

LTI RPTR

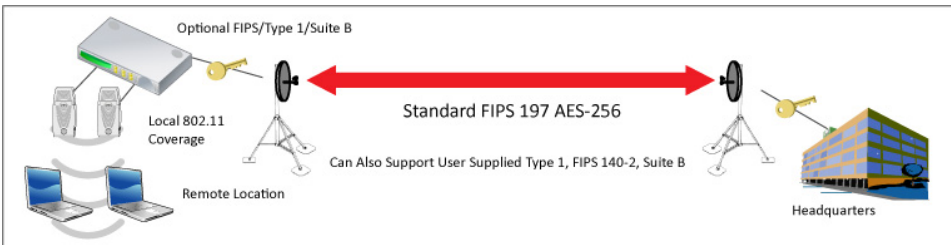
(R)apid (P)ortable (T)actical (R)each-back Module for Connection Anytime, Anywhere

To address the modernized warfighter's needs and the dynamic mission environment of First Responders and Federal Agencies, LTI DataComm has assembled a best of breed transportable Point-to-Point solution. When a branch office needs connectivity to headquarters, a natural disaster demands Emergency Response, or a military element is forward deployed without terrestrial reach-back, the LTI DataComm RPTR can support any user group, in any environment, with any Point-to-Point network requirement.

The Motorola PTP600 radios operate in the 5.4GHz/5.8GHz (unlicensed), 4.5GHz (Military), 4.9GHz (Public Safety), and the newly opened 2.5GHz (Military) spectra. The radios are capable of data rates up to 300 Mbps ranging from short range NLoS (Non Line of Sight) to very long range LoS (Line of Sight) through the unique combination of cutting edge technologies: MIMO (Multiple-Input Multiple-Output), i-OFDM (intelligent Orthogonal Frequency Division Multiplexing), Adaptive Modulation, Dual Polarized Antennas, and i-DFS (intelligent Dynamic Frequency Selection). The Motorola PTP 600 Wireless Ethernet Bridge offers the ideal solution for

LTI RPTR Kit Includes:

- 3 Motorola PTP600 radios (Full Link + Spare)
- Lightning Protection Units
- FIPS-197 AES Encryption
- 300ft CAT5e
- RJ45 Connectors
- Barrel Plug Weatherproof Connectors
- Link Alignment Tool Kit
- 3yr warranty
- Quick Start Guide



battle field communications, training/simulation networks, and public safety applications. This system out-performs comparable wireless systems by delivering high throughput and spectral efficiency while maintaining low latency. Using a standard web browser and audible tone for antenna alignment, the PTP 600 is simple to configure, deploy and manage. A standard SNMP interface supplies third-party network management. Embedded AES encryption is enabled to further secure transmissions. All active electronic components are conveniently packaged in a robust outdoor enclosure. DC or Mains power is fed to the outdoor unit via standard industrial quality cat5e cable connected to a robust PoE unit. Where spectrum resources are scarce, links can be synchronized via GPS reference to allow co-channel operation.

The LTI RPTR is a complete reach-back communications kit boasting ease of configuration, ultra-stable connectivity and maximum spectral efficiency – all in a rugged, factory-fitted transport case for Military, First Responders and Federal users in either fixed or portable environments.

Product Datasheet



RPTR54 Bridges

(5.4GHz Federal set-aside band)

- Backhaul for point-to-multipoint, WiMAX and mesh networks
- Building-to-building and campus connectivity
- Backbone operations
- Internet access and email
- Distance learning
- Voice-over-IP and video surveillance

RPTR45 Bridges

(4.5GHz DOD set-aside)

- Battlefield communications
- Public safety
- Video surveillance
- Border security
- Tactical military operations
- Training and simulation networks
- Building-to-building and campus connectivity
- Traffic backhaul

RPTR49 Bridges

(4.9GHz First Responder set-aside)

- Real-time access to missing-person images, DMV records, video feeds, medical data, blueprints, vehicle locations, evacuation routes and road closures, fire hydrant locations
- Video surveillance back-haul, Mesh nodes, and command centers
- Cost-effective ASTRO® LMR backhaul links
- DR, emergency svcs, special events
- Broadband overlay and last-mile access

Product Datasheet



J/F-12 approved:

