MULTIHAUL™ TG LR TERMINAL UNIT T280

Long Range Options in Terragraph deployments

The MultiHaul™ TG system marks the release of Siklu's 3rd generation point to multipoint 60GHz products, this one with Terragraph certification. The TG network solution consists of Nodes operating over millimetre waves in a redundant mesh topology which also connect to Terminal Units (TU). The T280 is Siklu's long range TG TU, compatible with the N366 in PtMP mode for additional distances to served locations. The T280 can also operate in PtP mode, 2 identical units on each site, for even longer distances. The T280 offers up to 3 ports with both copper and fiber interfaces as well as a PoE out to power a collocated N366 or any other 3rd party device.

A Wide Range of Applications

- Fixed 5G Wireless Access, Gigabit to the Home, the MDU and the Enterprise
- Wi-Fi Hotspot Backhaul
- Security / Safe City Networks
- Smart City Business Services, Municipal networks
- Small Cell Backhaul
- Fiber hand-off

Long Distance and High Capacity

The Long Range T280 provides deployment options like no other 60GHz radios, with the inherent capacity of the Terragraph links. A choice of 0.5ft, 1ft or 2ft antenna allows choosing the perfect solution for the most challenging long distance links, while allowing installation on roof tops, or on street furniture with its compact streamlined reflector antenna.

Flexibility for Demanding Applications

The MultiHaul™ TG LR Terminal Units operate over the millimetre wave spectrum, with a range of reflector antennas. This confers several advantages including multi-gigabit capacity in dense deployments. With 3 ports, RJ-45 up to 5GE or fiber up to 10Gbps, a multitude of service deliveries and interfaces can be realized to meet the need of any demanding application.

Always-On Mission Critical Networks

When you can't afford to lose a video stream, critical safe city sensor data or any other mission critical data, you need a wireless network that's as reliable and secure as fiber. With maximal immunity to interference and hacker-proof links with embedded AES encryption, MultiHaul™ TG delivers a network you can count on. With the mesh topology there are built in redundant paths for traffic if an outage occurs in a given link.

Simple Integrated Future-safe Terminal Unit

Wireless infrastructure should be simple, and future proof. Organizations want to quickly deploy a single box across the target neighbourhood, knowing that they have options to meet the interface requirements of any application. With a built in software configured ethernet switch, PoE out up to 65W for collocated CPEs, cameras or other devices, plus fiber termination, the T280 Unit can address all your applications.

Fiber Quality with Wireless Flexibility

Siklu's millimetre wave radios successfully combine the capacity of fiber with the flexibility, speed of deployment and low TCO of wireless networks. That is what makes them the world's best-selling millimetre wave radios every year since 2011. They provide rock solid performance, even in very dense networks or under severe weather conditions, in thousands of networks around the globe.

Highly Secure and Physically Immune Beams

The narrow beamwidth confers several advantages including immunity to interference and network jamming. In contrast to wide-beam wireless systems that need to use multiple strategies to perform in dense areas. Multiple subscribers and services can be connected with complete isolation based on physical port, VLAN ID and/or a Terminal Unit (in PtMP mode).

Ready Set Go

With auto-connect no laptop or mobile device needed, the T280 allows plug and play deployment in a very short time. It fits right into the PtMP management model of the serving N366 in PtMP mode, or operates with a single pane of glass in PtP mode, both units on the same screen.

MULTIHAUL™ TG LONG REACH TERMINAL UNIT T280

60GHz Long Range Terminal Unit Radio - specifications

The main specifications of the MultiHaul™ TG Long Range Units are outlined in the following table.

Topologies	Point to Point, Point to Multi-point, Daisy-chain, L2 SDN Mesh
Frequency & Duplexing	57-66GHz, TDD/TDMA, 4 channels.
Channel Bandwidth, Modulation & Adaptive Coding, TPC	2160MHz, BPSK to QAM16, up to 10 levels of hitless adaptive bandwidth, coding and modulation – boost gain by over 29dB. Automatic Transmit Power Control (ATPC), per link.
Radio OTA Rate (over the air) / Throughput	OTA up to 4,600Mbps (future release 9,200Mbps with channel bonding). Throughput 2,000Mbps aggregate (license upgradable to 3,800 Mbps agg.; future release up to 5,500 Mbps aggregate).
Antenna Options	0.5ft – 36dBi (future release 1ft – 42dBi, 2ft – 48dBi), field installable / replaceable (FRU). Effective distances, capacity and availability can be calculated with Siklu Link Budget Calculator lbc.siklu.com
Transmit power	+13dBm at the antenna port (note: transmit power is backed off at modulations > MCS9)
Interfaces (3 ports)	1x RJ-45 5G2.5/1GbE with PoE-In, 1x RJ-45 1GbE with PoE-Out (55W), 1x SFP+ 10GbE.
Ethernet Features	IEEE 802.1d transparent bridging, VLAN tagging and isolation, Provider bridge - VLAN stacking.
Security	AES 128-bits OTA, GUI over HTTPS, CLI over SSH.
Out of the Box	Factory configuration PtP mode (T280 <> T280). Field configuration to PtMP mode (N366 <> T280, with future SW upgrade).
Management & Provisioning	In-band, Out-of-band management, Web GUI (one-pane configuration of local and remote units) & Embedded CLI, NETCONF.
PoE-Out	1 port, 55W POE-Out (IEEE 802.3bt)
Conformance	Radio: US FCC 47 CFR Part 15.255; EN 302 217, EMC: US FCC 47 CFR Part 15; EN 301 489, Safety: UL/IEC 62368-1; UL/IEC 60950-22.
Terragraph	Terragraph certified.
Power Supply	PoE-In (IEEE 802.3bt or passive), or 48V DC (via RJ-45 adaptor), 35W no POE-Out, 90W with 55W POE-Out.
Environmental	Operating Temperature: -49° ÷ +131°F (-45° ÷ +55°C); Ingress Protection Rating: IP67.
Dimensions	6.5 x 9 x 2.5 in. / 165 x 230 x 650 mm. (W x H x D), antenna not included.
Weight	7.7 lbs. / 3.5 Kg, antenna not included.
Accessories	External Antenna, Mounting Kit, Power Supply – not included.

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