

RADWIN Alpha Model

Point-to-Point Radio - Data Sheet (RW2000/ODU/Alpha/F54/UNI/INT/500M)



RW-2954-6HC5

Product Description

RW-2954-6HC5 is a carrier-class radio that belongs to the RADWIN 2000 Alpha Series and supports 4.9 to 6 GHz frequency range.

The Radio complies with Universal, UBR, ETSI, ETSI/GER & FCC/IC bands with a factory default of 5.4 GHz Universal.

RW-2954-6HC5 delivers up to 500 Mbps throughput.

The unit includes an integrated antenna.

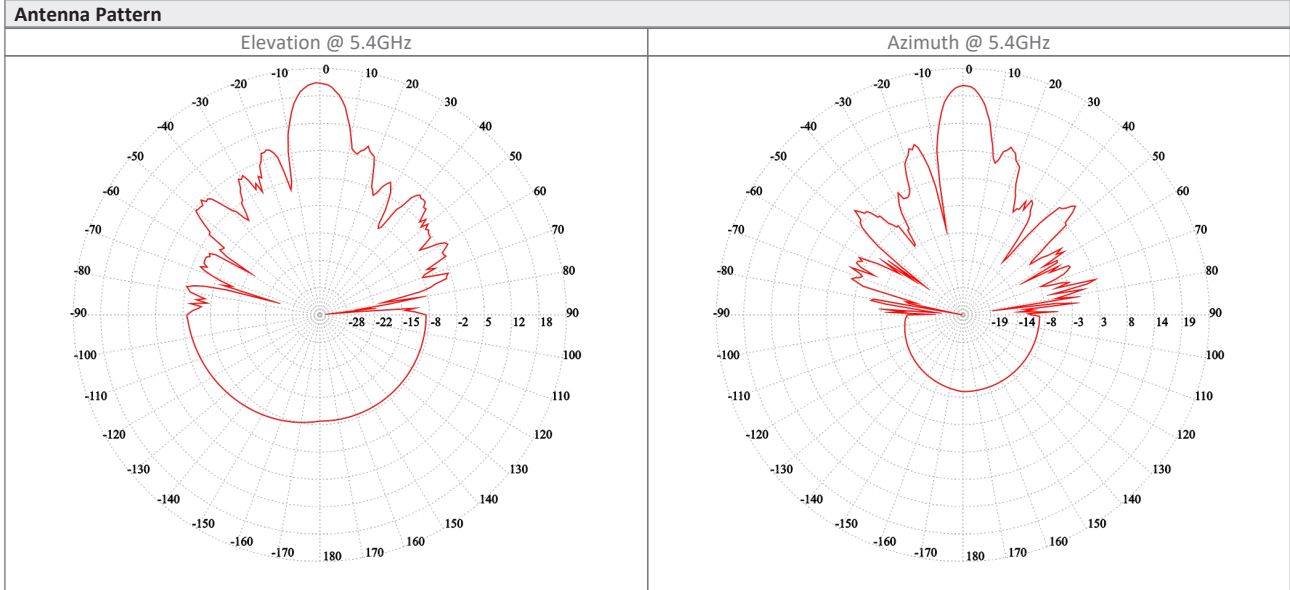
Product Highlights

- Up to 500 Mbps net aggregated throughput
- Telco-grade, extremely robust in harsh conditions
- Built-in GPS for intra and inter site TDD synchronization
- Configurable asymmetric throughput
- Advanced OFDM & MIMO technologies for operation in nLOS/NLOS and dense radio environments
- Integrated 22dBi antenna
- IP-67
- Can operate as SU PRO
- Support AES 256 encryption over the air (from release 5.1.30)

Product Specifications:

