Scalable Options in Terragraph Deployments
MULTIHAUL™ TG 90° NODE N265

The MultiHaul™ TG system marks the release of Siklu-by-Ceragon's 3rd generation point to multipoint 60GHz products, this one 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-by-Ceragon's SmartHaul™ Insight NMS with the Runner subsystem, for stress-free coverage extension and multi-path reliability. MultiHaul TG Node N265 is an additional Node option when either significant vertical tilt adjustment or a focused 90° coverage is required.

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

Flexibility in Radio Coverage

The MultiHaul TG N265 introduces targeted coverage flexibility to the TG series. Whether you need a 90° sector for corner-pole camera backhaul or an aggressive down-tilt to link buildings from a high-rise rooftop, the N265 delivers reliable connectivity for diverse urban and industrial layouts.

Always-On Mission Critical Networks

In a world of mission-critical data, connectivity must be absolute. MultiHaul™ TG provides a fiber-like foundation for Safe City sensors and vital video surveillance, hardened by embedded AES encryption to keep links hacker-proof.

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 horsepower to scale the bandwidth and accommodate new features over the foreseeable future, achieving a long and useful lifetime.

Fiber Quality with Wireless Flexibility

Ceragon's millimeter 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 millimeter 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 relate to complete isolation based on physical port, VLAN ID and/or a Terminal Unit.

Ready ~~Set~~ Go

The plug and play node is designed for an easy single person installation. The patent-pending scanning antennas automatically aligns with other Node(s) or served Terminal Units.

MULTIHAUL™ TG NODE N265

60GHz 90° Wireless Mesh Node Specifications

Topologies	Point to Point, Point to Multi-point, Self-Backhaul L2 SDN Mesh.
Frequency & Duplexing	57-66GHz, TDD/TDMA. 4 channels.
Channel Bandwidth, Modulation & Coding, ATPC	2,160MHz, BPSK to QAM16, up to 10 levels hitless adaptive 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 4,600 Mbps, Throughput ≤ 1,900 Mbps full duplex
System Gain (link budget)	110dB (Node to TU, including antenna gain). Please refer to Ceragon SmartHaul™ Link Budget Calculator (lbc.ceragon.com) for radio link performance models
Sector	Scanning: horizontal 90°, vertical 25°. Mechanical tilt adjustment ±10° with supplied MK, ±60° with optional EH-MK-SM; Links: up to 15 inks, up to 1 mesh links (out of the 15 links).
Network synchronization	On-board internal GPS / GPS-less mode supported
Interfaces	3 ports: 1x RJ-45 10/5/2.5/1GbE with PoE-In, 1x RJ-45 1GbE with PoE-Out, 1x SFP+ 10GbE.
Ethernet Features	IEEE 802.1d transparent bridging, IEEE 802.1q Virtual LAN, IEEE 802.1ad Provider bridge VLAN stacking.
Security	AES 128-bits OTA, GUI over HTTPS, CLI over SSH, file transfer over SSH.
Management & Provisioning	In-band, Out-of-band management; Web GUI (one-pane configuration of local and remote units) & Embedded CLI; NETCONF, SNMP.
PoE-Out	1 port PoE-Out, ≤63W (with AC PoE adapter); ≤66W (with DC PoE adapter); IEEE 802.3bt; Cable loss may affect power delivered to the PD.
Power Supply	48V DC input power via ETH1, options are; direct DC (with optional RJ45 property DC adapter) or PoE-In (IEEE 802.3bt or passive); Available PoE-In adapters: AC (60W or 90W) / DC (up to 95W); Power consumption: Without POE-Out ≤27W; With PoE-Out enabled: ≤90W (with AC POE-In adapter) / ≤93W (with DC POE-In adapter).
Terragraph	Terragraph certified.
Conformance	Radio: US FCC 47 CFR Part 15.255; EN 303 722, EMC: US FCC 47 CFR Part 15; EN 301 489, Safety: UL/IEC 62368-1; UL/IEC 60950-22.
Environmental	Operating Temperature: -49° ÷ +140°F (-45° ÷ +60°C); Ingress Protection Rating: IP67.
Dimensions	6.9 x 8.6 x 4.9 in. / 175 x 220 x 125 mm. (W x H x D).
Weight	4.84 lbs. / 2.2 Kg.
In the Box	N265 with attached mounting kit, metallic bands, grounding cable, 1x AWS (All Weather Shell), quick start guide;

Ordering Information

VEHP345	MH-N265-CCP-PoE-MWB	**MultiHaul™ TG Node**, 90°, 3800Mbps, 1 RJ-45 10GE & 1 RJ-45 1GE & 1 SFP+ 10GE, Mounting Kit included, IP-67, White
VEHM028	EH-MK-SM	Extended elevation mounting kit up to +60/-45°
VPSU113	AX-IN-10G-90W-AC-PoE	PoE Injector 90W, 10Gbps (100-240V AC source)
VSRG014	AX-SRG-10G-OD	10 GbE Ethernet/PoE Surge Protector (outdoor) 802.3ab/bz/an
VSFP021	AX-SFP+10G-SM	SFP+ 10Gbps SMF, 1310nm, LC connector

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