45600, 54600, 58600

NIST Registered: 45600, 48600

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RADIO TECHNOLOGY

RF Band	4.4 – 4.6 GHz (2.5, 4.4-4.6, 4.9, 5.4, 5.8)
Channel Size	Configurable 5/10/15/30 MHz
Channel Selection/Dynamic Frequency Control	By <i>intelligent</i> Dynamic Frequency Selection (<i>i</i> -DFS) or manual intervention; automatic selection on start-up and continual adaptation to avoid interference
Transmit Power	Varies with modulation mode and settings from -10 dBm to + 25 dBm
System Gain	Integrated: Varies with modulation mode; up to 165.9 dB using 21.5 dBi integrated antenna Connectorized: Varies with modulation mode and antenna type
Receiver Sensitivity	Adaptive, varying between -98.78 dBm and -61.6 dBm
Modulation	Dynamic; adapting between BPSK and 256 QAM
Error Correction	FEC
Duplex Scheme	Time Division Duplex (TDD) and Half Duplex Frequency Division Duplex (HD-FDD) Dynamic or Fixed ratio
Antenna: type/gain/B/W	Integrated: Integrated flat plate 21.5 dBi / 11° Connectorized: Any commercially available single or dual polar antennas up to 40 dBi in gain
Range	Up to 200 km (124 miles) LOS, 5km (3.5 miles) NLOS
Security and Encryption	Proprietary scrambling mechanism; optional 128/256 Bit AES, FIPS 197, NIST Registered: 45600, 48600

ETHERNET BRIDGING & E1/T1

Protocol	IEEE 802.3
User Data Throughput	Dynamically variable up to 300 Mbps at the Ethernet (aggregate) 5 MHz Channel: Up to 45 Mbps; 10 MHz Channel: Up to 90 Mbps 15 MHz Channel: Up to 135 Mbps; 30 MHz Channel: Up to 300 Mbps
Latency (one way)	1 ms typical in 30 MHz channels; 1.2 ms typical in 15 MHz channels 1.5 ms typical in 10 MHz channels; 2 ms typical in 5 MHz channels
QoS	802.1p (2 Levels)
Interface	10 / 100 / 1000 Base T (RJ-45) – auto MDI/MDIX, optional 1000 Base SX
E1/T1 Interface	ITU-T G.703/G.704 G.823/G.824; Single T1/E1 in 10 MHz channels Single T1/E1 in 15 MHz channels; Dual T1/E1 in 30 MHz channels

MANAGEMENT & INSTALLATION

LED Indicators	Power status, Ethernet link status and activity
System Management	Web or SNMP v1/v2c using MIB-II, a WiMAX and proprietary PTP MIB; Canopy® Prizm
Installation	Built-in audio assistance for link optimisation
Connection	Distance between outdoor unit and primary network connection: up to 100 metres (330')

PHYSICAL

Dimensions	Integrated Outdoor Unit (ODU): Width 370 mm (14.5"), Height 370 mm (14.5"), Depth 95 mm (3.75") Case Size: TBD Powered indoor unit (PIDU Plus): Width 250 mm (9.75"), Height 40 mm (1.5"), Depth 80 mm (3")
Weight	Integrated ODU: 5.5 kg (12.1 lbs) including bracket PIDU Plus: 864 g (1.9 lbs) Total RPTR 3:1 Weight: 82 lbs
Power Source	90–240 VAC, 50–60 Hz / 36-60V DC; redundant powering configurations supported. Integrated; 55W Max Consumption

ENVIRONMENTAL & REGULATORY

Operating Temperature	-40°C (-40°F) to +60°C (+140°F), including solar radiation
Ingress Protection	IP65 (ODU), IP53 (PIDU Plus)
Humidity	100% Condensing
Protection and Safety	UL60950; IEC60950; CB
Radio	NTIA Red Book Section 5.3.3, J/F-12 approved: 45600, 54600, 58600
EMC	USA CFR 47 Part 15 Class B

OPTIONAL RPTR MAST SPECS

Dimensions	46.5 ft tall, 54x14x14 with carrying case
Weight	41.23 lbs (mast & Tripod), 33.80 lbs (accessory weight), 76.26 lbs total
Deployment	Load (unguyed): 10 lbs; Time- 1 person: 15 minutes
Wind Survival	70 mph

Solutions to Serve, Solutions for Service