

Tropos 3210

Indoor MetroMesh™ Router



The patented Tropos® MetroMesh™ architecture delivers the maximum scalability, high capacity at low cost and great user experience demanded by carriers, municipalities and network users. The MetroMesh architecture combines the innovative and patented Tropos MetroMesh OS, the industry's most sophisticated metro-scale mesh routing intelligence, with the Tropos MetroMesh operation and optimization tools, which provide centralized visibility, analysis and control, and purpose-built MetroMesh routers with peerless Wi-Fi radio performance. MetroMesh enables carriers, municipalities and public safety agencies to deliver city-wide fixed and mobile multi-megabit connectivity for IP-based voice, video and data applications.

Because the MetroMesh OS and PWRP never require more than 5% of available bandwidth, networks can be easily scaled to many thousand nodes without any client throughput or network capacity degradation.

The MetroMesh architecture is key to maximizing network economics, as the software, management, and hardware combine to enable the operation of multiple independent networks on a single metro-scale Wi-Fi mesh infrastructure. Individual user communities can operate independently on the MetroMesh, segregating information access, billing, and access levels.

Tropos MetroMesh routers require only power and can be deployed anywhere it is available. Each Tropos 3210 indoor MetroMesh router provides wireless connectivity to standard 802.11b/g clients and seamlessly meshes with Tropos outdoor MetroMesh routers to extend the coverage area of the metro-scale Wi-Fi network.

FEATURES

MetroMesh OS

- Patented, purpose-built layer 3 mesh routing intelligence
- Predictive Wireless Routing Protocol dynamically employs links across multiple frequency bands to form the highest throughput, lowest latency end-to-end path
- Dynamic channel assignment, automatic power control and automated data rate selection provide the most efficient use of RF spectrum
- Redundant, self-configuring and self-healing network architecture
- Adaptive Mesh Connectivity Engine compensates for Wi-Fi client variations, improving connection reliability
- Ability to configure and operate multiple virtual networks on a single wireless infrastructure
- High-speed, session-persistent roaming

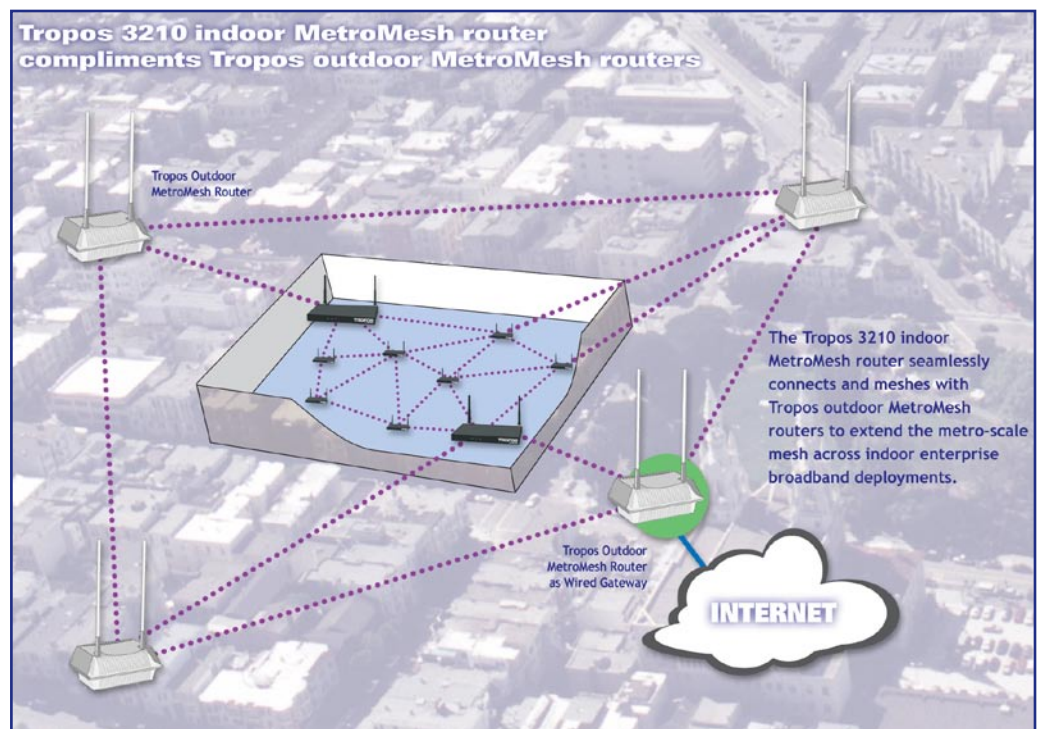
Secure Management

- User-defined traffic filters
- 802.1x/802.11i/WPA2
- MAC address access control lists
- AES encryption of mesh data and control traffic
- Secure local and remote configuration via HTTPS
- SNMP-based element management system

