

DATASHEET

Unwired Edge Core.

Feature List 2024/11/04

Centralized network and device management with provisioning, telemetry, and updates.

Unwired Edge Core delivers powerful, cloud-based, vendor-independent network and device management that simplifies integrating and orchestrating large numbers of devices and significantly reduces manual work.

Features include zero-touch provisioning, comprehensive connectivity options, over-the-air firmware updates, and real-time telemetry and monitoring. The system supports a wide range of network uplinks and uses an API-first architecture for greater efficiency and easy integration with third-party systems. It provides secure, reliable connectivity over multi-carrier cellular and satellite networks including WAN bonding, and suits complex network environments and a range of scales — from small embedded routers to edge servers.

Network Services

- WAN Networks

- Cellular network (2G, 3G, 4G, 5G)
 - Custom APN support
 - Multi-modem support
 - Signal coverage tracking
 - SIM card management
- Satellite connection
 - With Starlink support
- WiFi uplink
 - Uplink via stationary WiFi connections
- WAN bonding (packet-based)
 - Bonding of any uplinks

- Fully transparent bonding
- Quality of Service
- Provider-managed bonding service
 - Unwired CloudLink for Unwired Edge Cloud OS devices
 - All Bondix-supported devices

- SD-WAN/VPN

- Support for Layer-2 and Layer-3 VPNs (OpenVPN, IPSEC, ...)
- Custom extensions via OCI containers (e.g., Tailscale, Zerotier, ...)

- LAN Networks

- Secure network isolation
- Support for 802.1q VLAN

- Firewall
 - Built-in firewall, extendable via OCI containers
- Switching
 - Management of built-in switch functions of supported devices
 - Remote access for managing external switches via VPN, SDN, Zerotier, Tailscale
 - Monitoring and observability via switch APIs (e.g., SNMP, HTTP API)

Software Lifecycle Management

- Vendor-independent operating system
- Multi-role operating system (router, application host, access point)
- Automatic “Over-the-Air” (OTA) updates
- Long-term software support (over 10 years)
- Flexible software rollout and approval processes
- Compliance with major security and compliance frameworks

Device Management

- Multi-tenant device management
- Central management across various vendors
- Cloud-hosted
- Web-based user interface
- API for all functions
- Zero-configuration device deployment
- Device inventory based on tenants and groups
- Automated deployment and configuration
- Asynchronous configuration rollout

Security

- User and role-based access
- Delegated tenant management for integrators
- Single Sign-On (OAuth)-compatible
- API key-based access for integrations
- Fully encrypted
- Automatic certificate rotation
- Secure device onboarding
- Secure by design
- Audit trail

Configuration

- UI and API-based configuration
- Configuration for individual devices and entire fleets
- Graphical network configuration
- Asynchronous configuration deployment
- Automation and integration via API
- Audit trail

Device Status & Observability

- Real-time GNSS location tracking
- Real-time telemetry for cellular and WiFi
- OpenMetrics (Prometheus) API
- Integration with Grafana Cloud and BI tools
- Support for offline logging
- Local network monitoring for connected devices (device detection and connection status on Layer 2 and Layer 3, HTTP/S, SNMP)