MULTIHAUL™ TG NODE N366

60GHz 4-Sector wireless L2 SDN mesh Node Datasheet

MultiHaul™ TG- Node N366 Complete 360-degree coverage in one unit for Terragraph deployments

The MultiHaul™ TG system marks the release of Siklu's 3rd generation point to multipoint 60GHz products, with Terragraph certification. The solution consists of Nodes operating over millimetre waves in a redundant mesh topology which connect a suite of Terminal Units (TU). The MultiHaul™ TG family of products brings the advantages of mmWave spectrum – multi-gigabit capacity, immunity to interference and massive amounts of available spectrum - to an easy to deploy solution with the addition of L2 SDN mesh, enabled by Siklu's SmartHaul™ Runner application, for stress-free coverage extension and multi-path reliability. MultiHaul™ TG Node, N366, is the ideal solution for scalable deployments across neighbourhoods and business environments.

A Wide Range of Applications

- Fixed Wireless Access, Gigabit to the Home, the MDU and Enterprise

- Security / Safe City Networks

- Wi-Fi hotspot backhaul

- Smart City Business Services, Municipal Networks

- Small Cell backhaul

High Capacity and Flexibility for Dense Deployments

The MultiHaul™ TG Nodes operate with 4 independent sectors over the millimetre wave spectrum using narrow beams. This confers several advantages including multi-gigabit capacity in dense deployments. With 4 independent high-gain beam-forming antennas, a multitude of network topologies can be realized to optimize coverage, capacity and performance.

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.

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. An additional layer of reliability is available through the L2 self-organizing (SON) capabilities enabled by SmartHaul™ Runner, enabling automatic reorganization and rerouting around site failures.

Ready ~~Set~~ Go

The plug and play integrated node is designed for an easy single person installation. The patent-pending scanning antennas automatically aligns with other Nodes or with TUs. For buildings with difficult roof-top access, a single Node is installed on its roof to serve multiple locations.

Simple Integrated Future-safe Multi-Functional Node

Wireless infrastructure should be simple, and future proof. Organizations want to quickly deploy a single box across the target neighbourhood, knowing that this infrastructure will address the needs of self-backhaul, distribution, local services, redundancy, SLA enforcement, with enough horse power to scale the bandwidth and accommodate new features over the foreseeable future, achieving a long and useful life time.

MULTIHAUL™ TG NODE - N366

60GHz 4-Sector wireless L2 SDN mesh Node Specifications

The main specifications of the MultiHaul™ TG Nodes are outlined in the following table.

Topologies	Point to Multi-point, Self-Backhaul L2 SDN Mesh Point to Point
Sector(s)	Up to 4x 90° sector, for 360° coverage (license dependent). Horizontal scanning: 90°, per sector. Vertical scanning: 50°.
Frequency & Duplexing	57-66GHz. TDMA, Managed TDD, Terragraph certified.
Channels & Width	4x non-overlapping channels, 2160MHz wide. Any sector any of 4 channels, for optimal RF performance.
Modulation & Coding	10 level of adaptive coding and modulation
Radio OTA Rate (over the air)	Up to 4600 Mbps.
Aggregate Throughput	> 3800 Mbps per sector (license dependent) > 15Gbps per node
System Gain (link budget)	110dB (Node to Node/TU, including antenna gain)
Typical Reach (Node to Node/TU)	1000ft. (300m) Detailed performance calculations - see Siklu's online link budget calculator: lbc.siklu.com
Interfaces	3 ports: 1x RJ-45 1/2.5/5/10GbE with PoE-In, 1x RJ-45 1GbE with PoE-Out (35W), 1x SFP+ 10GbE
Ethernet Features	IEEE 802.1d transparent bridging. Provider bridge - VLAN & VLAN stacking.
Security	GUI over HTTPS, CLI over SSH, AES 128-bits over the air.
Management & Provisioning	In-band, Out-of-band management. Web GUI (one-pane configuration of local and remote units) & Embedded CLI. NETCONF.
Conformance	Radio: US FCC 47 CFR Part 15.255; EN 302 567. EMC: US FCC 47 CFR Part 15; EN 301 489; Safety: UL 62368.
Power Supply	PoE, 55W no POE-Out, 90W with POE-Out (PoE-In: IEEE 802.3bt or passive; PoE-Out: IEEE 802.3bt)
Environmental	Operating Temperature: -49° ÷ +131°F (-45° ÷ +55°C); Ingress Protection Rating: IP67
Dimensions	9.4 x 7 in. / 238 x 179 mm. (height x diameter)
Weight	8.8 lbs. (4 Kg)

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