Interface Masters Technologies

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

About Interface Masters Technologies

❖ leading innovator of monitoring and networking

equipment for the past Sixteen Years

❖ Based in San Jose, California with sales and support offices

In Europe & Hong Kong

Interface Masters Technologies & OCP

❖ Joined with Broadcom to author the OCP Switch specification Rev 1.0 in early 2013

❖ In the process of developing rev 1.1 of the OCP Spec for TOR and Spine switch

❖ Introduced Niagara2948-12XLM a modular TOR switch in September, 2013

❖ Today is introducing Niagara2632XL a spine switch

❖ Will introduce Niagara2948-6XL the 2nd TOR switch by the end of March

Interface Masters Confidential Information

Niagara **2948-12XLM-OCP**

❖ 1U switch based on Broadcom StrataXGS® Trident 2

  ❖ 1.28 Tbps of Bandwidth

❖ Choice of X86, PPC, MIPs or ARM Control Processor

❖ Optional Data Plane off-load module

❖ Modular IO configuration

  ❖ Up to 96 x 10Gb ports

  ❖ Up to 12 x 40Gb ports

❖ Support data center configurations

Niagara 2948-12XL-OCP – Internal

Control CPU

- ❖ Flexible control CPU board:
  - ❖ CPU architecture
    - ❖ X86 – AMD embedded G-series SOC
    - ❖ Power PC – Freescale multi core PPC
    - ❖ MIPS – Broadcom Multi Core MIPS
    - ❖ ARM
  - ❖ CPU Power
    - ❖ single core or multi core
    - ❖ Speed configuration
  - ❖ Memory
  - ❖ Storage

Data Plane Processor (DPP)

❖ Acceleration for data place functions

  ❖ Encryption and decryption

  ❖ Deep Packet inspection function

❖ 40Gbps interface to the data plane

❖ Supports:

  ❖ Multi core MIPs CPU – XLP432
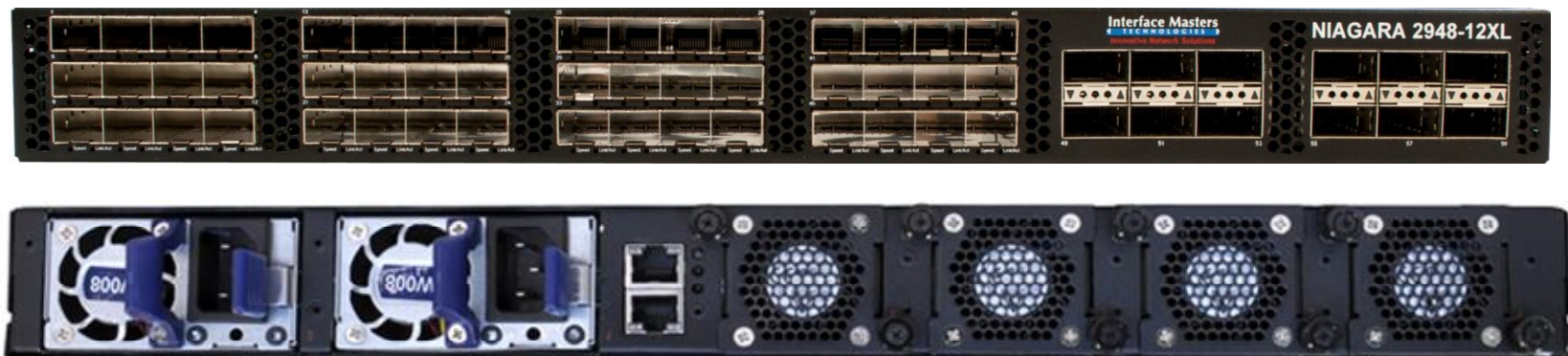
  ❖ FPGA design

