

TropOS 6430-T

Outdoor broadband mesh router with integrated TeleOS unlicensed 900 MHz PTP/PTMP access point



The TropOS 6430-T outdoor mesh router concurrently delivers broadband mesh and narrowband point-to-point (PTP) and point-to-multipoint (PTMP) functionality. It provides superior reliability by using its mesh routing, automatic interference avoidance and dynamic channel modulation capabilities. The TropOS 6430-T uses the 802.11a/b/g/n wireless standards to deliver 600 Mbps total wireless data rate plus up to 3.5 Mbps via the 900 MHz ISM band. Integration of a TropOS mesh router and TeleOS narrowband access point simplifies installation and enhances reliability and manageability.

Wireless

- IEEE 802.11b/g/n radio
 - Modulation: 802.11g/n - OFDM (64-QAM, 16-QAM, QPSK, BPSK); 802.11b - DSSS (DBPSK, DQPSK, CCK)
 - Media access protocol: CSMA/CA with ACK
 - TX power (dBm EIRP)

setable in 1dB increments

Band (MHz)	FCC
2400 - 2473	21-36
2400 - 2483	NA

- 2x2 MIMO-antenna system: 2-TX x 2-RX
- 7.4 dBi removable omnidirectional antennas
- RX Sensitivity:
 - 98 dBm @ 1 Mbps
 - 96 dBm @ 6 Mbps

- IEEE 802.11a/n radio
 - Modulation: 802.11a/n - OFDM (64-QAM, 16-QAM, QPSK, BPSK)
 - Media access protocol: CSMA/CA with ACK
 - TX power (dBm EIRP)

setable in 1dB increments

Band (MHz)	FCC
5150-5250	21-36
5250-5350	15-30
5470-5725	15-30
5725-5850	21-36

- 2x2 MIMO-antenna system: 2-TX x 2-RX
- 8 dBi removable omnidirectional antennas
- RX sensitivity
 - 95 dBm @ 6 Mbps
- 900 MHz ISM-FHSS & DTS radio
 - Modulation: MSK, 2-FSK, BPSK, QPSK, 8-PSK, 16-PSK, 16-QAM, 32-QAM
 - TX power (dBm EIRP)

setable in 1dB increments

Band (MHz)	FCC
902-928	15-31

- RX sensitivity (dBm)

Channel Width (kHz)	Modulation	Data Rate (kbps)	Sensitivity (dBm)	
FHSS	76.45	MSK	57	-110
	154.29	MSK	114	-107
	207.11	MSK	153	-106
	309.97	MSK	229	-103
DTS	600	BPSK	530	-99
	900	2FSK	663	-98
	1200	BPSK	884	-98
	600	QPSK	1061	-97
	600	8PSK	1541	-91
	1200	QPSK	1768	-95
	600	16QAM	2121	-87
	1200	8PSK	2651	-90
	600	32QAM	2651	-81
	1200	16QAM	3535	-86
	1200	16PSK	3535	-83
	1200	32QAM	4419	-81

Power and productivity
for a better world™



Interfaces

- 802.11a/b/g/n wireless, 802.11a, 802.11n client compatibility
- One IEEE 802.3u autosensing 10/100BASE-T Ethernet port
- One 10/100/1000BASE-T Ethernet port
- Protocols: DNP3, Modbus (RTU), Modbus (ASCII), raw (serial pass-through) support
- Integrated GPS receiver
- IPv4; IPv6-ready
- BGP
- 802.1q VLAN support (ESSID and IP based tagging)
- Support for static and dynamic addressing for wireless and wired clients
- Session-persistent mobility across subnets
- IP multicast forwarding, IGMPv3; IGMP Proxy
- Automatic rate, power, channel and band control
- IEC 61850 GOOSE messaging
- Reliable broadcast
- ABB System 800xA RNRP

Quality of service

- 802.11e WMM
- 802.1p/q with 4 queues per VLAN and ESSID
- 802.1p and DSCP

Management

- Local and remote management tools via HTTPS
- Identity-based authentication (4 levels)
- Configuration save and restore
- Over the air software upgrades
- SNMP (standard MIBs)
- Wireless, network and client monitoring and statistics
- Infrared (IR) port
- Wireless rescue
- 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, EAP-TTLS, 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)
- Integrated firewall
 - Packet filtering on TCP/UDP port, protocol, SA, DA
 - Peer-to-peer blocking
 - Client access control lists
- Evil twin detection and reporting
- Denial of service (DoS) attack detection and reporting

Environmental specifications

- Operating temperature range: -40°C to 75°C
- Storage temperature range: -40°C to 85°C
- Weather rating: IP67 UL579/IEC 60529 IP67
- Wind survivability: >165 mph
- Wind loading (165 mph): <210 Newtons
- ASTM B117 salt fog rust resistance compliant
- Transportation: ISTA 2A

Power

- 802.3at on the 10/100/1000BASE-T port
- 48 VDC on the 100/100BASE-T port
- 120/240 VAC with optional, external accessory (optional external battery backup available)
- Power consumption: 4 W typical
- Power-on and network status LEDs

Physical

- Dimensions
 - w/o mounting brackets, w/o antennas: 9.25" W (23.5 cm) x 7.5" D (19.1 cm) x 3.75" H (9.5 cm)
 - w/o mounting brackets, with antennas: 21.25" H (54 cm) - 2.4 GHZ antenna 16.63 H (42.2 cm) - 5 GHz antenna
- Weight: 7 lbs (3.2 kg) without mounting brackets, with antennas

Wireless approvals

- FCC CFR 47 Part 15
- Industry Canada RSS 247

Safety approvals

- EN 60950
- IEC 950
- UL 60950-1
- CSA 22.2 No. 60950-1
- IEC 60529 IP67 rated for outdoor use
- UL 1449/IEC 60664-1
- IEEE 1613

Hazardous environment certification (pending)

- Class I Division 2 Groups A, B C and D (US, Canada)

Protection

- 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

Warranty

- Five year hardware warranty
- Software and hardware maintenance plans available

For more information please contact:

ABB Wireless

3055 Orchard Drive
San Jose, CA 94135
Phone: +1 408.331.6800
E-Mail: wireless.sales@nam.abb.com

www.abb.com/unwired

Power and productivity
for a better world™

