LTU™ LR

DATASHEET

5 GHz PtMP LTU™ Long-Range Client Radio

Proprietary Ubiquiti® LTU Processor

Long-Range 26 dBi Antenna with High-Power InnerFeed®

10/20/30/40/50 MHz Channel Width Flexibility

Model: LTU-LR

Overview

Designed for long-range applications, the LTU LR is a 5 GHz subscriber station that functions as a CPE (Customer Premises Equipment) in a Point-to-MultiPoint (PtMP) environment with the LTU Rocket® as the basestation.

Proprietary LTU Technology

Based on Ubiquiti's LTU technology, the LTU LR is not impeded by the limitations of standard 802.11 Wi-Fi technology. Its custom LTU silicon and radio architecture provide up to 600+ Mbps[1] of real TCP/IP throughput and modulation rates of up to 4096QAM[2].

CPE Modes

The LTU LR supports both bridged and built-in hardware NAT router modes to suit your specific deployment.

Frequency Split

The LTU LR can use different frequencies for TX and RX to avoid interference.

Improved Noise Immunity

The LTU LR directs RF energy in a tighter beamwidth. With the focus in one direction, the LTU LR blocks or spatially filters out noise to improve noise immunity. This is especially important in an area crowded with other RF signals of the same or similar frequency.

Innovative Design

Ubiquiti's InnerFeed technology integrates the radio into the feedhorn of a 26 dBi antenna, so there is no need for a cable. This improves performance because it eliminates cable losses.

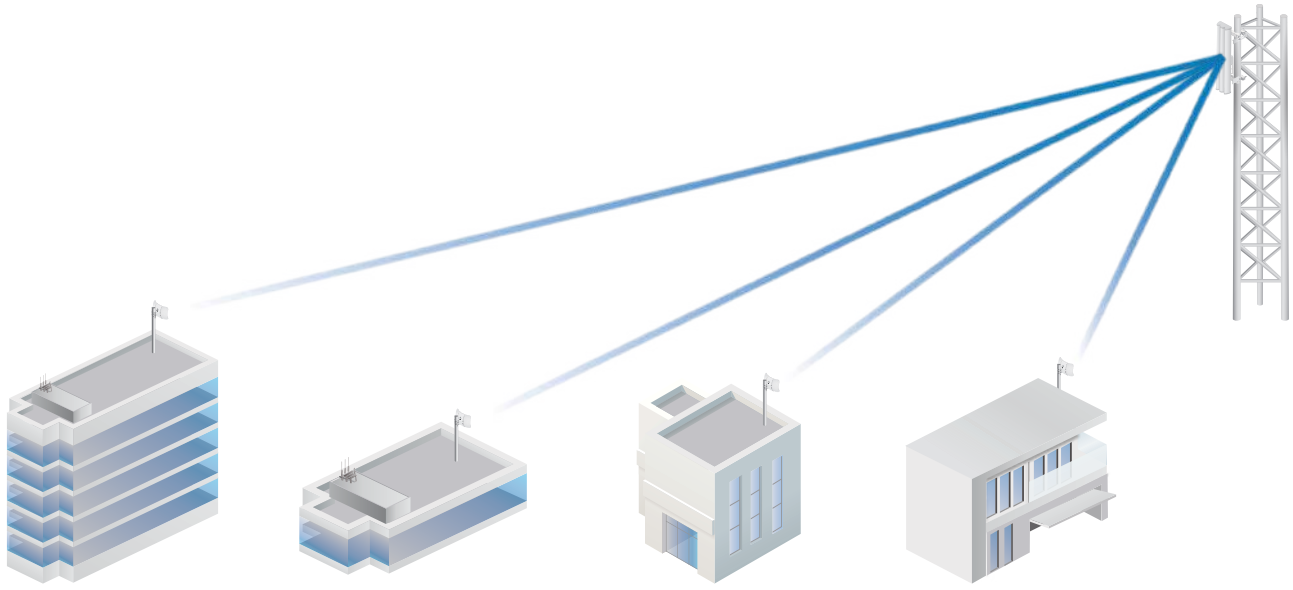
Quick Mounting and Alignment

The LTU LR features a large reflector size and easy elevation adjustment (azimuth is adjusted by rotation around the pole).