Flexible IO module in a 1U

❖ Support different application
   ❖ TOP – Leaf switch
      ❖ 48 x 10Gb + 12 x 40Gb
      ❖ 48 x 10Gb + 6 x 40Gb
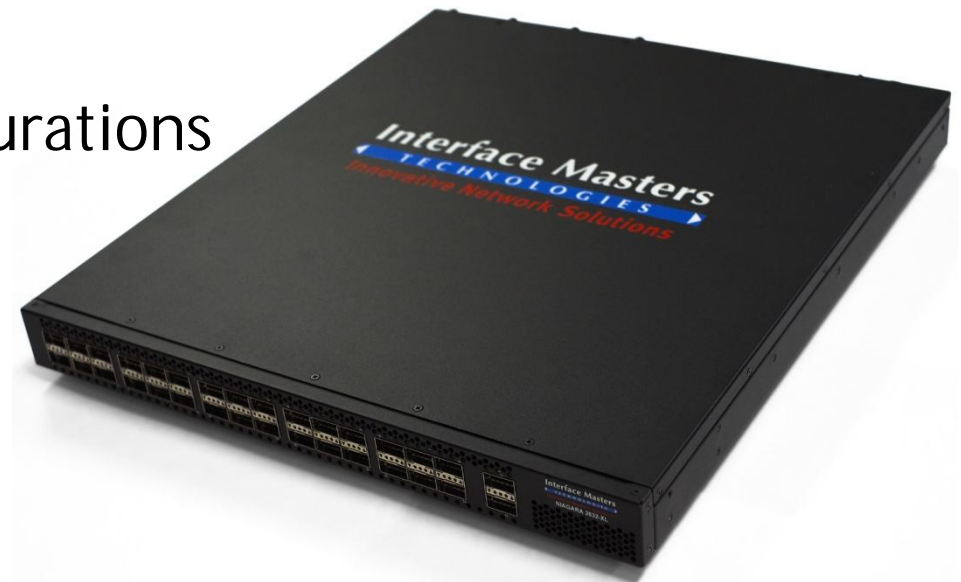   ❖ 72 x 10Gb
   ❖ Aggregation – Spine switch
      ❖ 32 x 40Gb

Niagara 2948-12XL-OCP – Front and Back

❖ Supports dual redundant power supplies

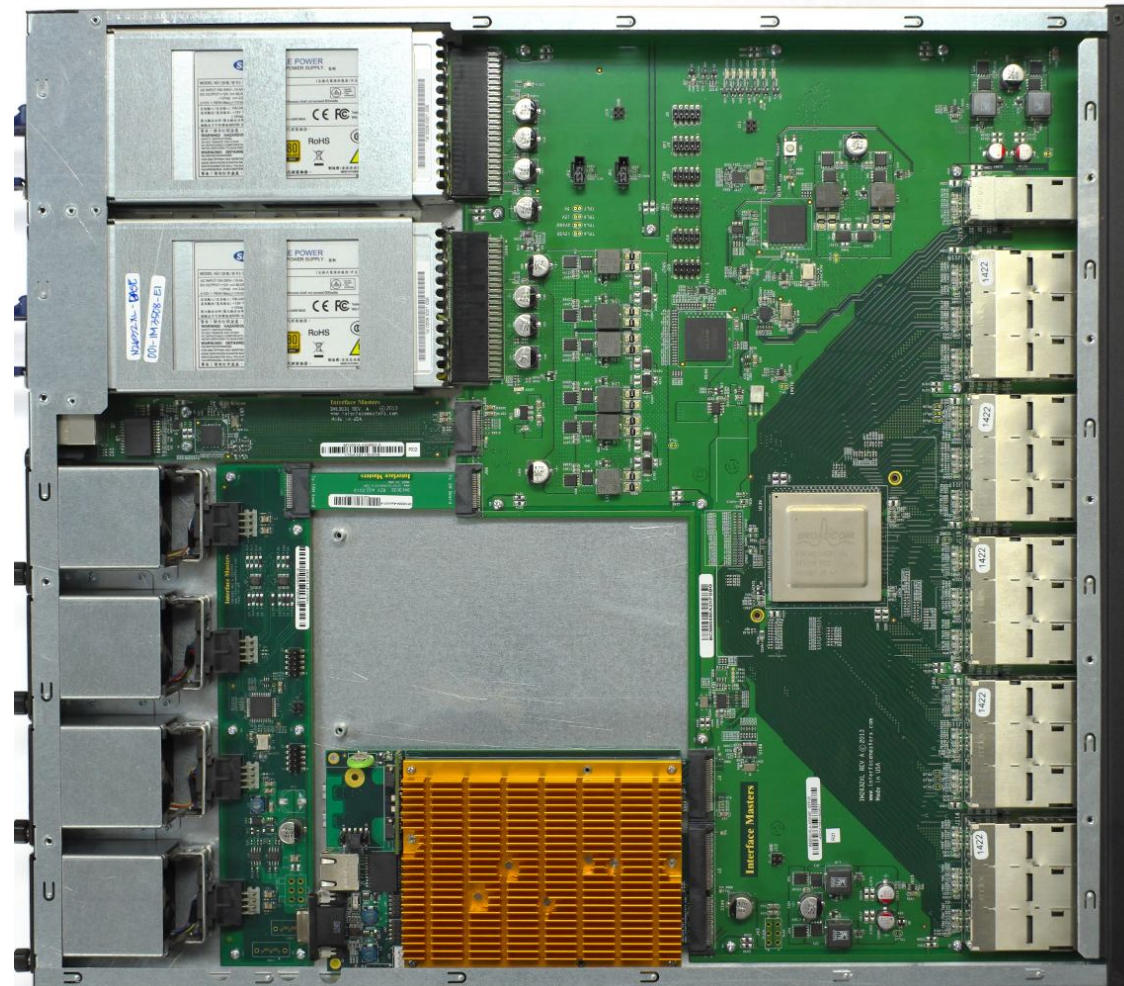❖ Hot Pluggable fans - back to front and front to back
factory configurable

