# EDGEIRON 2402CF, 4802CF, 246 AND 486



LAYER 2 SWITCHES

Foundry Networks' EdgeIron 2402CF, EdgeIron 4802CF, EdgeIron 24G, and EdgeIron 48G deliver a cost-effective solution for the enterprise wiring closet, small backbone, server farm, and desktop applications for high-performance local area networks. The EdgeIron family of 10/100 and 10/100/1000 switches delivers interface flexibility, wire-speed performance, superior port density, and a complete, standard Layer 2 feature set to address the mid-range needs of enterprise users. The EdgeIron products come in a 1-RU form factor, enabling seamless installation within a wiring closet, distribution, and data center. The EdgeIron products include combo Gigabit Ethernet ports that allow for RJ-45 (copper) or mini-GBIC (fiber) uplink installations. EdgeIron 2402CF, 4802CF, 24G, and 48G support mini-GBIC optics, such as SX for multimode fiber, LX for single-mode fiber, or LHA for single-mode fiber that can reach up to 70Km.

#### FEATURES/ BENEFITS HIGHLIGHTS

- Cost-effective solution for high-performance LAN environments in a 1-RU form factor
- Wire-speed performance, auto-sensing, and auto MDI/MDIX on all ports
- Combo Gigabit Ethernet ports to deliver integrated RJ-45 (Copper) or mini-GBIC (fiber) for uplink installation, giving greater flexibility and cost savings for wiring closet installations
- Support for jumbo frames of up to 9,000 bytes within the EdgeIron 24G and 48G, ideal for high-end server connectivity and network attached file servers
- ► Complete, standard layer 2 features that includes the following:
  - IEEE 802.1q and 802.1p (Class of Service) with 4 hardware queues per port to enable prioritization of mission-critical applications
  - Per-VLAN Spanning Tree (PVST) for broadcast isolation
  - 802.3ad for automatic link aggregation and 802.1x for port security
  - 802.1w Rapid Spanning Tree Protocol for superior network reliability
  - Support for Generic VLAN Registration Protocol (GVRP)
  - Internet Group Management Protocol (IGMP) Snooping
- Robust Quality-of-Service features, including Class of Service (802.1p) mapping to Type of Service or DiffServ and support for priority queuing algorithm such as Weighted Round Robin and Strict
- Low latency as low as 10μs, ideal for advanced applications like VoIP and video conferencing over IP
- Extensive management and monitoring features, including an industry-standard CLI, secure web-based GUI, integrated SNMP agent with mini-RMON and Secure Shell for secured and encrypted management access
- Backed by Foundry's Global Customer Service and Worldwide Sales Organization





#### **EDGEIRON 2402CF**



The EdgeIron 2402CF features 24 10/100 RJ-45 ports and 2 combo GbE RJ-45/mini-GBIC slots in a 1-RU form factor, ideal for wiring closet installation. The EdgeIron 2402CF comes with switching performance of up to 8.8Gbps and forwarding rate performance of up to 6.6Mpps.

#### EDGEIRON 4802CF



The EdgeIron 4802CF features 48 10/100 RJ-45 ports and 2 combo GbE RJ-45/mini-GBIC slots in a 1-RU form factor, ideal for higher-density wiring closet installation. The EdgeIron 4802CF comes with a switching performance of up to 13.6Gbps and forwarding rate performance of up to 10.2Mpps.

#### EDGEIRON 24G



The EdgeIron 24G features 20 10/100/1000 RJ-45 ports and 4 combo GbE RJ-45/mini-GBIC slots in a 1-RU form factor, ideal for wiring closet, distribution, and data center installation.

The EdgeIron 24G supports jumbo frames, making it an ideal solution for server connectivity and network attached file servers. The EdgeIron 24G comes with switching performance of up to 48Gbps and forwarding rate performance of up to 35.7Mpps.

#### EDGEIRON 48G



The EdgeIron 48G features 44 10/100/1000 RJ-45 ports and 4 combo GbE RJ-45/mini-GBIC slots in a 1-RU form factor, ideal for wiring closet, distribution, and data center installation. The EdgeIron 48G supports jumbo frames, making it an ideal solution for high-density server connectivity and network attached file servers. The EdgeIron 48G comes with switching performance of 80Gbps and forwarding rate performance of up to 60Mpps.



# Edgelron Product Family Key Features and Benefits

#### PERFORMANCE, SCALABILITY AND SECURITY

Enterprise networks require cost-effective performance, scalability, and high density to support mission-critical business applications and rapid network expansion. With wire-speed switching performance, 255 activeVLANs (eachVLAN ID value may range up to 4,096), the EdgeIron family provides best-inclass performance and capacity.

