

# MLTG-CN LR

## TERRAGRAPH PTP LONG-RANGE CLIENT NODE

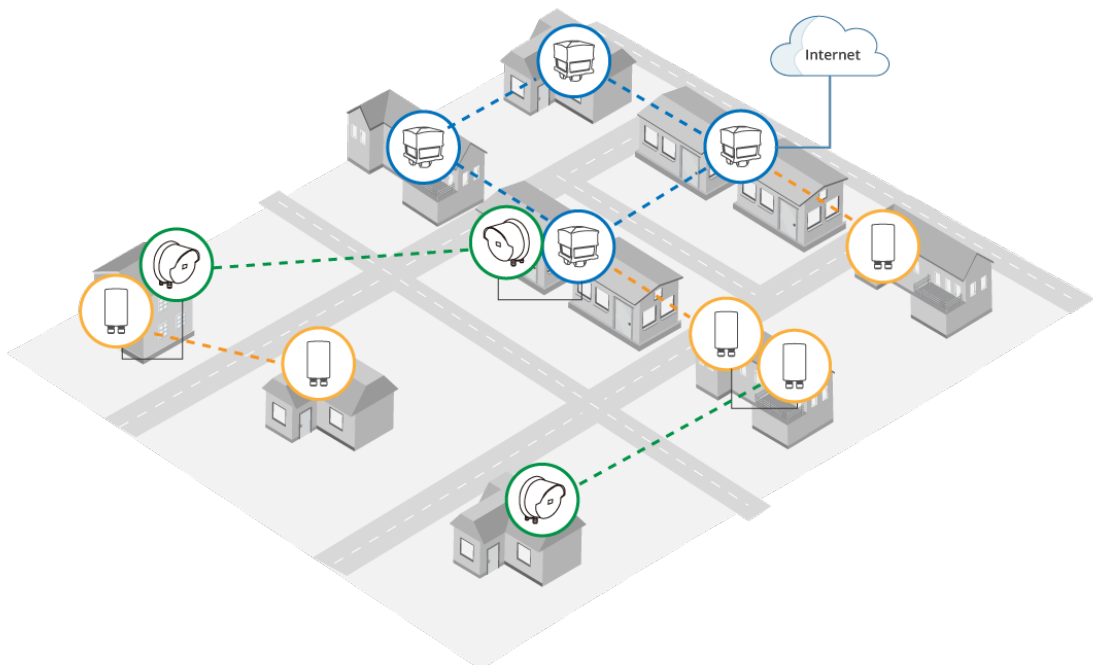


### INTRODUCTION

MLTG-CN LR is a Terragraph certified client node (CN). MLTG-CN LR supports IEEE802.11ay standard to deliver high-speed Internet in a noise-free and unlicensed 60GHz spectrum. With high-gain antenna and beamforming technology, MLTG-CN LR is suitable for long-range deployments. The range can reach up to 1 km when paired with MLTG-CN LR. And it can reach up to 700 meters when paired with MLTG-360.

MLTG-CN LR can be paired to quickly build long-range Point-to-Point (PtP) links for the backhaul or last-mile access, and deliver fiber-like multi-gigabit throughput.

When connected with MLTG-360, MLTG-CN LR can also function as a endpoint to provide last-mile wireless gigabit connectivity to the client site, such as warehouse, company building, or residential area.



MLTG-360



MLTG-CN



MLTG-CN LR

## APPLICATION

- Long distance PTP connection
- Fixed Wireless Access
- Fiber-like Gigabit speed to Home, MDU, and Enterprise
- Wi-Fi Hotspot Backhaul
- IoT / Surveillance Backhaul
- Small Cell Backhaul
- Security & Smart City Networks
- Wireless Business Services & Municipal networks

