Metnet 60G

mmWave (60GHz) Mesh Node

Gigabit Mesh Low TCO

Benefits

- Double the Capacity and Up to 4X the Reach
- Gigabit Service Delivery Up to 500m
- Support for Channels 1-6 Delivering 90% Lower atmospheric attenuation
- 50% Greater Channel Selection Delivering Highly Reliable Connectivity
- 4X the Number of Clients Supported (Up to 120 Nodes or CPE)
- 80% Lower Power Draw Per Gigabit Connection

Overview

The Adtran Metnet 60G mmWave backhaul and access mesh solution enables service providers to rapidly expand gigabit coverage at the lowest cost per gigabit connection, while delivering reliable connectivity in all weather conditions. Operating in the high-band mmWave spectrum from 57GHz to71GHz, the Adtran Metnet 60G mesh node is designed to enable rapid deployment of gigabit connectivity to hundreds of homes, businesses, 5G backhaul and smart city applications.

Industry-Leading Performance

The Metnet 60G mesh node is a high-capacity (up to 15.2Gbps) unit that supports all six channels (1-6), flexible channel selection and dynamic bandwidth allocation, ensuring faster and more reliable gigabit coverage. One or more of the Metnet 60G mesh nodes can be connected into the core network using dual 1G or 10G fiber, and the Metnet 60G nodes form automatic multi- gigabit backhaul links to neighboring nodes, and in combination with the Metnet 60G Customer Premises Equipment (CPE), enable delivery of residential or business-class gigabit services up to one-third of a mile (500 m). In addition, the Metnet 60G mesh nodes support multi-gigabit backhaul for Gfast DPUs, public Wi-Fi hotspots or CCTV surveillance. The Metnet solution is also ideal for 4G/5G small cell backhaul, offering low-latency, high-capacity backhaul links, with QoS and clock synchronization.

Each Metnet 60G mesh node supports up to 120 CPE or node links, simplifying network scaling and coverage.

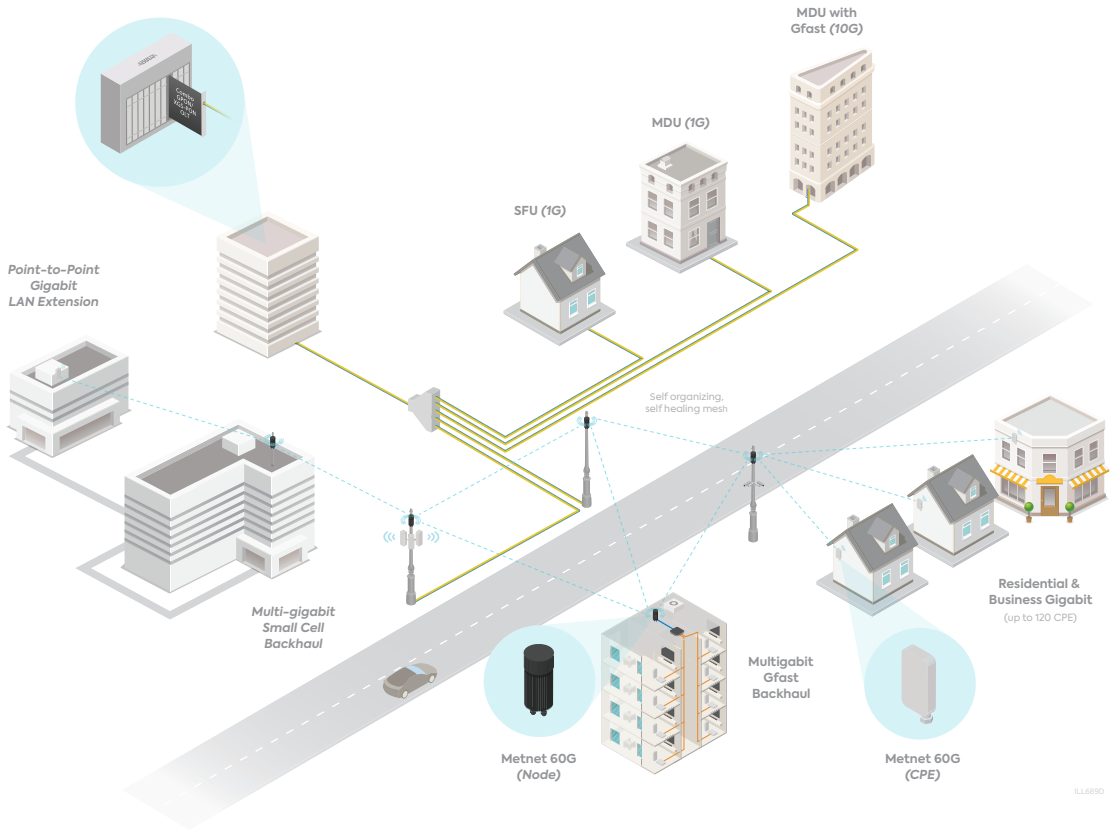### Industry First Self-Organizing Network

The Metnet 60G solution is built on the industry's first self-organizing and self-healing network (SON) technology delivering advanced interference avoidance to continuously optimize network performance. The Metnet 60G connect autonomously to form Multipoint-to-Multipoint mesh links with neighboring nodes, enabling rapid time-to-market with broadband services. When new nodes are added, the system automatically reorganizes and realigns, enabling faster scaling of the network. In addition, self-organizing, self-healing links automatically reroute traffic in the event of a node failure or line-of- sight obstacles.