Enterprise network managers, who demands security, can rely on the "port-security" feature that comes with the EdgeIron 2402CF, 4802CF, 24G, and 48G. Enterprise network managers can restrict access to their network by allowing only secured hosts (using the MAC addresses) to a port. Additional security actions such as disabling a port can be activated when a "port-security" violation occurs, thus proactively eliminating security violations.

#### COST-EFFECTIVE SOLUTION

The EdgeIron 2402CF, 4802CF, 24G, and 48G are ideal for providing cost-effective, high-performance connectivity in a variety of network deployments. The EdgeIron 4802CF is well suited to wiring closet deployments where high-density 10/100 is required. Key applications for the EdgeIron 24G and 48G include high-performance server aggregation, high-speed workgroup backbone upgrades, and Gigabit over Copper to the desktop for power users. Foundry Networks offers a complete line of complementary Layer 2/3 stackable and chassis products for the edge and the core of the enterprise, including the FastIron enterprise product family, that can be deployed in conjunction with the EdgeIron 2402CF, 4802CF, 24G, and 48G to create a complete, robust, scalable, and world-class high-performance network.

# INCLUDES COMPLETE STANDARD LAYER 2 FEATURE SET

Each EdgeIron ships with a complete, standards-based Layer 2 feature set, including 802.1Q VLANs, 802.1p-based Class of Service (CoS),802.1D single SpanningTree Protocol, PerVLAN SpanningTree (PVST), 802.1w Rapid SpanningTree Protocol, 802.3x-based flow control, BootP, TFTP, Generic VLAN Registration Protocol (GVRP), Generic Multicast Registration Protocol (GMRP), Internet Group Management Protocol (IGMP) Snooping, and port mirroring. With support for CoS mapping to Type of Service (ToS) and DiffServ Control Points (DSCP), the EdgeIron delivers critical Quality of Service (QoS) features for next-generation applications such as Voice over IP and streaming audio or video.

#### EASE OF MANAGEMENT

With an easy-to-use, industry-standard Command Line Interface (CLI), Telnet based interface, Web based GUI, and RADIUS-based authentication, the EdgeIron is easy and secure to configure, deploy and maintain. Foundry's full-function IronView Network Manager empowers network operators to seamlessly control software and configuration updates for any Foundry product from a central station, dramatically simplifying network provisioning, diagnostics and resolution, thus reducing the total cost of ownership of installing and maintaining a world-class network infrastructure.

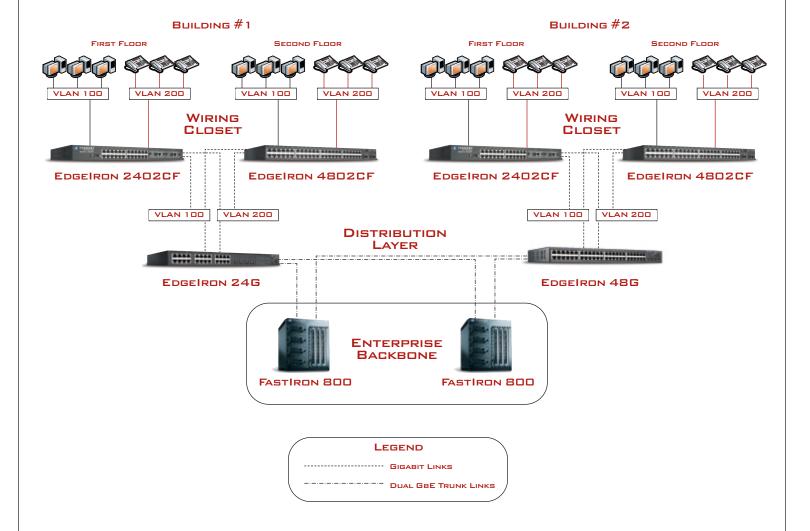


# Building Enterprise Networks Using the Edgelron

# ENTERPRISE WIRING CLOSET AND DISTRIBUTION

The EdgeIron 2402CF and 4802CF, which come with 2 Gigabit Ethernet over Copper ports as uplinks, are well suited for enterprise wiring closet deployments and can be immediately connected to an EdgeIron 24G, which can be used within the distribution layer. With this solution and the EdgeIron's 1RU size, network managers can easily collapse several EdgeIron 2402CF and 4802CF switches into an EdgeIron 24G and a 48G to deliver

a high-density wiring closet solution. Furthermore, the EdgeIron 24G and the 48G supports up to 4 mini-GBIC ports allows network managers to easily connect the distribution back to the enterprise backbone using SX, LX, or LHB optics, enabling distances of up to 300m, 5Km, or 120Km, respectively. This solution delivers a cost-effective and efficient aggregation of wiring closets within an enterprise network.