Niagara 2632XL-OCP

❖1U switch based on Broadcom StrataXGS® Trident 2

  ❖1.28 Tbps of Bandwidth

❖Choice of X86, PPC, MIPs or ARM Control Processor

❖32 ports of 40Gb
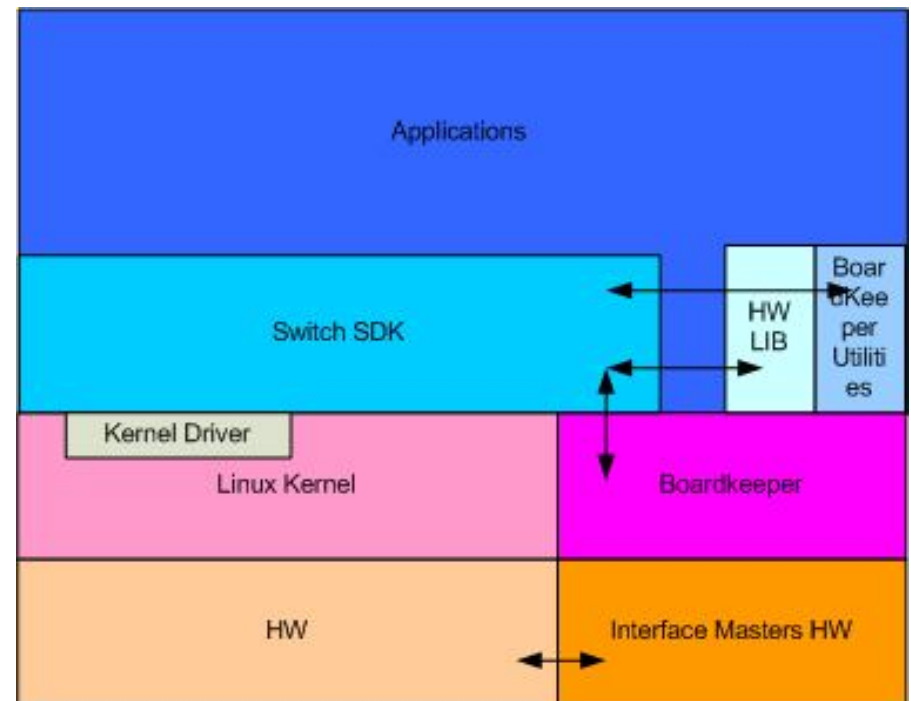
❖Support data center configurations

Niagara 2632XL-OCP

Niagara 2632XL-OCP – Front and Back

❖Supports dual redundant power supplies

❖Hot Pluggable fans - back to front and front to back

factory configurable

Software Foundation

❖ Boot loader
- ❖ GRUB 2 for X86
- ❖ U-Boot and X-Loader for MIPS

❖ Open Network Install Environment (ONIE)

❖ Linux BSP
- ❖ Debian or Ubuntu Distribution

❖ Interface Masters Boardkeeper
- ❖ Drivers and interfaces to boards, buses and protocols
- ❖ Hardware auto-configuration

❖ Broadcom SDK – 6.3.2

Switching Software

❖ Switch can be delivered with the following configurations

    ❖ Hardware only

    ❖ Hardware + OpenFlow 1.3.1

    ❖ Hardware + L2-L3 switching software

❖ ONEI: enables ecosystem of operating systems

❖ Optional 3rd party Independent Software Vendors

First Time Boot Up

Boot Loader
(HW Vendor Supplied)

ONIE
(HW Vendor Supplied)

Fetches

Installer
(OS Vendor)

Installs

Network OS
(OS Vendor Supplied)