

iPECS 10G Data Center Switch ES-5000XG Series

24/48 PORT 10G SFP+ TOR SWITCHES



Overview

LG-Ericsson ES-5024XG/ES-5048XG provides a high-capacity, wire-speed, low latency L2 enabled multi-port 10GbE platform for the Data Center. This switch family offers the aggregation of high density 1U rack servers, as the data center transitions from 1GbE to 10GbE.

The ES-5024XG/ES-5048XG provides up to 24/48 ports of 10GbE network connectivity and it offers features that are required for next generation data center design. Targets support of the Converged Enhanced Ethernet market segment. In addition to congestion and traffic management features required by the Data Center, the device supports the emerging Fiber Channel over Ethernet (FCoE) solutions for LAN, SAN and IPC networks.

The 10 Gigabit Ethernet is becoming the interconnect of choice in data centers of all sizes providing key improvements in terms of bandwidth, latency, scalability, reliability and application performance.

The ES-5024XG/ES-5048XG switch enables a seamless migration path from existing Gigabit Ethernet-based servers to 10 Gigabit Ethernet-based high performance servers while further enabling the transition to virtualized environments.

The ES-5024XG/ES-5048XG switch is designed with the density, performance, front-to cooling, and front port configuration that make it ideal for aggregation a large number of 10 Gigabit Ethernet links from servers into a smaller number of uplinks to aggregation-layer switches. The switch port density allows each switch to support a single rack or neighboring racks using the SFP+ connectors and cabling options.

Applications

- As an access-layer switch, it can be used purely as a 10G Ethernet Switch, consolidating 10GE connection into a smaller number of server connections trunked to the aggregation layer.
- As a top-of-rack, end-of-row cabling and switching model for next generation data center infrastructure.

Key Benefits

High Performance

- 24x/48x 10G switch non-blocking design
- Embedded buffer size 4MB

High Availability

- Redundant power supplies
- Hot swap fan trays

Advance Data Center HW Features

- Support hot aisle design
 - Front-to-back
- Simplify rack cabling
 - Network ports on front, PSUs/fans on back
- Energy Efficiency
 - Lowest power consumption for 24x/48x 10G total system
 - < 3 watts per 10G port w SFP+optics
 - PSUs up to 90% efficient
 - Variable speed fans

Advance Data Center SW Features

- Jumbo frames up to 10K bytes
- 802.1Qau Congestion Notification (QCN)
- 802.1Qbb Priority Flow control (PFC) for lossless operation and low delay/high throughput. Cut-through for delay sensitive services
- 802.1Qaz Enhanced Transmission Selection (ETS) for network convergence
- FCoE ACLs and FIP snooping



800.873.5528
WWW.TARGETD.COM

Technical Specifications

PHYSICAL PORTS

- 24/48 10Gigabit SFP+ ports
- 1 RJ-45 management ports
- 1 RJ-45 console port
- 2 PSU slots for removable power supplies
- 1 fan tray

PERFORMANCE

- Switching Capacity: 960Gbps(ES-5048XG)/480Gbps(ES-5024XG)
- Forwarding Rate: 714Mpps(ES-5048XG)/357Mpps(ES-5024XG)
- MAC Address Table Size: 32K
- Packet Buffer Size: 4MB

L2 FEATURES

- Auto-negotiation for port speed and duplex mode
- Flow Control:
 - IEEE 802.3x for full duplex mode
 - Back-Pressure for half duplex mode
- Support spanning tree
 - Support IEEE 802.1D spanning tree
 - Support IEEE 802.1s multiple spanning tree
- Support IEEE 802.1w rapid spanning tree
- Per-VLAN Rapid spanning tree (PVRST)
- VLANs support:
 - Supports 512 active VLANs
 - Supports IEEE 802.1Q VLAN
 - Port-based VLAN
- MAC based VLAN
- Protocol-based VLAN
- Support private VLAN edge
- GVRP
- Q-in-Q
- Supports IGMP
 - IGMP snooping v1/v2/v3
 - IGMP querier
 - IGMP immediate leave
 - IGMP throttling IGMP filtering
 - IFMPSNP leave proxy
- Supports multicast VLAN registration (MVR)
- Provides Link Aggregation
 - Support IEEE 802.3ad
 - Manual trunking

SECURITY

- Supports L2/L3/L4 access control list
- User/Password protected system management terminal (SNMP, Telnet, Web)
- Static Port Security (MAC based)
- Dynamic Port Security (MAC based)
- Supports RADIUS authentication
- Support TACACS+ authentication
- MAC-based authentication
 - User Name Password Authentication
 - Local Authentication
- Remote Authentications via RADIUS/TACACS+
- Supports management interface access filtering
 - SNMP
 - Web
 - Telnet
- Supports SSH v1.5/v2
- Supports HTTPS/SSL
- Supports IEEE 802.1x
 - Port-based
 - MAC-based security

QOS FEATURES

- Provides 8 queues per port/ 128 groups per system
- Priority queue scheduling scheme: strict priority, WRR
- L2/L3/L4 Traffic Classification/ Priority Management
 - IEEE 802.1p (COS)
 - DSCP/TOS
 - TCP/UDP port number
 - Per port bandwidth management

MANAGEMENT

- Switch Management:
 - CLI via console port or Telnet
 - WEB management
 - SNMP v1, v2c, v3
- Firmware & Configuration:
 - Dual firmware images
 - Firmware upgrade via TFTP server
 - Multiple configuration files
 - Configuration file upload/download via TFTP server
- Supports RMON (groups 1, 2, 3 and 9)
- Supports BOOTP, DHCP for IP address assignment
- Supports SNTP
- Event/Error Log/Syslog

DATA CENTER FEATURES

- FCoE
 - ACLs and FIP snooping
- 802.1Qau Congestion Notification (QCN)
- 802.1Qaz Enhanced Transmission Selection (ETS)
- 802.1Qbb Priority Based Flow Control (PFC)

MECHANICAL

- Dimensions (H x W x D): 4.3 x 44 x 59cm (1RU)
- LED Indicators: Port, Uplink, System, Diagnostic

SAFETY

- CSA/NRTL (UL 1950, CSA 22.2.9.50)
- TUV/GS (EN60950)

ELECTROMAGNETIC COMPATIBILITY

- CE Mark
- FCC Class A
- VCCI Class A

ENVIRONMENTAL SPECIFICATIONS

- Temperature:
 - IEC 68-2-14
 - 0° to 40° (Standard Operating)
 - -40° to 70° (Non-Operating)
- Humidity: 5% to 95% (Non-condensing)
- Vibration: IEC 68-2-36, IEC 68-2-6
- Shock: IEC 68-2-29
- Drop: IEC 68-2-32



800.873.5528
WWW.TARGETD.COM

LG-Ericsson USA, Inc. www.lgericssonus.com
 20 Mason, Irvine, CA 92618



This document is for general guidance purpose only. The information provided in this document is valid as of the date of its publication and is subject to change without notice. LG-Ericsson USA, Inc. assumes no responsibility for any errors or omissions in this documents that result in your misunderstanding.
 Copyright 2011. LG-Ericsson USA, Inc. All rights reserved.
 v. 1