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## NETWORK DESIGN FOR MULTIHAUL<sup>TM</sup> TG

### **Starring SmartHaul<sup>™</sup> WiNDE**

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DEFE

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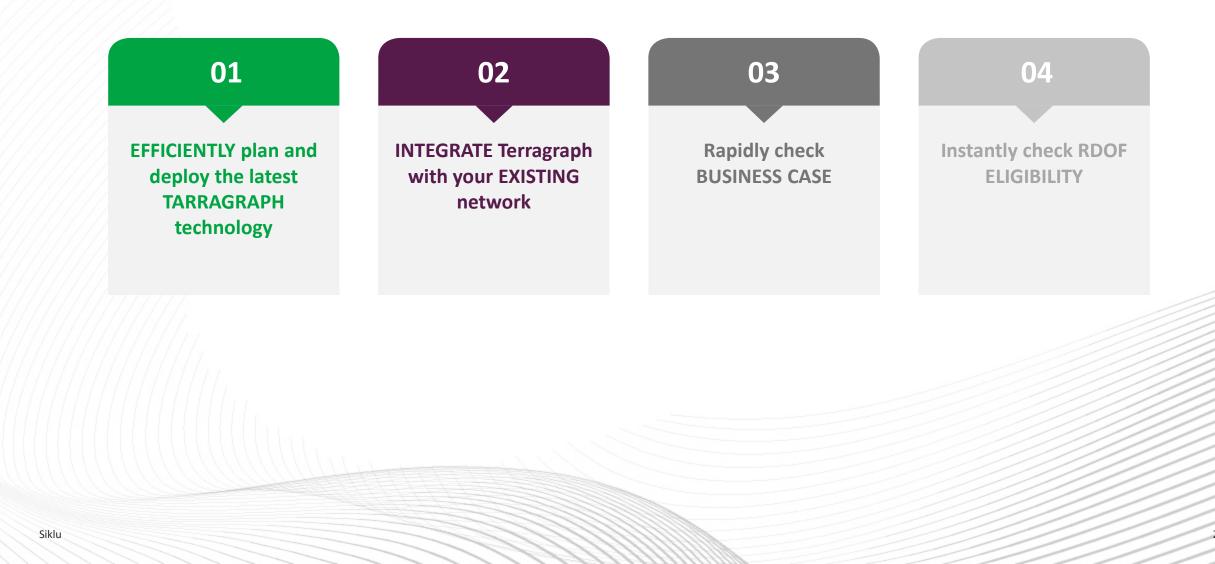
## Content/Agenda

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Summary and Q&A	00





## In This Webinar You Will Learn



## About Siklu

## Company Snapshot

Siklu is a leading player in mmWave solutions

Founded:

2008

### **Employees:**

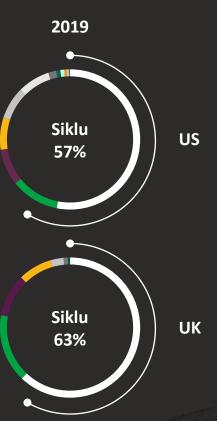
+100; Headquarter in Israel; Presence in USA, CALA, EMEA and APAC

Technology:

Groundbreaking all-silicon innovations, mastering the art of millimeter waves fixed wireless networks

Al tools and apps for planning and design of Fixed 5G mmWave networks.

Leading E Band vendor in the US and the UK According to FCC & OFCOM



Most Comprehensive mmWave offering



60GHz V-band PtMP

V-band PtP

60GHz

60GHz V-band mesh with SON/SDN

70-80Ghz E-band PtP

Network Design and Operations Tools **Most Deployed Links** 



Countries

100K+

Deployed

250+

**Smart Cities** 



Patents

## Key Applications for MultiHaul<sup>™</sup> TG

Gigabit capacity is a key enabler of the connected society

#### **Smart Cities**

Municipal Networks



Video Security



IoT Wireless





Public Safety



Critical Infrastructure



Education



Small Cell & Mobile BH



**Enterprise Connectivity** 



Public Wi-Fi



Community Connectivity



**Residential SFU** 



**Rural Connectivity** 











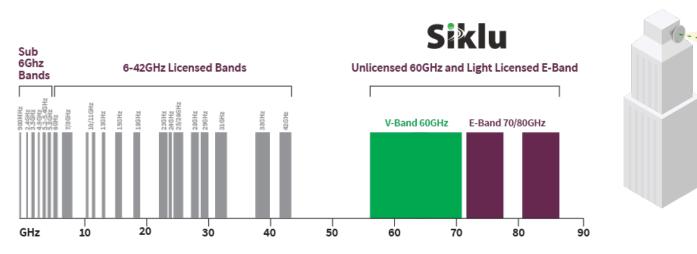
## mmWave technology



### What is mmWave Wireless?

Widest spectrum - High capacity!

