TropOS 4310-XA
Mobile mesh router for extreme applications

TropOS 4310-XA mobile mesh routers interoperate seamlessly with TropOS fixed routers to deliver a robust, high-performance wireless connectivity solution for mobile workers and equipment. At vehicular speeds, the mobile routers support voice, video and data connectivity and extends the TropOS fixed network to provide access for handhelds, laptops and other endpoint devices.

Wireless
– IEEE 802.11b/g/n radio
  – Modulation: 802.11g - OFDM, 802.11b - DSSS
  – TX power (dBm EIRP)

Band (MHz)	FCC	ETSI	Brazil
2400 - 2473	21-36	NA	NA
2400 - 2483	NA	5-20	NA

setable in 1dB increments

  – Media access protocol: CSMA/CA with ACK
– RX sensitivity:
  -100 dBm @ 1 Mbps
  -94 dBm @ 6 Mbps,
  -76 dBm @ 54 Mbps

Wireless continued
– Multi-antenna system: 1-TX x 2-RX with MRC
– Support for 802.11n MRC

Interfaces
– TCP and VPN session persistent roaming across subnets
– Full 802.11b/g client compatibility
– IPv4; IPv6-ready
– 802.1q VLAN support
– Support for static and dynamic addressing for wireless and wired clients
– Layer 2 and layer 3 support
– Session - persistent mobility across subnets
– DHCP server and relay
– NAT support
– Autosensing 10/100BASE-T Ethernet ports (management and client connection)

Quality of service
– 802.11e WMM
– 802.1p/q with 4 queues per VLAN and ESSID
– 802.1p and DSCP
– VoIP and VoWiFi support

Management
– Secure local and remote management tools via HTTPS
– Identity-based authentication (4 levels)
– Configuration save and restore
– Over the air software upgrades
– Software upgrades with rollback
– SNMP (standard MIBs)
– Wireless, network and client monitoring and statistics
– GPS location tracking in SuprOS
– SuprOS carrier class NMS support

Security
– IPsec VPNs with tunnels to wired client interfaces using AES
– Authentication: WPA, WPA2, 802.11i, RADIUS, 802.1x (includes EAP-TLS, EAPT-TLS, EAP-SIM, PEAP)
– Encryption: Open, WEP, TKIP, AES-CCM
– AES encryption of mesh and control traffic
– Technical controls required to achieve NERC CIP v5 compliance
– Multiple BSSIDs & ESSIDs (ESSID suppression)
– Password and certificate-based HTTPS and SSH remote access

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Security continued

– Integrated firewall
  – Packet filtering & forwarding
  – Client access control lists
  – Router access control
– Evil twin detection and reporting
– Denial of Service (DoS) attack detection and reporting

Environmental specifications

– Operating temperature range: -40°C to 70°C
– Storage temperature range: -40°C to 85°C
– Shock & vibration: MIL-STD-202E, Method 204C; ETSI 300-19-2-4;T41.E class 4M3
– Humidity range: 0-100% condensing
– Water and dust resistance: UL579/IEC60529 IP67
– Transportation: ISTA 2A

Power

– Power input: 11-55VDC
– Power consumption: 8W typical
– Polarity protection
– Low voltage disconnect protection
– Network status LED

Physical

– Dimensions: 7.25" (18.4 cm) height x 10" (25.4 cm) width x 3.25" (8.25 cm) depth
– Weight: 3 lbs (1.3 kg)
– Connectors
  – Ethernet: 4-pole, circular, industrial Ethernet M-12 D-coded female (two: one client device & one management)
  – Power: industrial-type locking connector, 2-pin, male
  – Aux: industrial-type locking connector, 7-pin, female
  – RF: 2 N-female
– Auxiliary port
  – Remote network status indicator
  – Serial GPS input

Wireless approvals

– FCC CFR 47 Part 15, Class B
– Industry Canada RSS 210

Railways approvals

– IEC 60571
– EN 50 155

Safety approvals

– UL 60950-22
– IEC 950
– UL 60950-1
– CE

Protection

– Antenna protection: ≤ 0.5µJ for 3kA @ 8/20µS waveform
– Electrical protection:
  – EN61000-4-5 level 4 AC surge immunity
– Data protection:
  - EN61000-4-2 level 4 ESD immunity

Warranty

– One (1) year on parts and labor; return to point of purchase
– Software and hardware maintenance plans available

For more information please contact:

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