[1] *1+ Gbps with future firmware upgrade.*

[2] *Available with future firmware upgrade.*

Deployment Example



In a PtMP link, the LTU LR functions as CPEs to the LTU Rocket, which is paired with an airMAX® sector antenna.

Channel Width Flexibility

Channel width flexibility allows independent TX and RX channel frequency configurations anywhere within the radio band to avoid local interference. Channel width options include the following:

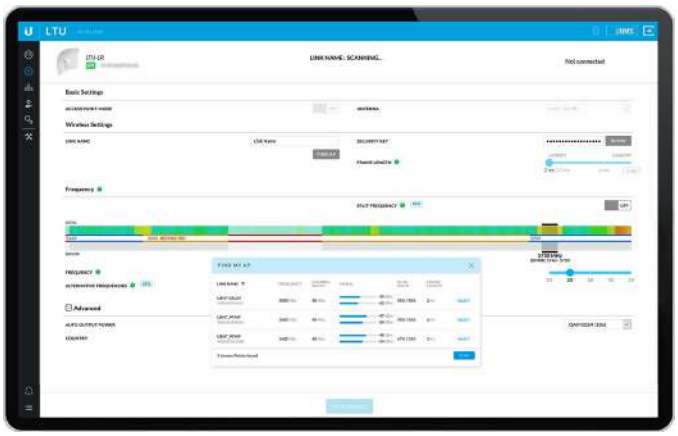
- 10 MHz
- 20 MHz
- 30 MHz
- 40 MHz
- 50 MHz
- Up to 100 MHz*

Auto Power Adjustments

By default, the Auto Output Power option allows the LTU LR to set the output power (EIRP) to the appropriate level.

Signal Control

The LTU LR's TX output power is controlled by the AP's target TX output power. A PtMP network can manage signal levels to enhance network stability and achieve optimal wireless performance with the highest possible modulation.



Convenient Configuration

To manage the LTU LR, you have two options: the LTU Configuration Interface and Ubiquiti Network Management System (UNMS™). Either option lets you manually configure the LTU LR.

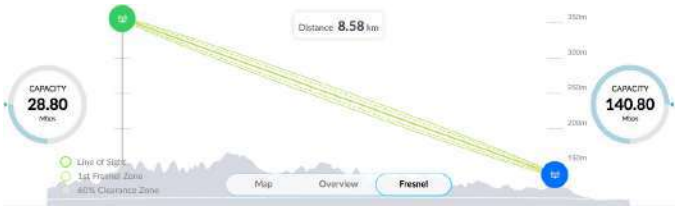
Within the LTU Configuration Interface, you can manually configure the LTU LR or manage it from the AP side using the Find My AP feature. The LTU LR will automatically scan for APs using the same channel bandwidth. Select the appropriate AP and then use it to configure the LTU LR.

* *Available with future firmware upgrade.*

LTU Configuration Interface

PtMP Dashboard

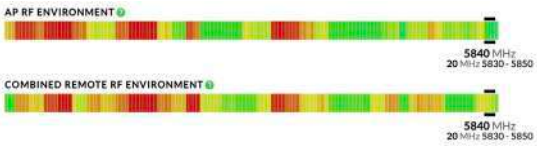
The Dashboard offers map and Fresnel views* so you can visualize the network. The map view shows your PtMP links overlaid on a geographic map, while the Fresnel view shows the link calculated for your selected CPE, including line of sight, first Fresnel zone, and 60% clearance zone.



New graphs provide instant status updates and help you to detect connectivity issues and their effects on PtMP performance:

- The airtime distribution bar graph displays in real time how much airtime each CPE is using. Click any point to view the airtime and link score for a specific CPE.

- The AP RF environment bar graph shows ambient RF noise levels across the frequency spectrum.
- The combined remote RF environment bar graph also shows ambient RF noise levels but for the combined environment of all of the remote CPEs.



