

Street-level gigabit V-band radios

Typical Applications

- Safe/Smart City Networks
- Business Broadband
- Wi-Fi Hotspot Backhaul
- Gigabit to the Home (GTTH)
- Small Cell Backhaul

Gigabit Throughput on Every Street

The EtherHaul™-600 series delivers up to 1 Gbps in a form factor that is small enough and rugged enough to be deployed at street level on poles and light fixtures. With the EH-614, Siklu offers a model that can tune from 57GHz up to 71GHz covering 14GHz of spectrum in a single product. When operating in the upper 60GHz portion of the band, distances can be achieved that are as much as 50% further than operation in the lower bands due to the absence of oxygen absorption.

Interference-Free Operation and Scalable Deployments

The unlicensed 60GHz V-band spectrum avoids interference typically seen in unlicensed bands through a combination of means. With 7 to 9GHz allocated around the world and 14GHz in the US and the UK, there is ample spectrum for mass, dense deployments. The V-band is also characterized by pencil-thin beams, meaning a small amount of spatial separation is often enough isolation, allowing aggressive frequency reuse schemas of the 14 full-capacity non-overlapping channels.

Robust Carrier Class Construction

The all-weather IP-67 sealed radio guarantees carrier–grade performance under even the harshest weather conditions. Designed to operate in temperatures from -45°C to +55°C this product has been deployed around the world from Siberia to Texas. Carrier class specifications are backed up by an MTBF measured in decades not years.

Streamline Operations with Carrier Ethernet & Synchronization

The EH-600/614 both have MEF-compliant integrated Carrier Ethernet switches. This helps streamline operations with configurable service-aware QoS, bandwidth management and OAM. For mobile operators, optional built-in timing synchronization with Sync-E and 1588v2 ensures smooth performance over packet based backhaul networks. With a built in switch, customers avoid additional boxes, power supplies etc and can leverage not only the layer 2 features but can be powered from a PoE out port on the radio.

Easiest Installation & Management

Virtually any installer can deploy the EH-600/614 with very little training or experience. Physical installation from opening the box to passing traffic can be as little as 15 mins when using pre-configurations loaded into the radio. Once deployed advanced configuration is available via an intuitive web GUI, while additional services may be remotely activated from a NOC. An IPERF integrated TCP and UDP load tester, and a spectrum analyzer, streamlines commissioning and troubleshooting.

Exceptional Value

With minimal deployment costs and virtually no maintenance, the EH-600 series minimizes Total Cost of Ownership (TCO) and provides a Return On Investment (ROI) often measured in months, providing an unbeatable price/Mb. A single part number supports both 57-67/71GHz (EH-600/EH-614) reducing TCO further with simplified inventory while benefiting from extended range achievable with the upper 60GHz spectrum.

Field Proven Technology

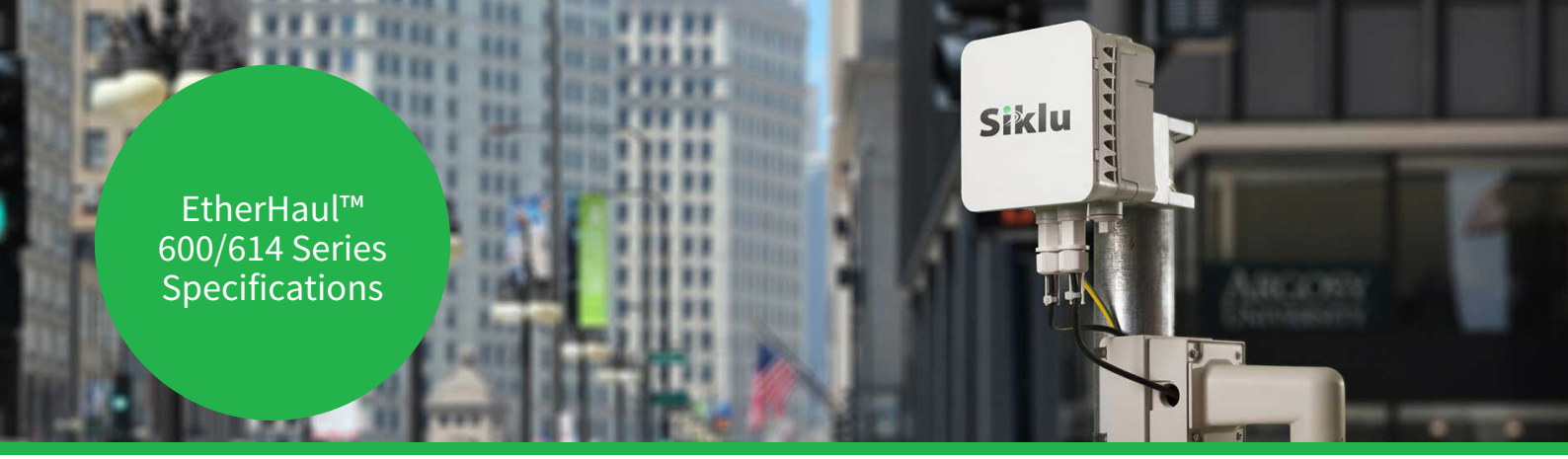
EtherHaul™ is the world's bestselling millimeter wave radio. Tens of thousands of units have been deployed and are performing reliably in stringent weather conditions all over the globe. The EH-600/614 incorporates Siklu's integrated all-silicon technology, which increases reliability while reducing size and cost. The result is a small form factor radio with a proven 90-year MTBF and an unbeatable price/throughput.