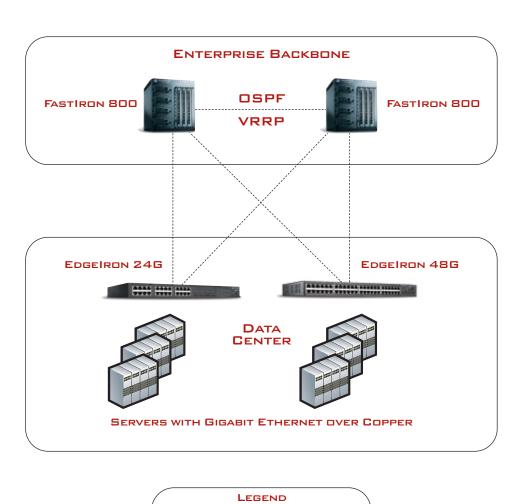




#### **ENTERPRISE DATA CENTER**

The EdgeIron 24G and the 48G are well suited for use within the enterprise data center. The EdgeIron 24G and the 48G, which comes with 24 GoC and 48 GoC, respectively, enables network managers to easily connect high-end servers with Gigabit Ethernet over Copper (GoC) ports. Both the EdgeIron 24G and the 48G comes with 4-port combo mini-GBIC slots,

which can be populated with SX, LX, or an LHB optic to connect the data center back to the enterprise core at distances up to 300m, 5Km, or 120Km, respectively. This solution delivers a cost-effective and flexible solution for data center networking requirements.



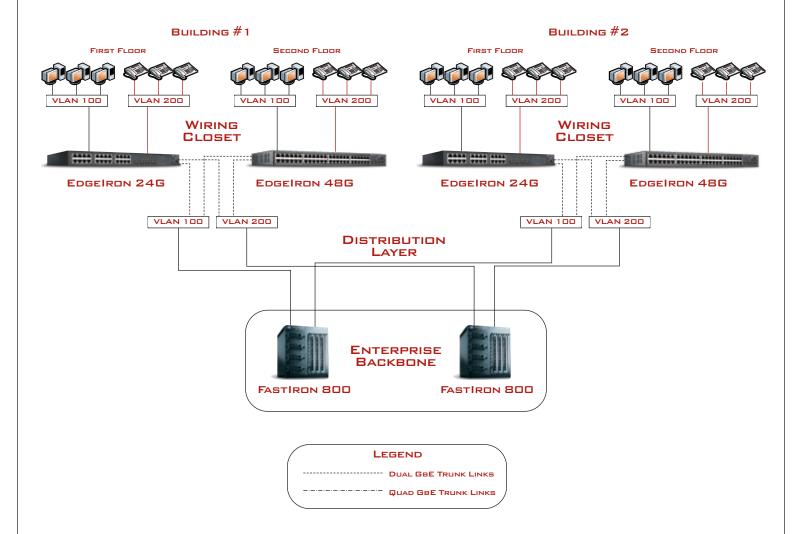
DUAL GBE TRUNK LINKS



#### GIGABIT COPPER TO THE DESKTOP

Today, laptops and desktop computers are being equipped with 10/100/1000 Base-T Ethernet ports because the cost of adding this feature is negligible. Foundry's EdgeIron 24G and 48G delivers a cost-effective solution for enterprise network managers wanting to future-proof their network to support 10/100/1000

Base-T Ethernet ports. The EdgeIron 24G and the 48G comes with the ability to auto-sense 10/100/1000 Base-T, eliminating the need to manually configure the speed of every switch port used for host connectivity.



A wiring closet with several EdgeIron 24G and 48G connected to a FastIron 3208RGC, equipped with 32-ports of Gigabit Ethernet over Copper and 8 mini-GBIC slots, delivers a high-density and a cost-effective solution for future-proofing a wiring closet to support hosts with 10/100/1000 Base-T

Ethernet ports. With the FastIron 3208RGC and its additional 8 mini-GBIC slots, network managers can ensure redundant and high-speed connectivity of wiring closets to the enterprise backbone.



#### **TECHNICAL SPECIFICATION**

Properties	EDGEIRON 2402CF	EDGEIRON 4802CF	EDGEIRON 24G	EDGEIRON 48G
10/100 Base-T Ports	24	48	0	0
1000 Base-T Ports	2	2	0	0
10/100/1000 Base-T Ports	0	0	24	48
Mini-GBIC Slots	2	2	4	4
Switching Performance (Gbps)	8.8	13.6	48	80
Forwarding Rate (Mpps)	6.6	10.2	35.7	60
Maximum Number of MAC Addresses	8,000	8,000	32,000	16,000
Physical Dimensions (HxWxD)	$1.7" \times 17.37" \times 9"$	1.7" x 17.37" x 12.76"	1.7" x 17.37" x 13.9"	1.7" x $17.37$ " x $13.9$ "
	(4.3 x 44 x 22.8 cm)	(4.3 x 44 x 32.4 cm)	$(4.3 \times 44 \times 35.3 \text{ cm})$	(4.3 x 44 x 35.3 cm)
Weight	7 lbs (3.18 Kg)	9.5 lbs (4.36 Kg)	9.5 lbs (4.36 Kg)	9.5 lbs (4.36 Kg)
Power Consumption (Watt)	24W Max	48W Max	48W Max	48W Max

