



Product Overview

The IntraCore 40480/40240 -10G series is a stackable Gigabit Ethernet routing switch with a choice of 24 or 48 Gigabit 10/100/1000BASE-T ports, 4 combo Gigabit Ethernet SFP slots and 2 optional 10 Gigabit Ethernet slots and 2 stacking ports on the rear panel. The IntraCore 40480/40240 series is ideal for service provider edge aggregation, Enterprise wiring closets, data center aggregation and network core deployment. It provides high performance, resilient stacking, wire speed L2 switching and L3 routing, comprehensive QoS and advanced security to deliver the scalability and resiliency to increase your company's productivity while reducing operation cost.



Stackable Architecture

The IntraCore 40000-10G series currently includes 2 different models IC40240-10G and IC40480-10G with dual optional 10 Gigabit Ethernet uplinks. The two models provide fully non-blocking performance to fulfill the most network demands for voice and video streaming. Optional 10GBASE-XFP10 transceivers can support up to 40km for fiber uplinks. The IntraCore 40000-10G series provides two stacking ports for hardware stacking up to 320Gbps throughput. Any combination of 40000-10G series units can be stacked up to 8 units high or to a maximum of 400 ports. The stack acts as a single switching unit that is managed by a master switch, elected from one of the member switches. The master switch automatically creates and updates all the switching and optional routing tables. A working stack can add new members or delete old ones without service interruption.

High Availability

With IEEE 802.1w Rapid Spanning Tree Protocol, the IntraCore 40000-10G series provides a loop free network and redundant links to the core network with rapid convergence less than 2 second. IEEE 802.1s Multiple Spanning Tree Protocol allows a spanning-tree instance per VLAN, for Layer 2 load sharing on redundant links. The IntraCore 40000 series supports IEEE 802.3ad Link Aggregation Control Protocol (LACP). It increases bandwidth by automatically aggregating several physical links together as a logical trunk and offers load balancing and fault tolerance for uplink connections. Adding Optional Redundant Power Supply ensures that the IntraCore 40000-10G series delivers the stable and redundant power support for today's high-availability, mission-critical applications.

Comprehensive QoS

The IntraCore 40000-10G series offers advance QoS for marking, classification, and scheduling to deliver best-in-class performance for data, voice, and video traffic at wire speed. 8 egress queues per port enable differentiated management of up to 8 traffic types across the stack. Traffic is prioritized according to 802.1p, DSCP, IP precedence and TCP/UDP port number to provide optimal performance to real-time applications. Weight Round Robin (WRR) and strict priority ensure differential prioritization of packet flows and avoid congestion of ingress and egress queues. With bidirectional rate-limiting, per port or traffic class, the IntraCore 40000-10G series preserves network bandwidth and allows full control of network resources.

Enhanced Security

The Edge Core 40000-10G series provides enhanced security features for connectivity and access control, including ACLs, authentication and port-level security with IEEE 802.1X. Access Control Lists (ACLs) can be used to restrict access to sensitive network resources by denying packets based on L2/L3/L4 headers. SSH and RADIUS authentication protect data communication and ensure data privacy. IEEE 802.1X port-based access control ensures dynamic, port-based security and user authentication for network access IP source guard prevents a malicious user from spoofing or taking over another user's IP address by creating a binding table between client's IP and MAC address, port, and VLAN.

Simplified Management

The IntraCore 40000-10G series supports both IPv4 & IPv6 management functions in SNMP/HTTP/Telnet/TFTP/ICMP, SSH, RADIUS/TACACS+ authentication and IPv6 QoS remapping when connecting to the switch or stack. The IntraCore 40000-10G series can be managed through by industry standard Command Line Interface (CLI) which provides a common industry look and feel to reduce training and operating costs. It also provides easy-of use Web GUI interface through a standard web browser. Four groups of RMON(history, statistic, alarms, and events) are supported for enhanced traffic management, monitoring, and analysis. Also, the IntraCore 40000-10G series can easily backup and restore Firmware and configuration files via TFTP.

