

## Technical Specifications

### Interfaces

- Ethernet connection to wired LAN (single or multiple)
- DSL/Cable/Dialup/WWAN connection to ISP
- 3G/4G/WiMAX connection to ISP
- Optional Ethernet LAN switch (managed/unmanaged)
- Wi-Fi Supplicant upstream connection

### Protocol Support

- IPv4 and IPv6 (host and router)
- Bridging
- IP, TCP, UDP, ICMP
- PPPoE, PPTP client
- DHCP, NTP, DNS, DNSsec
- RIPv1, RIPv2 (B & M), RIPng
- STP/RSTP/MSTP on wired and wireless interfaces
- IGMP snooping
- Optional IPsec connectivity (ESP, AH) with IKE/IKEv2
- Key IEEE 802.11 standards such as 802.11 a/b/d/e/f/g/h/i/k/n/s

### Networking Capabilities

- Static routing, dynamic routing
- Unlimited users (subject to capacity)
- Static IP address assignment
- Optional (multi-instance) DHCP server on WLAN, including address reservation capabilities
- DHCP client on wired side
- DHCP MAC filtering and MAC binding
- VLAN (static/dynamic, QoS, subnetting)
- NAT, classical routing and bridging options
- Port triggering
- UPnP support for zero-configuration networking
- Configurable MTU and PMTU discovery when used as access device
- Multiple LAN sub-nets
- Dynamic DNS clients (DynDNS, Iego, PeanutHull, DDNS 3322, others)
- Network device on USB (NAS, printer, 3G, Windows Connect Now, etc)
- Mail Transfer Agent for device email capabilities (client and server)
- MeshF1 – TeamF1's optimized technology for application layer mesh networking
- 802.11 MIB support

### Wireless Features

- 802.11 a/b/g/n radio support from various Wi-Fi chip vendors
- Multiple customizable SSIDs per radio

- WEP/WPA/WPA2 – Personal and Enterprise modes
- WPS (soft and hard push button, PIN as well as USB mode)
- MAC access list – black or white list
- Disable SSID broadcast
- Multiple BSSID support (Virtual AP)
- VLAN support (per SSID segmentation, and priority)
- Independent profile per Virtual AP
- Multiple vendor WLAN chipset support
- Vendor-specific extensions (Super-G/ XR Extended Range/Afterburner etc.)
- Auto-channel selection
- Multiple radio support
- Transmit Power Control
- Dynamic Frequency Selection
- WDS: point-to-point, multi-point, repeater
- 802.11d roaming extensions
- WMM / 802.11e QoS / UAPSD power save support
- 802.11r Fast roaming
- Inter Access Point Protocol
- 802.11s Mesh support
- 802.1x Port-based Network Access Control
- WLAN Authentication and Privacy Infrastructure (WAPI) support

### Security Features

- WIPS (Layer 2 Wireless Intrusion Prevention Service)
- DoS attack resistance
- E-mail alerts
- Choice of additional TeamF1 security modules such as VPN, FW, IDS etc.
- 802.11 security standards including WPA/WPA2(802.11i)/WEP/DWEP/WPS
- Choice of advanced encryption and integrity algorithms
- Built-in RADIUS client
- Support for device certificates
- Hidden, Guest and Maintenance SSIDs
- MAC address filtering
- Rogue AP Detection
- Wireless client isolation
- Captive Portal
- Weak IV Avoidance
- Multiple security options for Virtual APs
- SSL and SSH secured management
- Internal local user database authentication
- VLAN based per-SSID isolation

### Cryptography

- SHA-1, SHA-256/384/512
- DES/3DES

- AES 128/192/256
- RC-4
- RSA/DSA
- X.509 v.3 certificates

### Device Management

- Intuitive, easily brandable browser-based GUI
- Admin login with two factor authentication
- Multiple profiles and rights
- SNMP v2.c and v3 support
- TR-069 family of protocols for remote access and provisioning, including WLAN Profile
- Advanced per-client, AP and radio statistics
- Localization and Internationalization
- Telnet/SSH, FTP/SFTP, RCP/SCP
- Serial console (RS232/USB) CLI support
- SSL (HTTPS) based remote mgmt with IP address restrictions
- Custom remote management port
- Save/Restore configuration settings to/from PC/USB thumb-drive
- USB thumb-drive booting and firmware backup/restore/upgrade
- Windows Connect Now™ (WCN)
- GUI-based firmware upgrade
- SYSLOG, email logs, alerts
- ToD (Time of Day) policies
- SMTP authentication for email
- Traffic metering
- Admin inactivity timeout
- Support for manufacturing tests access for ODMs

### General Administration Features

- Export/Import config in ASCII
- Restore factory defaults, last known good configuration
- Advanced wireless statistics
- Display statistics and router status
- Comprehensive logging
- Diagnostics ping, DNS lookup, trace-route, etc.
- Web-based packet capture
- Web 2.0 features such as RSS feeds, search tags, etc.