# Technical Specification (Common)

#### **NETWORK INTERFACE**

- 10BASE-T: RJ-45 UTP Cat. 3,4,5
- 100BASE-TX:RJ-45 UTP Cat. 5
- 1000BASE-T: RJ-45 UTP Cat. 5

#### UNICAST AND MULTICAST LATENCY PERFORMANCE (EIF2402CF, EIF4802CF, AND EIF24G)

- Under 10μs for Unicast port to port Latency
- 650 700µs Multicast Join
- 6.5 7s Multicast Leave

#### **TEMPERATURE**

- Operating:  $0 50^{\circ}$ C
- Storage:  $-40 70^{\circ}$ C

#### HUMIDITY

- 10% to 90% (non-condensing)

#### **AC INPUT**

- 100 to 240V, 50-60 Hz

#### POWER SUPPLY

- Internal, auto-ranging transformer: 90 to 260VAC, 47 to 63 Hz
- Redundant DC input

#### MAXIMUM CURRENT

- 0.5A @ 110VAC, 0.7 A @ 240VAC

#### **MTBF**

- 6 years (estimated)

#### **SWITCH FEATURES**

- Spanning Tree Protocol and 802.1w
- Flow Control (802.3x)
- Full and Half Duplex; Auto MDI/MDIX
- VLAN Support, Up to 256VLANs; port-based or with 802.1QVLAN tagging
- GVRP for automaticVLAN learning
- Quality of Service (802.1p)
- Supports four levels of priority and weighted fair queuing
- Broadcast storm control
- Link Aggregation (802.3ad)
- Port Mirroring

#### MANAGEMENT FEATURES

- In-Band Management
- Telnet, Web-based HTTPS, or SNMP (v1 and v2c)
- Out-of-Band Management
- RS-232 DB-9 console port
- Software Loading
- Secure Shell v 1.5

#### MIB SUPPORT

- MIB II (RFC 1213)
- Bridging MIB (RFC 1493)
- Ethernet-like MIB (RFC 1643)
- SNMP (RFC 1157)
- ARP (RFC826)
- IEGMP (RFC1157)
- IGMP (RFC1112)
- Bridge MIB (RFC 1493),
- RADIUS (RFC2618)

# RMON SUPPORT (RFC 1757)

 Groups 1,2,3,9 (Statistics, History, Alarm, Event)



#### **STANDARDS**

- IEEE 802.3 10BASE-T specification
- IEEE 802.3u 100BASE-TX specification
- IEEE 802.3ab 1000BASE-T specification
- IEEE 802.3ad
- IEEE 802.3z 1000BASE-X specification
- 1000BASE-X (SX,LX, and LHA mini GBIC optic for LC connectors)
- 1000BASE-T (RJ-45)

PART NUMBER

E1MG-LHB

- IEEE 802.1w Rapid Spanning Tree Protocol

- IEEE 802.3x full duplex on 10BASE-T, 100BASE-T, and 1000BASE-T ports
- IEEE 802.1D SpanningTree Protocol
- IEEE 802.1p CoS prioritization
- IEEE 802.1QVLAN
- IEEE 802.1x for Port Security

#### ISO AND COMPLIANCES

- IEC 8802.3
- CE Mark

#### SAFETY

- CSA/NRTL (UL1950, CSA 22.2.950)
- TUV/GS (EN60950)

DESCRIPTION

### ELECTROMAGNETIC COMPATIBILITY

- CE mark
- EN55022 (1997) Class A.
- EN55024 (1998)
- EN61000-4-2/3/4/5/6/11
- EN61000-2-2 Class A.
- EN61000-2-3
- FCC Class A
- VCCI Class A
- CISPR Class A

#### ORDERING INFORMATION

# EIF2402CF 24 10/100 Base-T (RJ-45) ports and 2 combo Gigabit Ethernet RJ-45/mini-GBIC ports 48 10/100 Base-T (RJ-45) ports and 2 combo Gigabit Ethernet RJ-45/mini-GBIC ports EIF24G 24 10/100/1000 Base-T (RJ-45) ports and 4 combo Gigabit Ethernet RJ-45/ mini-GBIC ports EIF48G 48 10/100/1000 Base-T (RJ-45) ports and 4 combo Gigabit Ethernet RJ-45/ mini-GBIC ports E1MG-SX 1000BaseSX mini-GBIC optic MMF,LC connector E1MG-LX 1000BaseLX mini-GBIC optic SMF,LC connector

1000BaseLHA mini-GBIC optic SMF,LC connector

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