

Tropos 3320/3310 Indoor Mesh Router



Wireless

- IEEE 802.11b/g/n radio
 - Frequency band: 2.4-2.483 GHz
 - Modulation: 802.11g/n - OFDM (64-QAM, 16-QAM, QPSK, BPSK); 802.11b - DSSS (DBPSK, DQPSK, CCK)
 - Media Access Protocol: CSMA/CA with ACK
 - X Power: ETSI/EU 5-20 dBm (EIRP) set in 1 dB units; FCC/IC 17-32 dBm (EIRP) set in 1 dB units
 - Multi-Antenna System: 1-TX x 3-RX
 - Maximal-Ration Combining (MRC) receiver
 - 3 RP-SMA Connectors
 - RX Sensitivity:

-97 dBm @ 1 Mbps	-95 dBm @ 18 Mbps
-94 dBm @ 5.5 Mbps	-92 dBm @ 24 Mbps
-92 dBm @ 11 Mbps	-89 dBm @ 36 Mbps
-96 dBm @ 6 Mbps	-85 dBm @ 48 Mbps
-96 dBm @ 12 Mbps	-84 dBm @ 54 Mbps
- IEEE 802.11a/n
 - Frequency band: 5.725 - 5.850 GHz (FCC/IC) 5.470 - 5.725 GHz with DFS (ETSI/EU)
 - Modulation: 802.11a/n - OFDM (64-QAM, 16-QAM, QPSK, BPSK)
 - Media Access Protocol: CSMA/CA with ACK
 - TX Power: ETSI/EU 15-30 dBm (EIRP) set in 1 dB units; FCC/IC 16-31 dBm (EIRP) set in 1 dB units
 - 1 RP-SMA Connector
 - RX Sensitivity:

-92 dBm @ 6 Mbps	-84 dBm @ 24 Mbps
-91 dBm @ 9 Mbps	-81 dBm @ 36 Mbps
-90 dBm @ 12 Mbps	-77 dBm @ 48 Mbps
-87 dBm @ 18 Mbps	-75 dBm @ 54 Mbps

Networking

- Full 802.11b/g, 802.11a, 802.11n Client Compatibility
- IEEE 802.3u 10/100BaseT Ethernet Ports
- BGP
- 802.1q VLAN Support (ESSID and IP based tagging)
- Support for static and dynamic addressing for wireless and wired clients
- DHCP Server and Relay
- Plug and Play Wired Client Interface
- Session-Persistent Mobility across Subnets
- Location Based Services
- Layer 2 Emulation (L2E)
- NAT

Quality of Service

- 802.11e WMM
- 802.1p/q with 4 queues per VLAN and ESSID
- 802.1p and DSCP
- VoIP and VoWiFi Support
 - Heuristics-based Voice Classification
 - Call Admission Control
 - TSpec Classification
 - Seamless Mobility
 - Call Reporting
- Rate Limiting (Airtime and Throughput Based)

Management

- RADIUS Accounting
- Local and Remote Management Tools via HTTPS
- Router Access Control
- Identity-Based Authentication (4 levels)
- Configuration Save and Restore
- Software Upgrades with Rollback
- Command Line Interface (CLI) via SSH
- SNMP (standard MIBs and Tropos MIB)
- Wireless, Network and Client Monitoring and Statistics

Security

- Authentication: WPA, WPA2, 802.11i, RADIUS, 802.1x (includes EAP-TLS, EAP-TTLS, EAP-SIM, PEAP)
- Encryption: Open, WEP, TKIP, AES
- AES encryption of mesh and control traffic
- Multiple BSSIDs & ESSIDs (ESSID suppression)
- Full VPN compatibility (VPN filtering)
- HTTPS and SSH based Remote Access
- Packet Filtering & Forwarding
- Peer-to-Peer Blocking
- Client Access Control Lists
- Router Access Control
- Evil Twin Detection and Reporting
- Denial of Service Attack Detection

Environmental Specifications

- Operating temperature range: -40°C to 55°C
- Storage temperature range: -40°C to 85°C
- Weather rating: IP54
- ASTM B117 Salt Fog rust resistance compliant
- Shock & vibration: ETSI 300-19-2-4 spec T41.E class 4M3
- Transportation: ISTA 2A

Package Contents

- Tropos 3310/3320 Indoor Mesh Router
- Mounting bracket and accessories
- Quick Start Guide

Warranty

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

Approvals

- FCC CFR 47 Part 15, Class B Subpart C
- Industry Canada RSS 210
- EN 301 489-17
- EN 300 328
- EN 301 893
- EN 60950
- IEC 950
- UL 60950-1
- CSA 22.2 No. 60950-1
- UL 579/IEC 60529 IP-54 rated
- UL 1449/IEC 60664-1
- CE1

Hardware Specifications

- Auto-sensing 802.3u 10/100BASE-T Ethernet
- Power input: PoE (20-60 VDC); 100-277 VAC with external accessory
- Power consumption: 10 W typical
- Power-on and network status lamp: Green/Red/Blue
- Dimensions (w/o mounting brackets or antennas): 8.75" (22.2 cm) x 7.25" (18.4 cm) x 2.1" (5.4 cm)
- Weight: 2 lbs (.91 kg)

Protection Circuits

- Antenna Protection Integrated
- Electrical Protection:
 - EN61000-4-4 Level 2 Electrical Fast Transient Burst Immunity
 - EN61000-4-3 Level 2 EMC Field Immunity
 - EN61000-4-2 Level 2 (contact), Level 3 (air) ESD immunity

Ordering Information

Part Number: 33201000 for FCC and Canada
Tropos 3320 Indoor Mesh router, FCC TX; 2.4 & 5.8 GHz; three 3 dBi & one 5 dBi omni antennas, bracketry

Part Number: 33201500 for ETSI markets
Tropos 3320 Indoor Mesh router, ETSI TX; 2.4 & 5.4 GHz; three 3 dBi & one 5 dBi omni antennas, bracketry

Part Number: 33101000 for FCC and Canada
Tropos 3310 Indoor Mesh router, FCC TX; 2.4 GHz; three 3 dBi omni antennas, bracketry

Part Number: 33101500 for ETSI markets
Tropos 3310 Indoor Mesh router, ETSI TX; 2.4 GHz; three 3 dBi omni antennas, bracketry



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