5110
Outdoor Wi-Fi Cell

TROPOS networks

Building the
Broadband Atmosphere

FEATURES

WLAN
- High-performance 11 Mbps Wi-Fi
- Outdoor optimized with integrated 1 W radio
- Session-persistent roaming
- 802.3af Power over Ethernet
- Secure local and remote configuration via HTTPS
- SNMP-based element management system

Path Optimization
- Interoperates with Tropos 3110 indoor units for scalable 802.11b coverage
- Tropos Sphere NOS layer 3 mesh routing intelligence
- Auto-discovery and auto-configuration on power-up
- Continuous, real-time adjustment of optimum data paths
- Redundant, self-healing network architecture

Security
- User-defined traffic filters, including filters that allow access only to authorized VPN servers
- MAC address access control lists
- AES encryption of wireless routing
- 128/64 Bit WEP
- Full VPN compatibility

The Tropos Wi-Fi cell family combines the extended range of cellular technology with the high bandwidth of 802.11 to create anytime, anywhere broadband data networking.
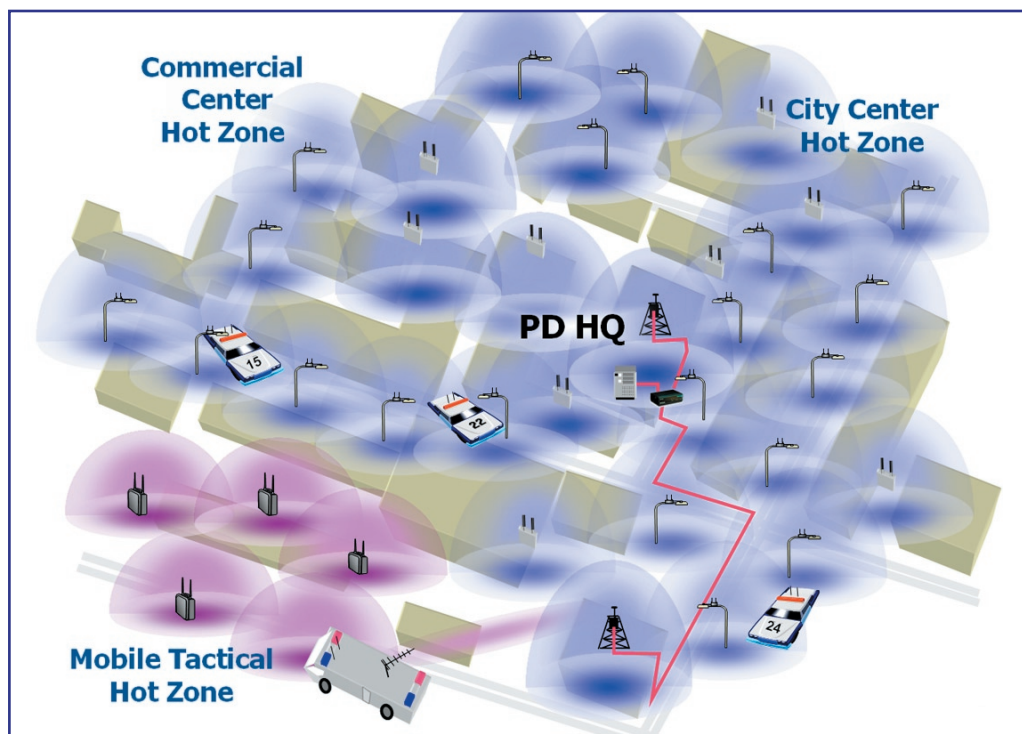
Tropos Networks™ technology adds intelligence to Wi-Fi to enable deployments that were previously difficult or impossible. The result: broader coverage, minimal installation and cabling costs, and rapid deployments.

Tropos Wi-Fi cells require only power and can be deployed anywhere it is available. Each Wi-Fi cell provides wireless connectivity to standard 802.11b clients and extends the coverage area of the cellular Wi-Fi network.

The Tropos Wi-Fi cells communicate with each other wirelessly through a lightweight control protocol implementing the industry's first cellular Wi-Fi mesh routing algorithm. The control protocol is part of Tropos Sphere™, an intelligent wireless network operating system to extend coverage and optimize performance.

The Tropos 5110 is UL/cUL certified for outdoor installation and can be mounted on external structures such as buildings or lampposts. Quickly implement citywide applications such as police data communications or public wireless access.

Metro-scale Wi-Fi is finally a reality.