Faster Deployment

The Metnet SON technology simplifies network deployment enabling service providers to rapidly install and begin offering revenue-generating services. Each node has a wide 300-degree field of view, and can be installed in less than 15 min- utes, with no radio planning or node alignment, allowing for installation by field technicians rather than highly technical RF planners. In addition, the Metnet 60G is the smallest radio of its kind in the industry. Its small size allows for discrete installation on street lights, sides of buildings, or roofs.

Adtran Metnet 60G nodes are fully FCC and EU/CE certified to leverage the license-free 60GHz spectrum.

METNET 60G

Point-to-Point
Gigabit
LAN Extension

MDU with
Gfast (10G)

MDU (1G)

SFU (1G)

Self organizing,
self healing mesh

Multi-gigabit
Small Cell
Backhaul

Residential &
Business Gigabit
(up to 120 CPE)

Metnet 60G
(Node)

Multigabit
Gfast
Backhaul

Metnet 60G
(CPE)

ILL6890

Product Specifications

Mesh Radio Specifications	
Frequency Band	57GHz to 71GHz band
Antenna	Beamforming Phase array 21dBi gain
Channels	802.11ad WiGig Channels 1 to 6
Modulation and encoding	13 levels of adaptive encoding MCS 0 – 12 up to 4.6Gbps
Transmitter and EIRP	40dBm EIRP
Number of sectors	4
Radio capacity	3.8Gbps per sector (15.2Gbps per node)
Performance & Attributes	
Beam angle	Horizontal 300° electronic steerable, 6° beam width; Vertical fixed, 18 degree
Topologies	Multipoint-to-Multipoint with SON /Point-to-Multipoint, Point-to-Point
Range	Up to 1,640 ft (500m) per Node or CPE Dependent on location, availability, and capacity
Interfaces	Up to 4 Ethernet interfaces • 2 x Fixed RJ45 100/1000 Base-T • 2 x optional 10G or 1G SFP optical
Max connections (per node)	120 CPE or mesh nodes
Ethernet Services	Native Ethernet based data service delivery • Tagged/untagged subscriber traffic classification • Single and double tagging w/ 802.1Q, 802.1ad QinQ • 802.1p, DSCP based prioritization • Strict Priority, WFQ scheduling • DHCP Option 82 Insertion • 802.1x Port Authentication • Bidirectional per subscriber rate limiting
Redundancy	• High availability via interference-aware SON mesh network • Network uplink redundancy via multiple nodes
Management	In-band management • Web GUI • MS w/ complete FCAPS support • Secure communication w/nodes • Zero-touch on-boarding of nodes • Radio link budget calculator • Topology based network view • Configuration management, fault management, performance management • Software upgrades and configuration backup/restore • REST/SNMPv2 NBI
Physical Specifications	
Dimensions	10.6'' x 6'' x 4.5'' (269mm x 150mm x 114mm) (H x W x D)
Weight	7.3lbs (3.3kg)
Power	• 100-240V AC Mains • 48V DC or 802.3bt 60W
Environmental	–40°F to +131°F (–40°C to +55°C) operating temperature IP-65 ingress protection rated
Regulatory Compliance	Radio: US FCC 47 CFR Part15.255 and EN 302 567, EN 303 413 EMC: US FCC 47 CFR Part15B and EN 301 489 Safety: IEC62368-1:2014/2018, IEC 62368-3:2017, IEC 60529:2013, IEC 60950-22:2016, EN50385:2017
Warranty	1 Year

METNET 60G

Ordering Information

Equipment	Part No.
Metnet 60GHz Mesh Nodes	
Adtran Metnet 60G Mesh node, AC power, Grey (Includes pole mount kit).	1759500CHF1
Adtran Metnet 60G 10GigE Mesh node, SFP Fiber, AC power, Grey (Includes pole mount kit.).	119316124F2
Adtran Metnet 60G Mesh node, DC/PoE power, Grey (Includes pole mount kit).	119316213F2
Adtran Metnet 60G 10GigE Mesh node, SFP Fiber, DC/PoE power, Grey (Includes pole mount kit).	119316223F2
Metnet 60GHz CPE	
Adtran Metnet 60G 1Gbps CPE, 90degree antenna, Grey (includes PoE injector with US power cord)	419326203F2US
Metnet EMS License (required)	
Adtran Metnet 60G EMS Software and Yr-1 License (up to 50 devices).	119310902F1
Adtran Metnet 60G EMS Annual License (1-50 Devices).	119310902F2*
Adtran **Procare (required)**	
Adtran ProCare for Metnet 60G Mesh Node (AC/DC/PoE)	1100AMFW30M1T1
Adtran ProCare for Metnet 60G CPE	1100AMFW10M1T1

*Additional license tiers available for quote. Please contact support@adtran.com.

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ADTRAN Certified Supplier
ISO 9001
ISO 14001
TL 9000

TL9000
TL 19.1270