## SPECIFICATIONS

PHYSICAL	
<b>Power</b>	<ul style="list-style-type: none"> <li>• 24~57V passive PoE injector (DC terminal block)</li> </ul>
<b>Dimensions (L x W x H)</b>	<ul style="list-style-type: none"> <li>• 35.5 x 35.5 x 31.5 cm (13.98 x 13.98 x 12.40 in)</li> </ul>
<b>Weight</b>	<ul style="list-style-type: none"> <li>• 3 kg (6.61 lbs)</li> </ul>
<b>Interface</b>	<ul style="list-style-type: none"> <li>• 1x 2.5G Ethernet Port (PoE IN)</li> <li>• 1x SFP Port</li> <li>• 1x 60GHz Radio</li> </ul>
<b>Environmental Conditions</b>	<ul style="list-style-type: none"> <li>• IP66 Rating</li> <li>• Operating Temperature: -40°C (-40°F) to 60°C (140°F)</li> <li>• Storage Temperature: -40°C (-40°F) to 70°C (158°F)</li> <li>• Operating Humidity: 5% to 95% non-condensing</li> <li>• Wind Resistance: 210 km/h (sustained wind)/ 265 km/h (wind gust)</li> </ul>
<b>Power Consumption</b>	<ul style="list-style-type: none"> <li>• 15.9W max.</li> </ul>
<b>Antenna</b>	<ul style="list-style-type: none"> <li>• Type: Built-in phased array antenna with dish</li> <li>• Gain: 40 dBi</li> <li>• Scan Range: +/-3°</li> <li>• Beam Width: 1°</li> </ul>
<b>Mounting</b>	<ul style="list-style-type: none"> <li>• Pole mount</li> </ul>
<b>Certifications</b>	<ul style="list-style-type: none"> <li>• FCC/IC/CE/VCCI/TELEC</li> </ul>
RADIO	
<b>Standards</b>	<ul style="list-style-type: none"> <li>• 802.11ay</li> </ul>
<b>RF Output Power*1</b>	<ul style="list-style-type: none"> <li>• Up to 56 dBm*2</li> </ul>
<b>Frequency Band</b>	<ul style="list-style-type: none"> <li>• 57-66GHz (channel 1 to channel 4)</li> </ul>
<b>Channel Bandwidth</b>	<ul style="list-style-type: none"> <li>• 2160MHz</li> <li>• 4320MHz (available in future software release)</li> </ul>
<b>Modulation</b>	<ul style="list-style-type: none"> <li>• BPSK, QPSK, 16QAM</li> </ul>
PERFORMANCE	
<b>Range*3</b>	<ul style="list-style-type: none"> <li>• When connected to MLTG-CN LR: <ul style="list-style-type: none"> <li>• Up to 1km (0.62 mi) for MCS9</li> </ul> </li> <li>• When connected to MLTG-360: <ul style="list-style-type: none"> <li>• Up to 700m (0.43 mi) for MCS9</li> </ul> </li> <li>• When connected to MLTG-CN: <ul style="list-style-type: none"> <li>• Up to 500m (0.31 mi) for MCS9</li> </ul> </li> </ul>
<b>Throughput</b>	<ul style="list-style-type: none"> <li>• 3.6Gbps aggregated</li> </ul>

\*1: RF output power here stands for EIRP with antenna gain

\*2: Maximum power is limited by local regulatory requirements

\*3: Distance will vary depending on environmental factors

## KEY FEATURES

- Support channel 1 to channel 4 (57-66GHz)
- Up to 3.6Gbps bi-directional aggregate throughput
- High gain antenna with beamforming technology
- Snow accumulation avoidance design
- Support TDMA-MAC for dynamic bandwidth allocation
- Support Over-the-Air (OTA) Security with AES128 encryption
- Support QoS with 4 service classes
- Terragraph Client Node Mode**
  - Support Layer 2 forwarding with VXLAN tunnel
  - Support Layer 2 forwarding with native bridge
- Support Layer 2 Point-to-Point mode
- VLAN / Q-in-Q transparent
- Configurable management port
- Boot bank swap / reset to default by consecutive power cycle
- SNMP private MIB for link stats
- Diagnostic file collection
- LED for aiming indication and signal strength
- NMS management

## ACCESSORIES

PART NUMBER	DESCRIPTION
ICC-BRACKET-LR	<ul style="list-style-type: none"> <li>• Precision Bracket (Optional)</li> <li>• Pole mount</li> <li>• Vertical adjustable range: +/- 12 degree</li> <li>• Horizontal adjustable range: +/- 15 degree</li> <li>• Wind Survivability: 129 mph (208 kph)</li> </ul>
ICC-BRACKET-LC	<ul style="list-style-type: none"> <li>• Precision Bracket (Optional)</li> <li>• Pole mount</li> <li>• Vertical adjustable range: +/- 7.5 degree</li> <li>• Horizontal adjustable range: +/- 3 degree</li> <li>• Wind Survivability: 125mph (201kph)</li> </ul>
ICC-SCOPE-9x50	<ul style="list-style-type: none"> <li>• Alignment scope (optional)</li> <li>• 9x50 magnification</li> <li>• Only compatible with ICC-BRACKET-LR mounting bracket</li> </ul>
Picatinny Rail Bracket	<ul style="list-style-type: none"> <li>• Mounting platform for rifle scope (optional)</li> <li>• Standard picatinny rail</li> <li>• Dimension (L x W x H): 7.4 x 2.1 x 1.3 cm (2.9 x 0.8 x 0.5 in)</li> <li>• Only compatible with ICC-BRACKET-LR mounting bracket</li> </ul>