Platform

- High-performance 54 Mbps Wi-Fi
- Best-in-class link budget for superior RF propagation
- Extends outdoor MetroMesh networks to indoor areas

The MetroMesh OS, including the Tropos Predictive Wireless Routing Protocol (PWRP™), is the industry's most scalable mesh routing algorithm. The Tropos 3210 indoor MetroMesh router, utilizing the embedded PWRP, creates a self-organizing and self-healing wireless mesh, and intelligently selects the most optimum data path to the wired network.



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TECHNICAL SPECIFICATIONS

Wireless

- IEEE 802.11b/g
- Frequency band: 2.4-2.483 GHz
- Modulation: 802.11g - OFDM (64-QAM, 16-QAM, QPSK, BPSK)
802.11b - DSSS (DBPSK, DQPSK, CCK)
- TX Power: 20 dBm (Average)
- Media Access Protocol: CSMA/CA with ACK
- RX Sensitivity:

-93 dBm @ 1 Mbps	-90 dBm @ 12 Mbps
-91 dBm @ 2 Mbps	-88 dBm @ 18 Mbps
-90 dBm @ 5.5 Mbps	-85 dBm @ 24 Mbps
-88 dBm @ 11 Mbps	-81 dBm @ 36 Mbps
-92 dBm @ 6 Mbps	-76 dBm @ 48 Mbps
-91 dBm @ 9 Mbps	-74 dBm @ 54 Mbps
- Transmit and receive Diversity
- Impedance: 50 ohms
- 2 female SMA connectors

Networking

- NAT support
- Layer 2 and Layer 3 support
- DHCP Server and Relay
- TCP and VPN session persistent roaming
- Full 802.11b/g client compatibility
- Sub-interface support

Management

- SNMP V2c
- Tropos MIB
- HTTPS to on-board management tools
- Secure local and remote configuration via HTTPS
- Web-based management tool
- Simple configuration save and restore
- Network & client monitoring and statistical capture features

Security

- Authentication: 802.11i, WPA, WPA2, 802.1x (including EAP-TLS/TTLS/SIM/PEAP)
- Encryption: WEP, TKIP, AES
- AES encryption of mesh and control traffic
- Multiple BSSIDs & ESSIDs (ESSID suppression)
- Full VPN compatibility (VPN filtering—rejects non-VPN traffic)
- MAC address access control lists
- HTTPS only to on-board management tools
- Packet filtering

Environmental Specifications

- Operating temperature range: -10 °C to 50 °C
- Humidity: 95% (non-condensing)

Approvals

- FCC CFR 47 Part 15, Class A
- Industry Canada RSS 210
- EN 60 950
- UL 60950-1
- CSA 22.2 No. 950
- UL 2043 Plenum Rated

Hardware Specifications

- Autosensing 10/100BaseT Ethernet
- Power input:
 - External wall plug-in AC power supply: 90 - 265VAC 50/60Hz
 - 802.3af Power over Ethernet with *optional accessory**
- Power Consumption: 7 W typical
- Dimensions: 10.25 in (26.04 cm) wide x 6.00 in (15.24 cm) deep x 1 in (2.54 cm) high
- Weight: 3 lbs (1.4 kg), w/o antennas
- Four LEDs: Power, Signal Strength, Activity, Disk

Warranty

- One (1) year on parts and labor; return to point of purchase
- *Optional* standard and premium support packages available

Package Contents

- Tropos 3210
- Mounting accessories
- Hardware Installation Guide
- Quick Start Guide
- Antennas and power supply ordered separately

Ordering Information:

Part Number: 32101000

Tropos 3210 indoor MetroMesh router; two SMA connectors

Part Number: PS012001

Domestic wall plug AC/DC power adapter, 120VAC to 12VDC

Part Number: PS011002

One 12V automotive power adapter

Part Number: PS078001

3210 indoor Power over Ethernet kit (Ethernet cable not included)

Part Number: AN015004

(1) 3210 1.5dBi unit mount omni antenna; SMA connector

* 802.3af Power over Ethernet requires optional external PoE injector, sold separately