Interface Masters
T E C H N O L O G I E S
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Innovative Network Solutions

Niagara 2948 Product Family
48, 24, 16 & 8 Port 10 Gigabit Managed Switches
*Advanced Switching and Routing System*

Overview

Niagara 2948 family is a High Port density 10 Gigabit SFP+ Specialized Switch family. The Niagara 2948 family supports layer 2/3/4 10 Gigabit Ethernet enterprise and datacenter capabilities including advanced switching and routing, Layer 2 switching, IP v4/v6 routing, QoS support and management capabilities. The family is built for optimal flexibility enabling multi-mode or single mode fiber media configuration and connectivity to 10GE or 1GE networks via SFP+ or SFP connectors. The family possesses management functionality that can be utilized via an extensive web GUI or CLI which enables flexibility and multiple configurations.

The family supports 4 configurations including, Niagara 2948, a 48 SFP+ port version, Niagara 2924, a 24 SFP+ port version, Niagara 2916, a 16 SFP+ port version and Niagara 2908, an 8 port SFP+ port version. Each port has support for a variety of SFP modules and cables including SFP+ SR, SFP+ LR, SFP+ ER, SFP-SX, SFP-LX, SFP-TX and direct attached cabling.
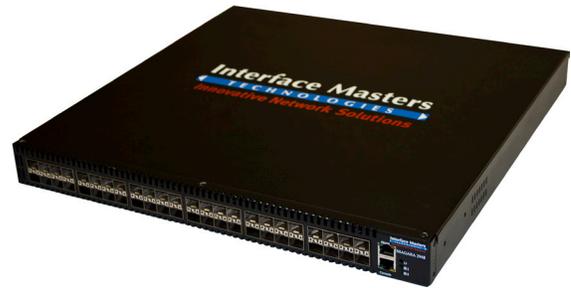
Target Applications

The comprehensive feature set is well suited for a range of applications including:

- Carrier Ethernet and Metro Ethernet devices
- Datacenter switching applications
- IP-DSLAMs, blade servers
- Managed Ethernet switches
- MTU or MDU premises switches

Management

- SNMP (v1, v2c, v3) agent and MIB support; configuration save / restore
- CLI (Console, Telnet, SSH), pre-defined CLI commands
- WebUI (HTTP and HTTPS / SSL), pre-defined web pages
- Software and configuration upgrade through TFTP or SFTP
- Syslog – client (with reliable syslog delivery) and relay
- TCP/IP stack for IPv4 and IPv6 (including ARP, ICMP, ND, UDP)
- DHCP (client, server, relay) for IPv4
- Stateless DHCP service for IPv6 for specific options assignment
- RADIUS client
- TACACS+ client
- RMONv1, RMONv2, DSMON
- IP authorized managers
- Ethernet port control and management
- Traffic mirroring
- SNTP (Simple Network Time Protocol) client
- Chassis management
- Switch stacking

Basic Layer 2 Switching

- Transparent bridging
- VLAN aware bridging with GARP, GVRP, GMRP

- Rapid Spanning Tree Protocol
- Multiple Spanning Tree Protocol
- Per VLAN Rapid Spanning Tree Protocol (enhanced) – PVRST+
- IGMP snooping
- IGMP filtering
- IGMP Proxy
- MLD snooping
- Link Aggregation with LACP
- 802.1x authentication
- Link Layer Discovery Protocol (LLDP)
- Ethernet OAM – 802.3ah
- MRP (Multiple Registration Protocol)

Routing

- IPv4 unicast - static routing, RIP v1/v2, OSPFv2, IS-IS, BGP4
- IPv4 multicast – IGMP router, PIM-SM/DM, DVMRP
- IPv4 – NAT (Network Address Translation) – unicast and multicast
- IPv6 unicast - static routing, RIP v6, OSPFv3, IS-IS, BGP4+
- IPv6 multicast – MLD, PIMv6
- Route redistribution between IPv4 routing protocols and static routes
- Route maps for filtering route advertisements and route redistribution – IPv4 and IPv6
- IPv6 tunneling over IPv4 – IPv4 and IPv6
- Graceful restart for BGP, BGP4+, IS-IS, OSPFv2, OSPFv3
- Hot standby redundancy for OSPFv2, OSPFv3, PIM for IPv4/v6
- Virtual routing with IPv4/v6 static routing, OSPFv2/v3, IS-IS for IPv4, RIPv2
- VRRP for router redundancy

Advanced Layer 2 Switching, MPLS / VPLS

- Q-in-Q VLAN tunneling and Provider bridging
- MPLS - static LSPs, LDP, RSVP-TE, PWE3 VCs for L2 VPNs QoS (dependent on silicon support)
- ACLs (Access Control Lists) for traffic filtering
- 802.1p, DiffServ, traffic prioritization queuing, policing, shaping
- Rate limiting and storm control
- Flow control and priority flow control
- Enhanced transmission selection

Highly Reliable

Each member of the Niagara 2948 family utilizes two redundant hot swappable power supplies for maximum reliability.

Each member of the Niagara 2948 utilizes advanced design and power efficiency techniques for optimal operation.

Linux Operating system	Chassis management, Stacking	Management - CLI (console / Telnet / SSH), WebUI (HTTP / SSL), SNMPv3, Radius, Tacacs+
	System management, config save / restore, DHCP-IPv4, Stateless DHCP for IPv6, RMONv1/v2, DSMON, Syslog, Mirroring, SNTP, software upgrade	
	MPLS | ACL, QOS, Flow Control, Priority Flow Control, Rate Control, Storm Control, Enhanced Transmission Selection	
	Layer 3 suite – IPv4 & IPv6, RIP, RIPv6, OSPF, OSPFv3, BGP4, IGMP, MLD, PIM, DVMRP	
	Layer 2 suite – VLAN, RSTP/MSTP, GVRP / MVRP, GMRP / MMRP, LA, LACP, IGMP / MLD snooping, EOAM, LLDP	

Maximum Power Consumption

Niagara 2948	195 Watts
Niagara 2924	145 Watts
Niagara 2916	128 Watts
Niagara 2908	111 Watts

Environmental

Operating Temperature	0 to 55 ºC or 32 to 131 ºF
Operating Humidity	5 to 95%
Airflow	100 lf/m

Dimensions

	mm	inches
Length	440.182	17.33
Height	44.450	1.75
Width	440.182	17.33

Product Line

- Network Interface Cards with Bypass
- Network Interface Cards without Bypass
- External Bypass Products
- SSL/IPSec Cards
- Embedded Switches
- Embedded Platforms
- Development Tools
- TAP Systems

About Interface Masters Technologies, Inc.

Interface Masters Technologies is a leading vendor in the high speed networking market including Bypass, TAP, switches and smart NICs products, based in the heart of the Silicon Valley. Interface Masters' expertise lies in Gigabit, 10 Gigabit and 40 Gigabit Ethernet networking solutions that integrate with monitoring, inline networking, IPS, UTM, Load Balancing, WAN acceleration, and other mission-critical IT and security appliances.

Flagship product lines include hardware load-balancers, specialized 10GE internal server adapter cards, switches, 10 Gigabit external intelligent Network TAP and Bypass and failover systems that increase network monitoring capabilities, network reliability and inline appliance availability.

Company Headquarters are located in San Jose, CA with satellite offices in Hong Kong and Europe.

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