

Product Data Sheet

LE2700 Series Hardened Managed Modular Switches



Overview

The LE2700 Series Hardened Managed Modular Switches are ideal for industrial Ethernet applications. Use them to control and monitor equipment at oil/gas wells transmission facilities, water/wastewater, IP security/surveillance cameras and alarms, utilities, or building HVAC systems.

The LE2700 Series Hardened Managed Modular Switches are scalable, flexible, cost-effective, and reliable. The Chassis is a Layer 2 modular rackmount managed Gigabit Ethernet switch with four module slots.

The switch's four slots accommodate Ethernet switch modules. Choose from 8-port 10/100/1000BASE-T RJ-45 modules (LE2720C), 4-port 100-Mbps SC or fiber ST modules (LE2710C or LE2711C), and 8-port 100/1000-Mbps SFP modules (LE2721C). The eight SFP "cages" on the LE2721C hold eight SFP modules (LFP401–LFP404 and/or LFP411–LFP414).

Slot 4 can be used for 100-/1000-Mbps or 10GE uplinks; it accommodates a 4-Port SFP module (LE2722C) to connect to 100-/1000-Mbps links or a 4-Port 10GE SFP+ module (LE2731C) to connect to high-capacity fiber 10GE uplinks. The four SFP "cages" on the LE2722C hold four SFP modules (LFP401–LFP404 and/or LFP411–LFP414). The four SFP+ "cages" on the LE2731C hold four LSP421 and/or LSP422 SFP+ modules.

Basic Features

- Modular design with dual power supplies enables flexible network planning by allowing users to add capacity as demand increases. Choose the right quantity, speed, and range of interfaces for the application. Purchase the capacity you need when you need it.
- Environmentally hardened case withstands operating temperatures of -40 to +185° F (-40 to +85° C).
- Managed switch enables you to configure and monitor installations remotely.
- Supports Web, SNMP, and console user interfaces.
- Choose from copper, fiber, 10/100/1000-Mbps, and 10GE interfaces.
- Complies with IEEE 802.3az energy efficient standards.
- Manages traffic with 802.1p/q tagged frames.
- Handles jumbo frames.
- Supports IEEE 1588v2 synchronization.
- Accommodates high availability protocols, including xSTP, link aggregation, and redundant ring protocols.
- Supports IP multicast snooping with IGMPv2/3.
- Authenticates ACLs, TACACS+, and 802.1x users.
- Compatible with Modbus protocol.

Item	Code
Hardened Managed Ethernet Switch, 4-Slot Chassis	
US	LE2700A
EU	LE2700AE
UK	LE2700UK
Populate the chassis with these modules...	
4-Port Modules	
10GE SFP+ Module, Use in Slot 4 Only	LE2731C
100/1000-Mbps SFP Module, Use in Slot 4 Only	LE2722C
100FX Multimode (MM) Fiber, 2 km	
SC Module	LE2710C
ST Module	LE2711C
8-Port Modules	
10/100/1000BASE-T RJ-45 Module	LE2720C
100/1000-Mbps SFP Module	LE2721C
You might also need...	
Spare Power Supply	LE2700-PS

LE2700 Series Hardened Managed Modular Switches Data Sheet

LE2700 Series Hardened Managed Modular Switches Specifications

Ethernet Standards	IEEE 802.3 10BASE-T, IEEE 802.3u 100BASE-TX and 100BASE-FX, IEEE 802.3ab 1000BASE-T, IEEE 802.3z 100BASE-X, IEEE 802.3ae 10 Gigabit Ethernet, IEEE 802.3ad LACP (Link Aggregation Control Protocol), IEEE 802.1p COS (Class of Service), IEEE 802.1q VLAN tagging, IEEE 802.1w RSTP (Rapid Spanning Tree Protocol), IEEE 802.1s MSTP (Multiple Spanning Tree Protocol), IEEE 802.1x authentication, IEEE 801.1AB LLDP (Link Layer Discovery Protocol)
Jumbo Frames	Up to 9.6 KB
MAC Table	8 K
Network Redundancy	MRP, MSTP (RSTP/STP compatible)
Priority Queues	8
Processing	Store-and-forward
Security Features	Device binding, Enable/disable ports, MAC based port security, Port-based network access control (802.1x), Single 802.1x and Multiple 802.1x, MAC-based authentication, QoS assignment, Guest VLAN, MAC address limit, TACACS+, VLAN (802.1Q) to segregate and secure network traffic, Radius centralized password management, SNMPv3 encrypted authentication and access security, Https/SSH enhance network security, Web and CLI authentication and authorization, Authorization (15 levels), IP source guard
Software Features	IEEE 1588v2 clock synchronization, IEEE 801.1D Bridge, auto MAC address learning/aging and MAC address (static), Multiple Registration Protocol (MRP), MSTP (RSTP/STP compatible), Redundant Ring with recovery time less than 30 ms over 250 units, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging, IGMP v2/v3 Snooping, Port configuration, status, statistics, monitoring, security, DHCP Server/Client, DHCP Relay, Modbus TCP, DNS client proxy, SMTP Client