Advanced IPv4 Routing

The IntraCore 40000-10G series supports hardware based IPv4 routing hardware for maximum performance. Advanced routing protocols such as RIP and OSPF provide dynamic routing by exchanging routing information with other Layer 3 switches or routers. Multicast routing is supported under independent multicast protocol, including PIM-DM*, and PIM-SM*. DVMRP* is also supported to interconnect two multicast-enabled networks across non-multicast networks. VRRP prevents your system from failing by dynamically backing up multiple L3 switches for routing.

* Future Release

Interfaces

- 44/20 RJ-45 connectors for 10/100/100 BASE-T
- 4 Combo SFP modules/RJ45 for Gigabit Ethernet
- 2 10G XFP modules(SR, LR, ER) for uplink
- 2 stacking ports on rear panel
- 1 Redundant Power Supply Connector
- RJ45 Console port

Status Indicators

- System: Port, Uplink, System, Diagnostic
- Port: Link/Activity

Performance Specifications

- Switching Capacity: 136Gbps/88Gbps
- Forwarding Rate: 101.2Mpps/65.5Mpps
- System Memory: 64MBytes
- 16K MAC address with auto-learning and aging
- Packet Buffer Size: 4MB/2MB
- Jumbo frame: 9162 bytes
- True non-blocking with on-chip frame buffers

Layer 2 Specifications

- Auto-negotiation for port speed and duplex mode
- Flow Control: IEEE 802.3x & Back-Pressure
- Spanning Tree Protocol:
 - IEEE 802.1D Spanning Tree Protocol (STP)
 - IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
 - IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)
- VLANs:
 - Support 4K IEEE 802.11Q VLANs, port-based VLANs, GVRP
- Private VLAN Link Aggregation:
 - Static Trunk, IEEE 802.3ad Link Aggregation Control Protocol
 - Trunk groups: 8
 - Trunk links: 2~8 for Gigabit Ethernet port
 - Trunk links: 2~4 for 10 Gigabit Ethernet port
- IGMP Snooping: IGMP v1, v2 and v3* snooping and IGMP queries

Layer 3 Specification

- 2K IP Address entries
- 512 static routes
- ARP
- Multi-netting, Super-netting (CIDR)
- RIPv1, RIPv2
- OSPF
- DVMRP*, PIM-DM*, PIM-SM*
- VRRP
- Future firmware upgrade
- Policy based routing
- DHCP/BootP relay, DHCP server

QoS Features

- Priority Queues: 8 hardware queues per port
- Traffic classification based on IEEE 802.1p CoS, IP Precedence, DSCP,
- TCP/UDP port number, Access Control List, Marking
- DiffServ
- Supports WRR and Strict Priority
- Port Rate Limiting

Security

- Port Security
- IP Source Guard*
- Supports IEEE 802.1X port-based and MAC based access control
- IP filtering configuration for management interface (SNMP, Telnet, Web)
- RADIUS authentication
- Access Control List
- SSH v2
- HTTPS/SSL

Management

- CLI via console port or Telnet
- WEB management
- SNMP v1, v2c, v3
- IGMP snooping (v1/v2)
- Firmware & Configuration:
 - Dual firmware images
 - Firmware upgrade via TFTP/FTP/Xmodem
 - Multiple configuration files
 - Configuration file upload/download via TFTP/FTP server
- Supports RMON (groups 1, 2, 3 and 9)
- Supports BOOTP, DHCP for IP address assignment
- DHCP Snooping*
- DHCP option 82*
- Supports SNTP
- Supports Event/Error log/ System log
- IPv6:
- SNMP/HTTP/Telnet/SSH/ICMP/RADIUS/SSH/SMTP/ACL/Dual
- Stack/Neighbor discover/ DSCP remapping CoS/System log/DNS resolver/TFTP/Remote Ping

