

PacStar 446 Large GigE Switch Module

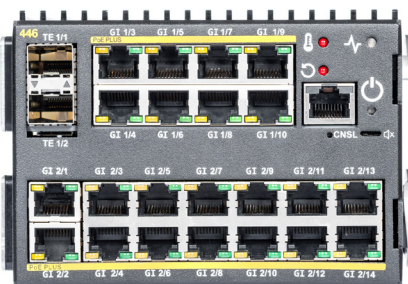
Based on Cisco Embedded Services Switch (ESS) 3300, PacStar 446 provides high-density network access at Gigabit speeds for critical voice, data, and video connectivity in a compact, rugged form-factor

PacStar 446 enables networking for a wide variety of edge-based C5ISR, cybersecurity, sensor, IoT, computing, and storage applications - connecting multiple devices to mission-critical tactical, ground-vehicle, and aircraft-mounted communications networks deployed in the field. PacStar 446 is ideal for use in environments requiring specialized form-factor, size, weight, power, port-density, port-media, and ruggedized communications needs.

Designed from the ground up to provide flexible deployment, configuration and setup options, PacStar 446 can be used as follows:

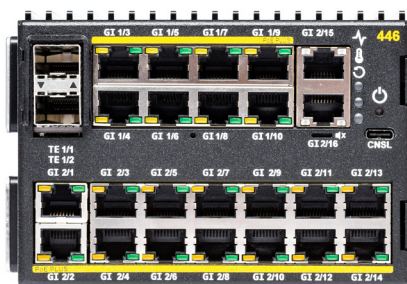
- As standalone switch module
- To provide high-speed switching infrastructure between servers and storage devices performing data intensive tasks in expeditionary settings
- In snap-together configurations with other PacStar 400-Series modules including switches, servers, and gateways
- Included in a modular, flexible system comprised of PacStar 400-Series modules, mounted in a variety of packaging and transport options solutions

PacStar offers a variety of system packaging and transport options for its PacStar 400-Series, including Pelican Case, Mini-Transit Case, Smart Chassis, Desktop Chassis, and Rack Mount Systems. The flexible modules, together with the wide range of packaging options, enables PacStar to deliver leading-edge customized, complete solutions that are reconfigurable in the field.



PacStar 446-01

(22) GigE User Ports and (2) SFP+ 10GigE Ports



PacStar 446-11

(24) GigE User Ports and (2) SFP+ 10GigE Ports

Key Features

- **Based on Cisco Embedded Services Switch (ESS) 3300** with (2) 10 GigE SFP+ and up to (24) GigE RJ45 ports
- **Industry-leading size, weight and power (SWaP)** provides customers maximum flexibility when integrating into programs where mobility and deployment speeds are critical
- **Extensively tested** to MIL-STD-810/461 by independent labs. Reports available on request. For more information, see: pacstar.com/testing/
- **Integrated smart power supply** that runs on and recharges tactical radio batteries, 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
- **Small, but powerful:** only 5.3" x 7.0" x 3.4" and 5 lbs.

Networking Capabilities

- Up to (26) Ethernet ports total
- Layer 2 switching - IEEE 802.1, 802.3 standard, VTPv2, NTP, UDLD, CDP, LLDP, unicast MAC filter,
- 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 nooping, 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
- IPv4 static routing

Connectors

- Up to (26) Ports Total:
 - Up to (13) RJ45 (10/100/1000 Base-T Ethernet)
 - (11) RJ45 (100/1000 Base-T Ethernet with PacStar PoE Plus)
 - (2) SFP+ (10/100/1000/10000 Base-T Ethernet)
- (1) RS-232 console port (RJ45 or USB-C depending upon model)
- Wide range DC input
- 12V DC output connector, KG-250X/XS compatible
- Radio battery and PacStar 400-Series power snap-together connector
- MicroSD card slot for input/export/storage of configurations

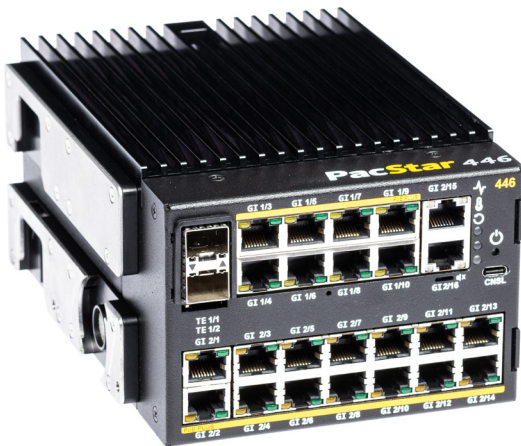
Physical Specifications

- Dimensions 5.3" x 7.0" x 3.4"
- Weight 5 lbs.
- Snap together connector provides DC pass-through for powering additional PacStar 400-Series modules
- Fanless design for quiet operation, high reliability and low power draw
- Operational temperature -20C to 70C
- Extensively tested to MIL-STD-810/461 by independent labs. Reports available on request. For more information, see: pacstar.com/testing/
- Includes zeroize button and over temperature indicator
- Lights-out mode

Power Specifications

- Battery snap-together connector supports AN/PRC-152/148 snap-on radio batteries with 2+ hours runtime per battery. Includes battery recharging, dead battery recovery, and low battery alarm
- Wide range DC input, 10-35V
- Worldwide AC power input (with adapter cable)
- Regulated clean 12V DC output, 25 watts (supports devices such as KG-250X/XS or KG-175D)
- PoE Plus power:
 - Up to 60 watts available PoE power*
 - 11 ports PoE 802.3at Type 2 backward compatible with 802.3af
- Power draw: nominal 25 watts, 85 watts total (including PoE load)

* Reduced operational temp limit when providing maximum PoE power



PacStar 446 with Cisco ESS 3300 is eligible to be used as a MACsec encryptor in a CSfC solution. More information can be found at www.nsa.gov.

The Cisco ESS-3000 Series is included on the Department of Defense Information Network (DoDIN) Approved Products List (APL). [Read the memo.](#)

PacStar products are covered by multiple patents. Additional patent(s) pending. See www.pacstar.com/patents for details.