### Narrow beams - No Interference!



5.8GHz: >10° E=Band: <1° E-Band (70/8 GHz) V-Band (60 GHz) Lightly licensed , 10GHz Unlicensed, 14GHz



## Building blocks and topology

## Siklu Building Blocks

E-band and V-band PtP / PtMP / Mesh products



Roof Top High-Capacity Point-to-Point

- Up to 10Gbps full duplex capacity
- 3 mi / 4.8 Km Range ( 6 mi / 9.6 Km with ExtendMM<sup>™</sup>)
- Different Antenna sizes



Street-level Point-to-Point

- Internal Switch with Dual PoE-Out
- Up to 1Gbps aggregated capacity
- 0.6 mi / 1 Km Range



Street-level Point-to-Multi-Point

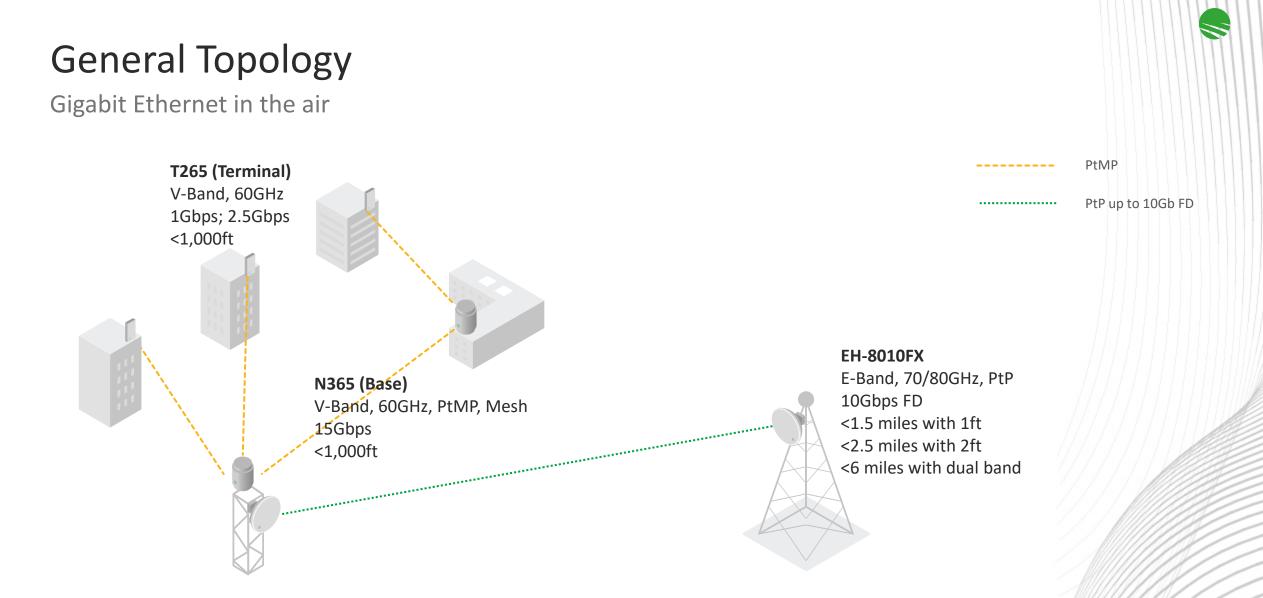
- Auto alignment with no setup
- Up to 1.8 Gbps aggregated capacity
- ≤ 0.25 mi / 400 m Range

#### terragraph certified



Street-level and Roofs L2 SDN Mesh

- Self-Organizing (SON) with SDN
- Auto alignment with no setup
- Up to 16 Gbps aggregated capacity
- ≤ 0.3 mi. / 450 m Range



## Multihaul TG





## MultiHaul<sup>™</sup> TG N366 (Base)

60GHz, PtMP, Mesh unit

Architecture	4 independent sectors, integrated in a single box Mesh support (self backhauling)	
Capacity	Per sector: 3.8Gbps L2; Roadmap: 5.5Gbps (CB2) Per node: +15 Gbps	
Channels	4 channels	
Distance	200/450 meters; 650/1,400 ft	
Interfaces	10/1GbE SFP+ 1/2.5/5/10GbE copper (802.3bz/an) 1GbE (copper)	
Networking	Managed TDD wireless L2, QoS	
Power consumption	55W, PoE 802.3bt	
Dimensions	7" x 9.5"	