LE2700 Series Hardened Managed Modular Switches Data Sheet

LE2700 Series Hardened Managed Modular Switches Specifications (continued)

Connectors	<p>LE2700A, LE2700AE, LE2700UK: RS-232 Serial Console Port: (1) RJ-45 via console cable, 115200 bps, 8, N, 1; Fault contact: 24-VDC, 1-A relay;</p> <p>LE2710C: (4) 100FX SC; LE2711C: (4) 100FX ST; LE2720C: (8) 10/100/1000BASE-T RJ-45; LE2721C: (8) slots for 100/1000-Mbps SFP modules; LE2722C: (4) slots for 100/1000-Mbps SFP modules (use in switch slot 4 only); LE2731C: (4) slots for 10GE SFP+ modules (use in switch slot 4 only)</p>
Indicators	<p>LE2700A, LE2700AE, LE2700UK: (39) LEDs: (1) PWR, (1) PWR1, (1) PWR2, (1) RM, (1) Ring, (1) Fault, (1) Def, (1) Link, (1) SPD, (1) FDX, (1) RMT, (28) Port LEDs;</p> <p>LE2720C: (2) LEDs per port;</p> <p>LE2722C: (1) LED per port;</p> <p>LE2731C: (1) LED per port</p>
Environmental	<p>Temperature Tolerance: Operating: -40 to +185° F (-40 to +85° C); Storage: -40 to +185° F (-40 to +85° C); Humidity: Operating: 5 to 95%, noncondensing</p>
Power	<p>Input: Dual 88–264 VAC/100–370 VDC power inputs at terminal block; Consumption (Typ.): 43.5 watts max.;; Overload Current Protection: Present</p>
Dimensions	<p>1.73"H x 17.32"W x 12.8"D (4.4 x 44 x 32.5 cm), 19" rackmountable</p>
Weight	<p>14.5 lb. (6.6 kg)</p>
Approvals	<p>EMI: FCC Part 15, CISPR (EN55022) Class A, EN50155 (EN50121-3-2, EN55011, EN50121-4);</p> <p>EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11</p>

LE2700 Series Hardened Managed Modular Switches Data Sheet

Ordering Information: SFP Modules		
Part Number	Description	Compatible Switch Modules
LFP401	SFP, 155-Mbps Fiber with Extended Diagnostics, 850-nm Multimode, LC, 2 km	LE2721C, LE2722C
LFP402	SFP, 155-Mbps Fiber with Extended Diagnostics, 1310-nm Multimode, LC, 2 km	LE2721C, LE2722C
LFP403	SFP, 155-Mbps Fiber with Extended Diagnostics, 1310-nm, Single-Mode, LC, 30 km	LE2721C, LE2722C
LFP404	SFP, 155-Mbps Fiber with Extended Diagnostics, 1310-nm Single-Mode, Plus, LC, 60 km	LE2721C, LE2722C
LFP411	SFP, 1.25-Gbps Fiber with Extended Diagnostics, 850-nm Multimode, LC, 300 m	LE2721C, LE2722C
LFP412	SFP, 1.25-Gbps Fiber with Extended Diagnostics, 1310-nm Multimode, LC, 2 km	LE2721C, LE2722C
LFP413	SFP, 1.25-Gbps Fiber with Extended Diagnostics, 1310-nm Single-Mode, LC, 10 km	LE2721C, LE2722C
LFP414	SFP, 1.25-Gbps Fiber with Extended Diagnostics, 1310-nm Single-Mode, LC, 30 km	LE2721C, LE2722C
LSP421	10GBASE-SR SFP+, 850-nm Multimode, 300 m, LC	LE2731C
LSP422	10GBASE-SR SFP+, 1310-nm Single-Mode, 10 km, LC	LE2731C

Disclaimer:

Black Box Network Services shall not be liable for damages of any kind, including, but not limited to, punitive, consequential or cost of cover damages, resulting from any errors in the product information or specifications set forth in this document and Black Box Network Services may revise this document at any time without notice.

About Black Box:

Black Box is a leading technology product solutions provider that helps customers build, manage, optimize, and secure their networks. The Black Box quality management system is ISO 9001:2008 certified, and the company has received numerous industry recognitions. Black Box provides its customers with free, 24/7 pre- and post-sales technical support. The Black Box catalog and Web site offer an extensive range of infrastructure products including Cabling, Cabinets & Racks, Data Center Cooling Solutions, Power & Surge Protection, and Environmental Monitoring.

© Copyright 2014. Black Box Corporation. All rights reserved. Black Box® and the Double Diamond logo are registered trademarks of BB Technologies, Inc. Any third-party trademarks appearing in this publication are acknowledged to be the property of their respective owners.