| Configuration | | | | | |
|--------------------------------|--|-----------------|-----------------|-----------------|--|
| Architecture | Outdoor Unit with an integrated antenna | | | | |
| PoE to ODU Interface | Outdoor CAT-5e; Maximum cable length: 100m for 10/100BaseT and 75m for 1000BaseT | | | | |
| Radio | | | | | |
| Max Capacity | 500 Mbps net aggregate throughput (up to 250 Mbps per direction) | | | | |
| Range | Up to 40 km / 25 miles * | | | | |
| Channel Bandwidth | Configurable: 10, 20, 40, 80 MHz (for the default band); Dynamic Channel BW selection (20/40/80 MHz) | | | | |
| Modulation | MIMO-OFDM (BPSK/QPSK/16QAM/64QAM/256QAM) | | | | |
| Adaptive Modulation & Coding | Supported | | | | |
| Automatic Channel Selection | Supported upon power up | | | | |
| DFS | Supported (ETSI, ETSI/GER) | | | | |
| Diversity | Supported | | | | |
| Spectrum Viewer | Supported | | | | |
| Max Tx Power | 26 dBm per chain | | | | |
| Duplex Technology | TDD | | | | |
| Error Correction | FEC k = 1/2, 2/3, 3/4, 5/6 | | | | |
| Encryption | AES 256 | | | | |
| Uplink / Downlink Allocation | Configurable: Symmetric or Asymmetric | | | | |
| QoS | Packet classification to 4 priority queues according to 802.1P or Diffserv | | | | |
| VLAN Support | 802.1Q, QinQ, 4094 VLANs | | | | |
| TDD Intra Site Synchronization | Supported via built-in GPS receiver | | | | |
| TDD Inter Site Synchronization | Supported via built-in GPS receiver | | | | |
| ODU Management | IPv4/IPv6 dual-stack; SNMPv1, SNMPv3; HTTP/HTTPS using web browser | | | | |
| Option 82 | Supported | | | | |
| RADIUS Authorization | Supported | | | | |
| RADIUS User authentication | Supported | | | | |
| Syslog | Supported | | | | |
| Dying gasp | **Supported (PoE voltage must be >= 55v) | | | | |
| Supported Bands | | | | | |
| Band | CBW 10MHz [GHz] | CBW 20MHz [GHz] | CBW 40MHz [GHz] | CBW 80MHz [GHz] | Radio Compliance |
| 4.9 GHz Universal | 4.900-4.995 | 4.900-4.995 | 4.900-4.995 | 4.900-4.995 | Universal |
| 5.1 GHz UBR | 5.125-5.880 | 5.125-5.880 | 5.125-5.880 | 5.125-5.880 | Universal |
| 5.1 GHz Universal | 5.145-5.340 | 5.140-5.345 | 5.130-5.355 | 5.130-5.375 | Universal |
| 5.4 GHz ETSI | 5.475-5.705 | 5.470-5.710 | 5.490-5.690 | 5.490-5.650 | ETSI EN 301 893 |
| 5.4 GHz Universal (default) | 5.470-5.725 | 5.465-5.730 | 5.455-5.740 | 5.455-5.760 | Universal |
| 5.7 GHz ETSI/GER | - | 5.735-5.865 | 5.735-5.865 | 5.735-5.865 | ETSI EN 302 502; ECC Recommendation (06)04 |
| 5.8 GHz ETSI | - | 5.735-5.865 | - | - | ETSI EN 302 502 |
| 5.8 GHz FCC/IC | 5.730-5.845 | 5.730-5.845 | 5.730-5.845 | 5.730-5.845 | FCC 47CFR Part 15.407; ISED RSS-247 |
| 5.8 GHz Universal | 5.725-5.850 | 5.725-5.850 | 5.725-5.850 | 5.725-5.850 | Universal |
| 5.9 GHz Universal | 5.725-5.955 | 5.720-5.960 | 5.710-5.970 | 5.710-5.990 | Universal |
| 6.0 GHz Universal | 5.695-6.055 | 5.690-6.060 | 5.680-6.070 | 5.680-6.090 | Universal |
| Mechanical | | | | | |
| ODU Dimensions | 32.5(w) x 32.5(h) x 6.7(d) cm | | | | |
| ODU Weight | 2 kg / 4.41 lbs | | | | |
| Mounting Kit | Included | | | | |
| Power | | | | | |
| Power Feeding | Power provided over ODU-IDU cable | | | | |
| Power Consumption | <13W | | | | |
| Network Device | | | | | |
| AC POE | RW-9921-400x | | | | |
| DC POE | RW-9921-2069 | | | | |
| Package Content | | | | | |
| Package | Radio unit with integrated antenna, pole/wall mounting kit, IP67 gland for POE port | | | | |
| Environmental | | | | | |
| Operating Temperatures | -35°C to 60°C / -31°F to 140°F | | | | |
| Humidity | 100% condensing, IP67 (totally protected against dust and against immersion in water up to 1m) | | | | |
| MTBF | 4,075,000 hours (Telcordia SR332 @25°C) | | | | |
| Wind Resistance operational | 180Km/h | | | | |
| Safety | | | | | |
| EU/Intl | EN/IEC 62368-1, EN/IEC 60950-22 | | | | |
| USA | cTUVus: UL 62368-1:2014, UL 60950-22 | | | | |
| EMC | | | | | |
| FCC | FCC 47 CFR, Part15, Subpart B, Class B | | | | |
| ETSI | ETSI EN 301 489-1, ETSI EN 301 489-4, ETSI 301 489-17 | | | | |
| Canada | ICES-003, CISPR 32, Class B | | | | |
| AS/NZS | CISPR 32, Class B | | | | |

| Integrated Antenna | |
|--------------------------|--|
| Gain | 21 dBi |
| Detailed Gain | 4.900: 19.0dBi 4.950 - 5.050GHz: 18.0dBi 5.100 - 5.500GHz: 20.0dBi 5.550 - 5.800GHz: 22.0dBi 5.850 - 5.950GHz: 21.0dBi 6.000: 20.0dBi |
| VSWR | 2.0 : 1 |
| 3 dB Azimuth Beamwidth | 10 Deg. (Typ) |
| 3 dB Elevation Beamwidth | Deg. (Typ) |
| Polarization | Dual Linear (Vertical and Horizontal) |
| Sidelobes Level | -12 dB(typ) |
| Cross Polarization | -25dB (typ) |
| F/B Ratio | -25 dB |
| Port To Port Isolation | 30 dB (typ) |
| Lightning Protection | DC Grounded |



Ordering Info

Part Number: RW-2954-6HC5

Description: RADWIN Alpha ODU, with an integrated antenna, supporting multi frequency bands at 5.x GHz, factory default 5.4 GHz Universal.

* May be limited by regulation in the specific band being used

Datasheet information can be changed by manufacturer without prior notice