

Airmux-400A

# ODU/F54E/350M/EMB

Point-to-Point Radio (Airmux-400A/ODU/F54E/350M/EMB)

**AIRMUX**

## Description

Airmux-400A/ODU/F54E/350M/EMB is a carrier-class radio that belongs to the RAD Airmux-400A Series and supports 5.4 to 5.8 GHz frequency range.

The Radio complies with ETSI regulation with a factory default of 5.4 GHz ETSI.

Airmux-400A/ODU/F54E/350M/EMB delivers up to 350 Mbps throughput.

The unit includes an embedded antenna and connectors (2 x SMA) for the high gain slide-on TurboGain antenna. The connectors can be used for 3rd party external antenna.

## Highlights

- Up to 350 Mbps net aggregated throughput
- Telco-grade, extremely robust in harsh conditions
- Supports intra-site synchronization to maximize capacity (via future SW upgrade)
- Configurable asymmetric throughput
- Advanced OFDM & MIMO technologies for operation in nLOS/NLOS and dense radio environments
- Multiple Antenna configuration: 16dBi embedded antenna, 22dBi antenna when using the TurboGain antenna, and 3rd party external antenna

# ODU/F54E/350M/EMB

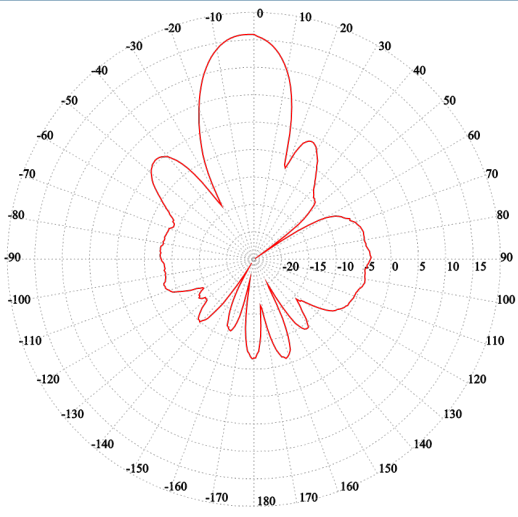
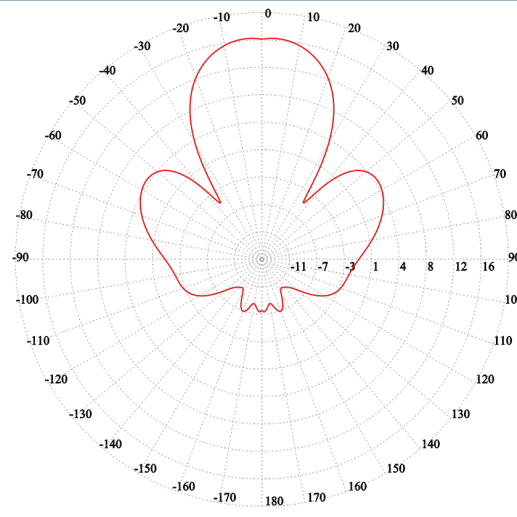
## Point-to-Point Radio (Airmux-400A/ODU/F54E/350M/EMB)

### Specifications

Configuration					
ArchitectureAlpha	Outdoor Unit with an embedded antenna and connectorized for external antenna (2 x SMA)				
PoE to ODU Interface	Outdoor CAT-5e; Maximum cable length: 100m for 10/100BaseT and 75m for 1000BaseT				
Radio					
Max Capacity	350 Mbps net aggregate throughput				
Range	Up to 120 km / 75 miles				
Channel Bandwidth	Configurable: 10, 20, 40, 80 MHz (for the default band)				
Modulation	MIMO-OFDM (BPSK/QPSK/16QAM/64QAM/256QAM)				
Adaptive Modulation & Coding	Supported				
Automatic Channel Selection	Supported upon power up				
DFS	Supported (ETSI)				
Diversity	Supported				
Spectrum Viewer	Supported				
Max Tx Power	24 dBm; max EIRP 30 dBm (for the default band)				
Duplex Technology	TDD				
Error Correction	FEC k = 1/2, 2/3, 3/4, 5/6				
Encryption	AES 128				
Support Indoor units	RAD PoE devices (9921-102X)				
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	Future support by software upgrade				
TDD Inter Site Synchronization	Supported through common GPS receiver per site (Future support by software upgrade)				
Supported Bands					
Band	CBW 10MHz [GHz]	CBW 20MHz [GHz]	CBW 40MHz [GHz]	CBW 80MHz [GHz]	Radio Compliance
5.4 GHz ETSI (default)	5.475-5.705	5.470-5.710	5.490-5.690	5.490-5.650	EN 301 893
5.8 GHz ETSI	5.735-5.865	5.735-5.865	-	-	EN 302 502
Mechanical					
ODU Dimensions	18.2(w) x 18.2(h) x 6.0(d) cm				
ODU Weight	0.5 kg / 1.10 lbs				
Power					
Power Feeding	Power provided over ODU-IDU cable				
Power Consumption	<12W				
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)				
Safety					
US/CAN (cTUVus)	UL 60950-1, UL 60950-22, CAN/CSA C22.2 60950-1, CAN/CSA C22.2 60950-22				
CE/IEC	EN/IEC 60950-1, EN/IEC 60950-22				
EMC					
FCC	47 CFR, Part15, Subpart B, Class B				
ETSI	EN 300 386, EN 301 489-1, EN 301 489-4				
CAN/CSA-CEI/IEC	CISPR 22-2010 Class B				

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## Point-to-Point Radio (Airmux-400A/ODU/F54E/350M/EMB)

Integrated Antenna	
Gain	16 dBi
VSWR	1.7:1
3 dB Azimuth Beamwidth	17 Deg. (Typ)
Polarization	Dual Linear (Vertical and Horizontal)
Sidelobes Level	-12 dB(typ)
Cross Polarization	-30dB (typ)
F/B Ratio	-25 dB
Port To Port Isolation	35 dB (typ)
Lightning Protection	DC Grounded
Antenna Pattern	
Elevation @ 5.6GHz	Azimuth @ 5.6GHz
	

### Ordering

#### Airmux-400A/ODU/F54E/350M/EMB

RAD Airmux-400A ODU, with an embedded antenna and connectorized for external antenna (2 x N-type), supporting multi frequency bands at 5.x GHz, factory default 5.4 GHz ETSI.