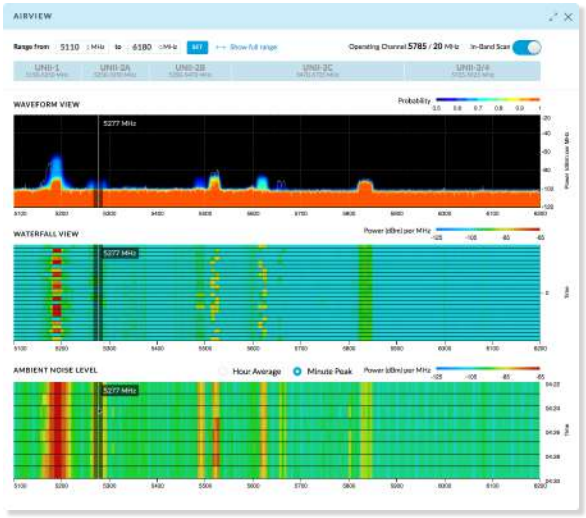
* *Available for models equipped with GPS.*

- The local and remote RX rate histograms show the receive modulation rates of the various CPEs.

Real-Time Spectral Analysis

airView® spectral analysis runs on a dedicated and independent receiver, which has excellent EVM (Error Vector Magnitude) performance.

The receiver can also perform other tasks, such as a search for channel occupancy, DFS detection, and automatic channel/frequency assignment. Calibration (signal level measurement accuracy) and resolution bandwidth options are enhanced. Spectral zoom (user-defined scan limits) is also available.



LTU™ LR

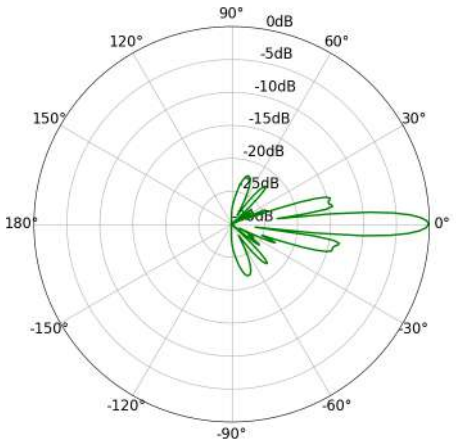
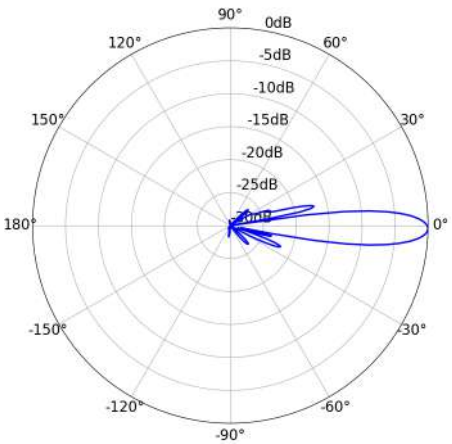
SPECIFICATIONS

LTU-LR	
Dimensions	512.5 x 385.75 x 258.3 mm (20.18 x 15.19 x 10.17")
Weight With Mount	1.360 kg (2.998 lb) 1.735 kg (3.825 lb)
Networking Interface	(1) 10/100/1000 Ethernet Port
Enclosure	Outdoor UV Stabilized Plastic
Max. Power Consumption	8.5W
Power Supply	24V, 0.5A Gigabit PoE Adapter (Included)
Power Method	24V Passive PoE (Pairs 4, 5+; 7, 8-)
Voltage Range	22 - 26V
Max. Conducted TX Power	22 dBm (per Chain)
Gain	26 dBi
Mounting	Pole-Mount (Kit Included)
Wind Loading	550 N @ 200 km/h (123.6 lbf @ 125 mph)
Wind Survivability	200 km/h (125 mph)
ESD/EMP Protection	± 24kV Contact/Air
Operating Temperature	-40 to 60° C (-40 to 140° F)
Operating Humidity	5 to 95% Noncondensing
Certifications	CE, FCC, IC

Operating Frequency (MHz)	
Worldwide	4800 - 6200*
US/CA U-NII-1 U-NII-2A U-NII-2C U-NII-3	 5150 - 5250 5250 - 5350 5470 - 5725 5725 - 5850

** Depends on regulatory region.*

Bluetooth LE Management Radio (MHz)	
Worldwide	2400 - 2483.5

Vertical Azimuth	Vertical Elevation
	
Horizontal Azimuth	**Horizontal Elevation**