ABB Wireless product line overview
TropOS and MicrOS broadband mesh, TeleOS and ArcheOS narrowband PTP/PTMP, SuprOS NMS

Wireless products from ABB are used to construct private, interoperable wireless IP communication networks for utilities, oil and gas, mining and industrial control system applications.

ABB Wireless delivers products and services to build interoperable wireless communication networks for utilities, oil and gas, mining, and industrial control systems. We optimally blend technologies such as broadband mesh, broadband point-to-multipoint (PTMP), sub-1 GHz unlicensed PTMP/point-to-point (PTP), and sub-1 GHz licensed PTMP/PTP to provide turnkey private wireless communication networks that meet customers' reliability, security, performance, and economic requirements. Our networks enable customers to own and operate a modern wireless communications infrastructure that can deliver five 9s system availability, is based on IP, provides enterprise class security from the core to the edge of the network, offers broadband speed, and can support multiple applications now and into the future.

The ABB Wireless product line includes TropOS broadband wireless mesh routers, MicrOS broadband mesh client nodes, TeleOS sub-1 GHz unlicensed PTMP/PTP radios, ArcheOS sub-1 GHz licensed PTMP/PTP radios, and the SuprOS network management system. Our professional services staff can assist customers in all phases of planning, deployment, optimization, and commissioning communication and automation solutions. As required, they can manage and facilitate integration with third party products that will connect to the communications network.

TropOS mesh routers and MicrOS client nodes
TropOS mesh routers and MicrOS client nodes build highly resilient wireless networks with high capacity for aggregating multiple, mission-critical applications covering broad geographic areas that are often remote locations with rugged terrain and extreme weather.

All TropOS mesh routers and MicrOS client nodes run Mesh OS. Mesh OS leverages each router's and client node's on-board intelligence to minimize network congestion and adapt on a real-time, packet-by-packet basis. This distributed approach optimizes performance and throughput by minimizing control traffic, delivers a highly scalable solution, and provides the connection quality demanded by industrial endpoints.

Mesh OS is the key to delivering high throughput and scalability. It is the industry's only mesh routing software that dynamically selects end-to-end paths through the mesh based on maximizing client -server throughput and minimizing latency.

The TropOS wireless mesh router product line includes outdoor, mobile, and indoor devices. MicrOS client nodes are optimized for wired IIoT client connectivity.

The TropOS 6430-T integrates a TropOS broadband mesh router with a TeleOS narrowband PTMP base station in a single enclosure, simplifying installation time, and reducing cost. It is the ideal solution to connect remote devices using long-range narrowband to a TropOS mesh network.

TeleOS sub-1 GHz unlicensed PTMP radios

The TeleOS product line from ABB Wireless provides a power efficient SCADA communications solution as well as connectivity to remote endpoints at low to medium speeds. TeleOS radios can operate in point-to-multipoint (PTMP) and point-to-point (PTP) configurations. Additionally, TeleOS radios can be used as repeaters to extend the range of radio links in both PTMP and PTP modes.

TeleOS is a dual band ISM/MAS 902-960 MHz software defined radio. TeleOS radios support data transfer rates from 9.6 kbps to 3.5 Mbps, power output from 10mW to 3W, and channel sizing from 12.5 kHz to 1.5 MHz. TeleOS selectively switches modulation schemes to ensure optimal throughput given available channel sizes and environmental noise.

ArcheOS sub-1 GHz licensed PTMP radios

ArcheOS licensed band point-to-multipoint (PTMP) and point-to-point (PTP) radios provide reliable, around-the-clock wireless communications for mission critical applications. Every ArcheOS radio can serve as a central master, a repeater, a remote terminal or all of these simultaneously. The ArcheOS anti-collision protocol supports all types of traffic – master, multi master-slave polling and report by exception – from remote units concurrently.

ArcheOS radios operate in a number of licensed, sub-1 GHz radio frequency (RF) bands including 200 MHz, 400 MHz and 700 MHz.

SuprOS network management system

SuprOS is a comprehensive wired and wireless network management system that provides the functionality required to manage ABB communication networks as a single system – including TropOS wireless mesh routers, MicrOS client nodes, TeleOS

unlicensed band PTP/PTMP radios and ArcheOS licensed band PTP/PTMP radios, plus AFS/AFR Ethernet switches and routers, and Cambium and Redline broadband PTP/PTMP radios. SuprOS streamlines and minimizes costs of deployment, optimization, operation, and maintenance of ABB communication networks.

SuprOS features an intuitive web-based interface. A powerful, standards-compliant network management system, SuprOS optimizes the efficiency of IT personnel by simplifying complex tasks such as wireless mesh network performance analysis and system optimization. Network-wide software updates and provisioning can be achieved via a single command from the management station, streamlining a potentially time-consuming task and preventing service disruptions.

A key advantage of SuprOS is the ease with which initial network deployments, expansions, and reconfigurations take place. Through use of advanced auto-discovery, networks devices such as mesh routers are able to automatically find one another, reducing the need for extensive pre-planning, and streamlining network deployment.

During network roll-out, SuprOS continuously analyzes the network, automatically determines strategies for optimizing performance and provides the tools needed to implement these strategies. SuprOS offers an innovative and intuitive approach to performance monitoring, optimization and control. IT management is presented with a comprehensive summary view, and can drill down for more detailed performance data to plan optimization strategies.

To integrate with higher level managers, SuprOS can forward traps it receives from devices it manages to enterprise management servers (e.g., OpenView, Tivoli) using SNMP. SuprOS also offers a northbound interface, which is a web service that presents information to third-party devices using XML.

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