



PacStar 541 Rugged Router + Switch Module



PacStar 541 provides high-performance routing, switching and advanced network services for critical voice, data and video connectivity in a compact, rugged form factor. The PacStar 541 is based on Cisco® router and switch technology and provides up two routed and eleven switched ports.

PacStar 500-Series is designed from the ground up to provide networking capabilities of the popular PacStar 400-Series, with the added benefit of environmental protection rated at IP67 for protection from dust and water. The PacStar 500-Series also features rugged M12 industry standard connectors providing protection beyond traditional RJ-45.

PacStar 541 is ideal for use in austere and environmentally challenging locations including:

- Military vehicle-mounted, on-the-move communications and networking applications
- Industrial facilities including oil & gas, mining, and transportations use cases
- Any outdoor application requiring high-performance voice/video, network, sensor and IoT data transport.

PacStar 541 utilizes the best of enterprise-class networking technologies, delivered in an OT ready package – enabling organizations to deploy the same technology for traditional networking or operational networks or to unify IT and OT networks, without sacrificing environmental protection.

The PacStar 541 is optionally managed by PacStar IQ-Core® Software, which simplifies system setup, network management and protects the system from mis-configuration by operators in the field.

KEY FEATURES

- Based on Cisco ESR 5915 routing, and Cisco ES2020 switching modules.
- Integrated smart power supply that runs on wide range DC input and world-wide AC input (with external power supply “brick”)
- PoE output
- Compact design for flexible packing and transport
- Extended temperature range, and fanless design improves reliability and uptime
- Managed by IQ-Core Software for easy setup and configuration
- Small, but powerful; only 10.2” x 10.9” x 2.4” and 8.7 lbs.

IP Router Capabilities

- (4) Use accessible ports: (2) routed and (2) switched
- (1) Internally connected Ethernet connection
- Cisco IOS Service Advertisement Framework (SAF)
- MLD proxy
- Routing protocols - RIP, RIPv2, OSPF, EIGRP, BGP, CPD, IP Policy Routing, IP Multicast (PIM) v1 and v2, IGMP v1 and v2, IP Multicast Load Splitting, Cisco GMP.

- Up to 32 VLANs supported per router
- IPv6 - IPv6 routing, IPv6 QoS, IPv6 tunneling support, Cisco IOS Zone- Based Firewall for IPv6 traffic
- Encapsulations - PPP, PPPoE client and server for Fast Ethernet, 802.1q VLAN trunking support and GRE
- Additional protocol support - Telnet, Asynchronous tunneling, Real-time Transport Protocol (RTP) header compression
- Extensive support for radio-aware routing and mobile IP
- Suite-B support cryptography
- Group Encrypted Transport VPN, Dynamic Multipoint VPN (DMVPN), or Enhanced Easy VPN
- Integrated threat control - IOS Firewall, Zone-Based Firewall, IPS, Content Filtering and Flexible Packet Matching (FPM)
- Extensive Security protocols – IPSEC, SSHv2, SSL/TLS, SRTP, AES, IKE
- Traffic management – QoS, Generic traffic shaping, 802.1p CoS, WRED, CBWFQ, LLQ, Priority Queuing and RSVP
- Management services - SNMP v2 and v3, RADIUS, TACACS+, Syslog, TFTP, DHCP, HSRP and more

- Cisco Unified Communications Manager Express with support for up to 48 phones

Switch Capabilities

- (9) User Accessible Ethernet ports
- (1) Internally connected (10/100 Base-T) Ethernet connection
- Layer 2 switching - IEEE 802.1, 802.3 standard, VTPv2, NTP, UDLD, CDP, LLDP, Unicast MAC filter, Flex Link, REP, VTPv3, EtherChannel, Voice VLAN
- Security - SCP, SSHv2, SNMPv3, TACACS+, RADIUS Server/Client, MAC Address Notification, BPDU Guard, SPAN session, Port-Security, DHCP Snooping, Dynamic Arp Inspection, IP Source Guard, 802.1x, Guest VLAN. MAC Authentication Bypass, 802.1x Multi- Domain Authentication, Storm Control, Trust Boundary
- Multicast - IGMPv1, v2, v3 Snooping, IGMP filtering, IGMP Querier
- Management - Web Device Manager, MIB, SmartPort, SNMP, syslog
- Quality of Service - Ingress Policing, Rate-Limit, Egress Queuing/shaping, AutoQoS
- IPv6 Host support, HTTP over IPv6, SNMP over IPv6

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Connectors

- (13) User accessible Ethernet ports total
- (2) M12 (10/100 Base-T Ethernet, Routed, 802.3at Type 1 PoE)
- (2) M12 (10/100 Base-T Ethernet, Switched, 802.3at Type 1 PoE)
- (7) M12 (10/100 Base-T Ethernet, Switched – (4) 802.3at Type 1 PoE)
- (2) M12 (10/100/1000 Base-T Ethernet, Switched)
- (1) M12 RS-232 console port (combination port serving both the Router and Switch)
- Wide range DC input

Physical Specifications

- Dimensions 10.2" x 10.9" x 2.4"
- Weight 8.7 lbs.
- Fanless design for quiet operation, higher reliability, and low power draw
- Operational temperature -20C to 70C
- MIL-STD 810G and MIL-STD 461F tests pending
- IP67 test pending

Power Specifications

- Wide range DC input, 10.5 - 35 V DC
- World-wide AC power input (with adapter cable)
- PoE power:
 - Switch: 12 watts available PoE power (50 watts 802.3at Type 2 PoE+ option available)
 - Router: 12 watts available PoE power
- Power draw: Nominal 20 watts total
- Max (including 15 watts of PoE devices attached) 42 watts* total