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TECHNICAL SPECIFICATIONS

Wireless
- IEEE 802.11b
- Frequency band: 2.4-2.483 GHz
- Modulation: DSSS (CCK, DQPSK, DBPSK)
- TX Power: 1 W (29 dBm)
- Media Access Protocol: CSMA/CA with ACK
- RX Sensitivity: -94 dBm (1 Mbps)
- Data rates supported: 11, 5.5, 2, 1 Mbps
- Receiver diversity
- 128/64 bit WEP
- Impedance: 50 ohms
- 7.4dBi omnidirectional antennas

Networking
- DHCP Server
- DHCP Relay
- TCP and VPN session persistent roaming without client software
- Full VPN compatibility
- Full 802.11b client compatibility
- Sub-interface support

Management
- SNMP V2
- Tropos MIB
- HTTPS to on-board management tools
- Secure local and remote configuration via HTTPS
- Web-based management tool
- Configuration save and restore

Security
- Full VPN compatibility
- VPN filtering—rejects non-VPN traffic
- VPN server restriction—only allows access to authorized VPN servers
- MAC address access control lists
- HTTPS to on-board management tools
- AES encryption of wireless routing
- NAT support
- 128/64 bit WEP
- HTTPS element management security
- Packet filtering
- ESSID suppression

Environmental Specifications
- Operating temperature range: -35 ˚C to 55 ˚C
- Storage temperature range: -40 ˚C to 85 ˚C
- Weather rating: NEMA 4x weathertight
- Wind survivability: >165 mph
- Wind loading (165 mph): <320 Newtons
- MIL-STD-810F 509.4 Salt Fog rust resistance compliant

Antennas
- Outdoor 7.4dBi omni directional antennas; N connectors
  - Antenna length: 17.0 in (43.2 cm)
  - Wind survival: 165 mph

Approvals
- FCC CFR47 Part 15, Class A
- UL/cUL 60950 listed I.T.E.
- UL 50/IEC 60664-1 rated for outdoor use
- UL 1449-2nd ed./IEC 60529
- CAN/CSA-C22.2 60950-00

Warranty
- One (1) year on parts and labor; return to point of purchase

Hardware Specifications
- Autosensing 10/100BaseT Ethernet
- Power input:
  - 802.3af Power over Ethernet
  - 120/208 VAC single and split-phase ANSI/IEEE C62.41 category C3
- Power consumption: 26 W typical
- Power-on and network status lamp: Green/Red
- Dimensions (w/o mounting brackets or antennas): 13.00 in (33.02 cm) wide x 6.00 in (15.24 cm) deep x 8.5 in (21.59 cm) high
- Max envelope (w/o antennas): 13.00 in (33.02 cm) wide x 8.5 in (21.59 cm) deep x 8.5 in (21.59 cm) high
- Weight: 19 lbs (8.58 kg) max., with mounting brackets,
- Color: White

Protection Circuits
- Antenna Protection: ≤ 0.5µJ for 6kV/3kA @ 8/20µS Waveform
- Electrical Protection:
  - ANSI/IEEE C62.41, UL 1449-2nd ed., 10kA @ 8/20 µS Wave form, 36kA per phase, L-L, L-N, L-PE
  - EN61000-4-5 Level 4 AC Surge Immunity
  - EN61000-4-4 Level 4 Electrical Fast Transient Burst Immunity
  - EN61000-4-3 EMC Field Immunity
- Data Protection:
  - EN61000-4-2 Level 4 ESD Immunity

Package Contents
- Tropos 5110
- Mounting bracket and accessories
- Hardware Installation Guide
- Quick Start Guide

Optional Accessories
- Power Cables
  - Wire secondary power supply, pigtail 25 ft.
  - Street light NEMA photo-electric control power tap 120/208 V AC, 2 wire 4 ft. power cable
  - Street light NEMA photo-electric control power tap 120/208 V AC, 2 wire 25 ft. power cable
  - Electrical power cord, pigtail cable 3 wire 6 ft.
- CAT5 building entrance data protection; network protection unit

Related Products
- Tropos™ 3110 Indoor Unit
- Tropos Control™ element management system
- One (1) year extended warranty
- Three (3) year extended warranty

Ordering Information:
Part Number: 51102100
  Tropos 5110 outdoor unit; two N connectors; brackets
Part Number: 51103000
  Tropos 5110 outdoor unit; two 7.4 dBi omni antennas; brackets