SNMP Standard

- RFC 1907 SNMPv2-MIB (MIB-II)
- RFC 2011 IP-MIB (MIB-II)
- RFC 2012 TCP-MIB (MIB-II)
- RFC 2013 UDP-MIB (MIB-II)
- IEEE 802.1X IEEE8021-PAE-MIB
- RFC 1493 Bridge MIB
- RFC 2863 IF-MIB
- RFC 2819 RMON MIB
- RFC 2618 RADIUS MIB
- RFC 2665 Etherlike MIB
- RFC 2737 Entity MIB
- RFC 2674 P-bridge, Q-bridge
- V-Bridge MIB
- RFC 3036 MAU MIB
- RFC 1612 DNS Resolver MIB
- RFC 3411 SNMP FrameWork
- RFC 3412 SNMP MPD MIB
- RFC 3413 SNMP Target MIB, SNMP Notify MIB
- RFC 3415 SNMP View-Based ACM MIB
- SNMP Trap Supported:
 - RFC 1215, 1907, 2863, 1493, 1757, 2819
- Private MIB

STACKING CABLES

- 3ft stacking cable

Physical

- Dimensions: 44.0 x 41.5 x 4.4 cm /
17.4 x 16.4 x 1.8 in
- Weight: 9.59 lbs (IC40480-10G)
8.44 lbs (IC40240-10G)

+ This warranty is exclusive and is limited to the original end user purchaser with the original warranty card only. This warranty shall not apply to secondhand products or to products that have been subjected to abuse, misuse, dropping, abnormal electrical or environmental conditions, lightning, water, or any condition other than what can be considered normal use. IC40480 (99-008xx) / IC40240(99-008xx)

Safety

- CSA/NRTL (UL60950, CSA 22.2.No 60950-00)
- TUV/GS (EN60950)
- CB

Electromagnetic Compatibility

- CE Mark(EN50081-1: EN55022 Class A, EN50082-1IEC 1000-4-2/3/4/6),
- EN60555-2 Class A, EN60555-3
- FCC Class A
- VCCI Class A

Environmental Specifications

- Power: Internal, auto-switching, 100 ~ 240 VAC, 50-60 Hz
- Operating Temperature: 0°C to 40°C (32°F to 104°F)
- Storage temperature: -20° to 70° C (-4° to 158°F)
- Relative Humidity: 10% to 90%, non-condensing
- Storage humidity: 95% maximum, non-condensing
- Vibration: IEC 68-2-36, IEC 68-2-6
- Shock: IEC 68-2-29
- Drop: IEC 68-2-32

Electrical

- Power Consumption (Max.):

IC40240-10G

- 49.6 Watts (without expansion XFP modules)
- 63.96 Watts (with two expansion XFP modules)

IC40480-10G

- 98.16 Watts (without expansion XFP modules)
- 104.16 Watts (with two expansion XFP modules)

- Power characteristics:

- Voltage: 100-240V AC auto-ranging
- Frequency: 47-63Hz

- Current:

IC40240-10G

- 0.58 A @ 110 VAC (without expansion XFP modules)
- 0.74 A @ 110 VAC (with two expansion XFP modules)
- 0.312 A @ 240 VAC (without expansion XFP modules)
- 0.375 A @ 240 VAC (with two expansion XFP modules)

IC40480-10G

- 0.995 A @ 110 VAC (without expansion XFP modules)
- 1.21 A @ 110 VAC (with two expansion XFP modules)
- 0.54 A @ 240 VAC (without expansion XFP modules)
- 0.605 A @ 240 VAC (with two expansion XFP modules)

Standard and Compliance

- IEEE 802.1D (STP)
- IEEE 802.1p (Cos)
- IEEE 802.1Q (VLANs)
- IEEE 802.1w Rapid Reconfiguration Spanning Tree
- IEEE 802.2 (LLC)
- IEEE 802.3 10Base-T
- IEEE 802.3u 100BASE-TX and 100BASE-FX
- IEEE 802.3x flow control support
- IEEE 802.3z (1000Base-SX/LX)
- IEEE 802.3ab (1000Base-TX)
- IEEE 802.3ac (VLAN tag)
- IEEE 802.3ad (Link Aggregation)
- IEEE 802.1Q (VLANs)

