



PacStar 424

Tactical 5G Gateway Router

Key Features

- TAA Compliant
- Compatibility with private and global cellular bands
- Compatible with industry standard nano-SIMs and eSIMs
- Integrated multi-core CPU for high-performance gigabit speeds and hosted applications
- Interoperable with SpeedFusion Network technology
- Local administration and cloud management options
- Runs on tactical radio batteries, power over ethernet, wide-range DC input, and worldwide AC input
- Compact, snap-together design enables quick expansion with other PacStar 400-Series modules and packaging solutions
- Extended temperature range and fanless design improves reliability and uptime
- Continuous runtime with hot swappable batteries
- Small, but powerful; only 5.3 in x 7.1 in x 1.6 in and 2.5 lb

PacStar® 424 tactical 5G gateway router is a multi-network device that provides integrated high-speed cellular and Wi-Fi to users at the edge, now enabled in the PacStar 400 Product Line form factor. This device can securely route IP traffic over 5G, terrestrial, satellite and/or tactical IP radio networks, providing communications flexibility and redundancy for tactical communications solutions. It natively supports Wi-Fi and 5G without having to rely on any public infrastructure and enables customers to have connectivity no matter where they are located. It supports a broad range of global 5G and LTE frequency bands, giving PacStar 424 wide global coverage and maximum flexibility for deployments across different regions.

PacStar 424's integrated 5G, Wi-Fi, and SATCOM routing capabilities at the edge lead to faster, more reliable connectivity, giving real-time access to intelligence, sensor feeds, and command updates. These capabilities also reduce the need to carry and configure extra hardware, allowing warfighters to focus on the mission, not setting up the network. These built-in 5G gateway and Wi-Fi access point features turn the network into an operational advantage, letting warfighters act on current, actionable information rather than delayed or outdated data. The resulting seamless data flow at the edge ensures critical information reaches the right people and systems immediately.

PacStar 424 delivers SpeedFusion technology to users at the edge, which powers enterprise-class VPNs by aggregating bandwidth of multiple WAN links. Whether a user is simply transferring a few documents or driving real-time edge sensor data, video feeds, and VoIP conversations, SpeedFusion pumps all data down a single data pipe that is low cost, ultra-fast, and easily configurable to suit any networking environment.

PacStar 424 is ideal for a wide range of mission profiles, including:

- Command Post Communications: Providing primary or backup 5G backhaul for mobile operations centers
- Networking-on-the-Move (NOTM): Ensuring continuous connectivity for ground vehicles and aircraft
- Unmanned Systems: Delivering high-bandwidth links for remote sensor data and video telemetry

Specifications

- WAN Interface:
 - 1x 10/100/1000/2500M Ethernet RJ45
 - 1x embedded cellular modem with redundant SIM slots
- LAN Interface:
 - 2x 10/100/1000M Ethernet RJ45
- Wi-Fi Interface:
 - Simultaneous dual-band (2.4 GHz / 5 GHz) Wi-Fi 6 2x2 MU-MIMO
 - Wi-Fi WAN and/or AP
- SpeedFusion Features:
 - Hot failover, smoothing, bandwidth bonding
- Number of SpeedFusion VPN Peers:
 - 2 / 5 / 10 / 20
 - *license dependent
- Router Throughput:
 - 1 Gbps
- SpeedFusion Throughput (No Encryption):
 - 400 Mbps
- SpeedFusion Throughput (256-bit AES):
 - 200 Mbps
- Recommended Users:
 - 1-150
- AP Controller:
 - Standard
- Maximum Number of AP Supported:
 - 30 / 50
 - *license dependent
- Cellular Data Rate 4 (Downlink / Uplink):
 - 5G: 4.1 Gbps / 900 Mbps
 - CAT-20: 2 Gbps / 211 Mbps
 - *firmware 8.4.0 or above
- Antenna Connectors:
 - 4x SMA cellular connectors
 - 2x RP-SMA Wi-Fi antenna connectors
 - 1x SMA GPS antenna connector
- Power Input:
 - Worldwide AC power input (with adapter cable)
 - 2x radio battery connectors for AN/PRC-152/148 snap on radio batteries; hot-swappable
 - Interoperable with PacStar 400 Product Line power connector and PacStar Smart Chassis
- Power Consumption:
 - 8 W (nominal), 19 W (max)
- Dimensions:
 - 5.3 in x 7.1 in x 1.6 in
- Weight:
 - 2.5 lb
- Operating Temperature:
 - -20 to 60 °C
- Certifications:
 - Contains FCC ID: U8G-P1AX02
 - CE, RoHS
 - MIL-STD-810/461
- SIM Options:
 - Nano-SIM (4FF)
 - BYO eSIM (2 profiles)
 - eSIM Pooled Data Service
 - RemoteSIM from SIM injector
 - FusionSIM 6

Table 1 Cellular Bands

Product	Region	5G-Bands	LTE-Bands
1x 5G embedded modem MAX-BR1-PRO-5GK-T-PRM	Global* *US Carrier Certifications: AT&T, T-Mobile, Verizon (C-Band), FirstNet	5G (NSA & SA) Sub 6Ghz: n1, n2, n3, n5, n7, n8, n12, n13, n14, n18, n20, n25, n26, n28, n29, n30, n38, n40, n41, n48, n66, n71, n75, n76, n77, n78, n79	B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B34, B38, B39, B40, B41, B42, B43, B46, B48, B66, B71

Capabilities

- Software:
 - Embedded SpeedFusion; MAX firmware
- WAN:
 - Support for PPPoE, static IP, DHCP WAN Link Health check bandwidth allowance monitor Support for dynamic DNS services
 - WAN port convertible into LAN port
- LAN:
 - DHCP server for LAN clients
 - Extended DHCP option DHCP reservation
 - DNS proxy for LAN clients
 - VLAN on LAN support
- Security:
 - Stateful firewall
 - DoS prevention
 - Web blocking
- Complete VPN Solution:
 - SpeedFusion VPN/SpeedFusion
 - » Hot failover
 - » Site-to-Site VPN
 - » 256-bit AES encryption
 - » Pre-shared key authentication
 - » Dynamic routing
 - X.509 certificate support*
 - IPsec VPN (network-to-network)
- Advanced QoS:
 - Individual bandwidth limit
 - Application prioritization
 - SIP, HTTPS, VPN QoS
 - Custom application QoS
- Global Positioning System:
 - Integrated GPS
 - Device location map
 - Location tracking data with InControl 2
 - Fleet management with InControl 2
- Networking:
 - NAT and IP forwarding
 - Static routes
 - Port forwarding
 - Many to One, One to One NAT
 - NAT Pool
 - SIP ALG, H.323 ALG
 - UPnP, NAT-PMP
- AP Controller:
 - Support for Pepwave AP series
 - Auto AP discovery
 - Auto AP firmware management
 - AP profile configuration
 - Wi-Fi usage statistics
- Captive Portal Support:
 - Support for wired and wireless LAN clients
 - Support RADIUS authentication
 - Time and usage quotas on open access mode built-in customizable splash page
- Device Management:
 - Web administrative interface
 - Command line interface
 - InControl management
 - Email notification
 - Active client & session lists
 - Bandwidth usage statistics
 - Syslog service
 - SNMP v1, v2c and v3

* Feature is available as an upgrade (MAX-BR1-ADV)



Figure 1: PacStar 424 connectors

PacStar 424