## MultiHaul<sup>™</sup>-TG Terminal Units T265

60GHz

Capacity	1Gbps L2 Roadmap: 2.5Gbps	
Channels	4 channels	
Distance	200/450 meters; 650/1,400 ft	
Interfaces	1GbE or 1GbE, 2x RJ-45 (2.5GbE, 1GbE) & SFP+ (10/1GbE)	
Networking	Managed TDD wireless L2, QoS	
Power consumption	35W, PoE 802.3bt; PoE Out up to 55W	
Dimensions	6.5" x 9" x 2.5"	IIIIIII.





## MultiHaul<sup>™</sup> TG Advantages

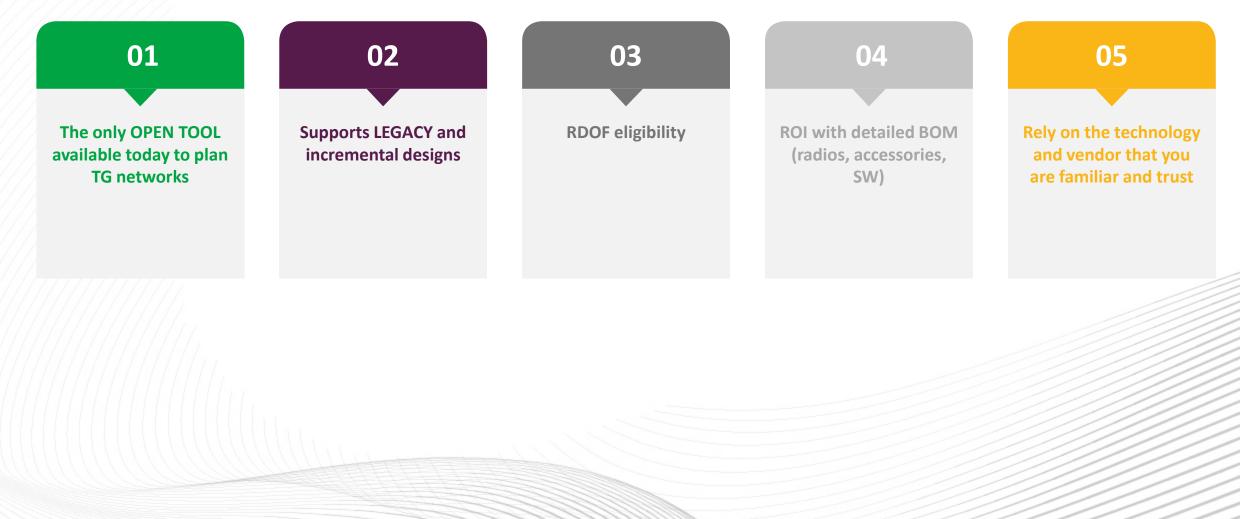
The best TG certified product in the market

	What's in there for the Service Provider?	Why MultiHaul™ TG?
Deployment & Operation	Lowest cost deployment, suitable for inexperienced installers Lowest footprint and power consumption per home served Doesn't require L3 networking expertise	No alignment – 360deg coverage Multiple mounting options Single cable installation No boxes interconnects, embedded switch
Networking & Performance	Best in-class latency, PPS, and throughput Best in-class radio performance	Native L2 architecture Strongest NPU Siklu's proprietary antenna module
Backward Compatibility	Known network debug and management tools Won't require specific knowledge Won't require heavy IT integration	No proprietary protocols IPv4 management No need for a network controller or IPv6 at the edge Native security protocols support
Time to Deploy	Fastest time to activate customers and rollout network	Out of the box operation without the controller Standard users' activation methods
Deployment flexibility	Meets the business case	6 types of terminal units Simple, low-cost interface with Backhaul (EH-8010)
Reliability	Simpler network - Lowest OPEX Highest industry reliability	Operates without controller – less elements Operates with unstable GPS signal Unprecedent integration and factory testing
Other	No operational risks	Country of origin: Israel China

Designing a MultiHaul™ TG Network



## SmartHaul<sup>™</sup> WiNDE



## **06** Q&A



Contact Us



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