidth	Configurable: 10, 20, 40 MHz (for the default band)			
Modulation	MIMO-OFDM (BPSK/QPSK/16QAM/64QAM)			
Adaptive Modulation & Coding	Supported			
Automatic Channel Selection	Supported			
DFS	Not Supported			
MIMO/Diversity	2x2/3x3			
Spectrum Viewer	Supported			
Max Tx Power	23 dBm (in all modulation schemes)			
Duplex Technology	TDD			
Error Correction	FEC k = 1/2, 2/3, 3/4, 5/6			
Encryption	AES 128			
Support Indoor units	RADWIN Outdoor PoE: (RW-9921-0080/2, RW-9921-0110). RADWIN Indoor PoE: (RW-9921-101X, RW-9921-2059)			
Bandwidth Allocation	Static and dynamic			
Latency (one direction)	Typical: < 3.0msec; Maximum <5msec			
Jitter	< 1msec			
Timing Transport	1588v2-TC, Sync-E			
Networking				
Ethernet Interface	Two ports , supporting 100/1000BaseT 1st port: Data and PoE 2nd port : Data			
Layer 2	Bridging learning of 5K MAC addresses			
QoS	Packet classification to 4 queues according to 802.1p and Diffserv, TTL, Strict priority. Dynamic scheduling according to air interface changes			
VLAN	Supported 802.1Q, 802.1P, QinQ			
Management & Installation				
Management Application	RADWIN Manager			
Protocol	SNMPv1, SNMPv3, Telnet, HTTP, IPv4/IPv6 , SFTP, SSH			
NMS Application	RNMS Manager or integration with Network NMS via standard MIBS			
Installation	1. Automatic Antenna Alignment 2. Advanced NLOS planning and deployment tools			
Supported Bands				
Band	CBW 10MHz [GHz]	CBW 20MHz [GHz]	CBW 40MHz [GHz]	Radio Compliance
3.6 GHz FCC/IC	3.650-3.700	3.650-3.700	3.650-3.700	FCC 47CFR Part 90 subpart Z; IC RSS-197
Mechanical				
ODU Dimensions	35.6(w) x 22.5(h) x 9.4(d) cm			
ODU Weight	3.3 kg / 7.28 lbs			
Power				
Power Feeding	Provided over PoE interface			
Power Consumption	<30W			
Environmental				
Operating Temperatures	-35°C to 60°C / -31°F to 140°F			
Humidity	100% condensing, IP67 (totally protected against dust and against immersion up to 1m)			
Radio regulation				
FCC/IC	1. 47CFR Part 15 Subpart C and Subpart E 2. 47CFR Part 90 Subpart Z - Restricted & Unrestricted modes 3. RSS-210 issue 8, IC RSS-192 issue 3, RSS-197 issue 1-Unrestricted Mode			
ETSI	EN302-326-2			
Safety				
FCC/IC (cTUVus)	UL 60950-1, UL 60950-22, CAN/CSA C22.2 60950-1, CAN/CSA C22.2 60950-22			
ETSI	EN/IEC 60950-1, EN/IEC 60950-22			
EMC				
FCC	47 CFR Class B, Part15, Subpart B			
ETSI	EN 301 489-1, EN 301 489-4			
CAN/CSA-CEI/IEC	CISPR 22-10 Class B			
AS/NZS	CISPR 22-2010 Class B			

Integrated Smart Beam-Forming Antenna	
Gain	16 dBi
VSWR	2.0 : 1
3 dB Azimuth Beamwidth	90 Deg. (typ)
Polarization	Triple Linear (2x Vertical and 1x Horizontal)
Sidelobes Level	-10 dB(typ)
Cross Polarization	-25dB (typ)
F/B Ratio	-25 dB
Port To Port Isolation	35 dB (typ)
Lightning Protection	DC Grounded

Ordering Info

Part Number: RW-55S0-0530

Description: RADWIN HSU 55S0 ODU, with a smart beamforming integrated antenna with embedded GPS, supporting 3.6 GHz FCC/IC frequency band.

*Datasheet contains preliminary data; supplementary data will be published at a later date. RADWIN reserves the rights to make changes at any time without notice.