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EtherHaul™ 600/614 Series Specifications

		EH-614TX	EH-600TX	EH-600T
Frequency & Duplexing	57-66GHz, TDD 57-71GHz, TDD	√	√	√
Channels	125/250/500MHz wide, 11 non-overlapping channels 125/250/500MHz wide, 14 non-overlapping channels	√	√	√
Modulation & Adaptive rate	5 level of hitless adaptive bandwidth, coding and modulation - boost gain by up to 25dB	Up to QAM 64	Up to QAM 64	Up to QAM 64
Throughput [Mbps]	Aggregated throughput up to	1000	1000	1000
Link budget (BER=10^{-6})	Including integrated 36dBi antenna gain	162dB	162dB	162dB
Interfaces	3xGbE copper ports	√	√	√
Ethernet features	IEEE 802.1d transparent bridging VLAN & VLAN stacking, 4K VLANs MEF 9, 14 and 21 compliant Ethernet services Smart Pipes Transparent Ports Mode Link aggregation: LAG and LACP (IEEE 802.3ad) Ethernet Ring Protection Switching: ITU-T G.8032 ERPS Link state propagation 16KB Jumbo frames Configurable QOS-aware forwarding 8 level H-QoS with multi mapping options: L2: 802.1p, VLAN id., L2½: MPLS EXP, L3: DSCP	√	√	√
Timing	Synchronous Ethernet and 1588v2 TC	√	-	√
Encryption	AES 128-bit and 256-bit	√	√	√
Management & provisioning	Zero-touch turn up; In-band, out-of-band management Web GUI (one-click configuration of local and remote units) & Embedded CLI SNMPv2/3, TACACS+, RADIUS Link OAM & Connectivity Fault Management (CFM): IEEE802.3ah & IEEE802.1ag; performance monitoring: ITU-T Y.1731 IPERF TCP/UDP capacity tester	√	√	√
Topologies	Ring, daisy-chain, mesh	√	√	√
Conformance	Radio: FCC Part 15.255, ETSI EN 302 217-3 & UK IR 2078 & IR 2000; EMC: USA FCC 47CFR.part 15 & ETSI EN 301 489; Safety: UL/EN 60950	√	√	√
Power supply	PoE+ (IEEE 802.3at), 26W without PoE-Out; up to 78W with PoE-Out	√	√	√
PoE-Out	Port 2 and Port 3 (IEEE 802.3at): 26W+26W / 13W+40W / 50W+0W	√	√	√
Environmental	Operating Temperature: -45° to +55°C (-49° to +131°F) Ingress Protection Rating: IP67	√	√	√
Dimensions	ODU + 0.5ft antenna: 5.9” x 6.1” x 3.5” (16.5 x 16.5 x 10cm)	√	√	√
Weight	ODU + 0.5ft antenna: 3.9 lbs. (1.8 kg)	√	√	√

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