Modules

- Asante SFP M1000SX
- Asante SFP M1000LX
- Asante SFP M1000LZ
- Asante XFP-10GSR
- Asante XFP-10GLR

Realibility

- IC40240-10G
MTBF 250C 122,388 hours
MTBF 550C 35,535 hours
- IC40480-10G
MTBF 250C 132,087 hours
MTBF 550C 45,739 hours

Warranty

- Asante 3 Years Warranty+

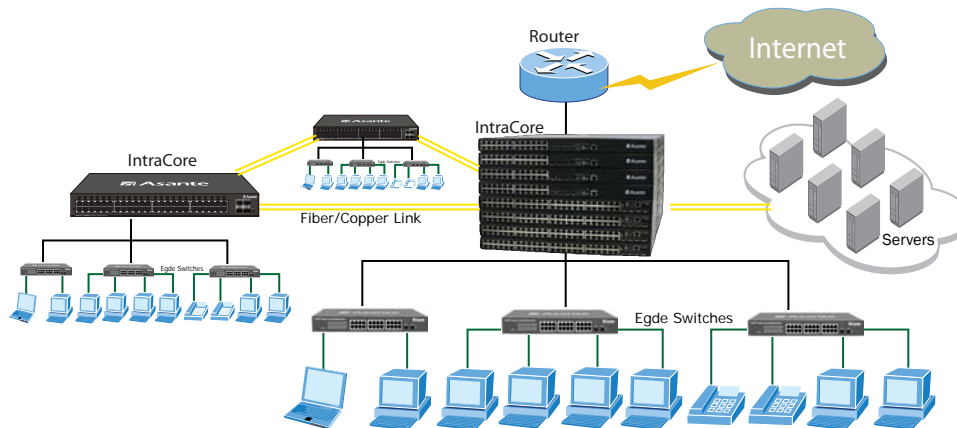
Asante Service

- Free 24x7 email contact, Mon-Fri on Call.

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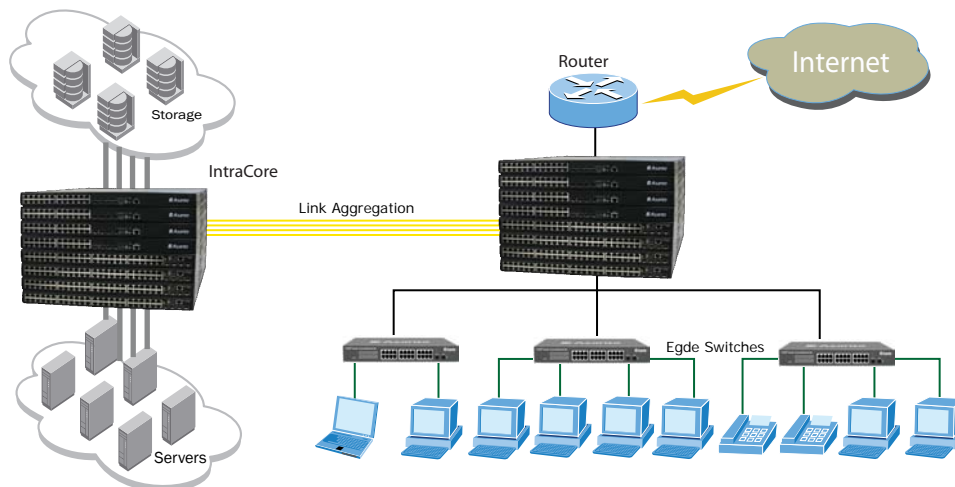
Infrastructure Switch

With a powerful 136/88Gigabits per second of non-blocking switch fabric, the IC40480/40240-10G offers two levels of infrastructure backbone network capabilities. These are highly scalable network core components which can easily aggregate the edge network switch into a business or group, and retain the greatest security management structure for network manager.



Data Server Switch

Network Server, data centers require a high traffic access via a reliable, high throughput network switch. The IC40480 can provide both features and maintain low power consumption for today's expensive energy costs. The Gigabit switch could be a center hub to those data centers and also provide access to the core.



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