

Features:

- ✓ Airflow configurations for both front and rear facing I/O layouts
- ✓ 48x 10 Gigabit SFP+ ports for twinax cabling or optical transceivers
- ✓ 4x 40 Gigabit QSFP ports
- ✓ Redundant 2x 460W power supplies
- ✓ Hot swappable fans

Arctica 4804x (Arctica OS)



10 Gigabit Ethernet Top-of-Rack or aggregation switch platform with industry standard CLI and OpenFlow capabilities.

Based on Broadcom's industry leading Trident+ merchant silicon, Penguin's Arctica 4804x is a 1U, fixed configuration Ethernet switch with 48 10GigE ports and 4 40GigE uplinks. Fully featured, Arctica 4804x delivers high L2/L3 performance in a highly cost effective package making it ideal for data center, HPC and other top-of-rack applications.

As one of the first Linux system vendors, Penguin has remained committed to its core Open Computing and Open Networking values. Consequently, in contrast to solutions from traditional high-priced tier-1 vendors, Penguin offers Arctica customers trapped by vendor lock-in, the ability to choose from a number of switch operating systems, allowing Arctica deployments to be more intelligently tailored for the application in hand.

For customers seeking compatibility with de-facto industry standards and access to more specialized switch features, Penguin offers Arctica Operating System (AOS) on Arctica 4804x and other Arctica models.

Providing an extensive L2/L3 feature set, AOS provides all the functionality needed to efficiently implement a wide range of networking solutions from simple, optimized top-of-rack applications to HPC and Datacenter fabrics and other large-scale deployments. In particular, AOS is OpenFlow capable, allowing the simple integration of Arctica switches into multi-vendor SDN based networks.

Furthermore, Penguin switches are designed to be easy to manage, maintain and deploy into the typical datacenter. Serviceability features include redundant fans and power supplies. Penguin Arctica product line also includes a full list of vendor-neutral cabling and transceiver options for copper and optical connectivity.

Penguin Arctica switch hardware, software and accessories are warranted and supported by Penguin Computing, experts in High Performance and Datacenter Computing Solutions.

Penguin Computing specializes in delivering turn-key High Performance Computing clusters and Data Center systems that include software solutions for cluster and workload management, high performance interconnects, storage systems and a power delivery infrastructure. All components are integrated in rack enclosures, configured for optimal performance by Penguin's HPC experts and ready to use.

Penguin systems are tested for compatibility with all major commercial and freely available Linux distributions and are available with Red Hat Enterprise Linux, SuSE Linux Enterprise Server or CentOS pre-installed.

Contact:

For information, please contact:
sales@penguincomputing.com

About Penguin Computing

For well over a decade Penguin Computing has been delivering integrated, Linux-based solutions for the enterprise and HPC space. With Linux expertise that is unmatched in the industry Penguin Computing offers an end-to-end portfolio of products that range from Linux servers and workstations to integrated, turn-key HPC clusters and cluster management software. For customers with special hardware requirements Penguin Computing provides customized 'build to order' server solutions. Complementing Penguin Computing's hardware and software solutions is Penguin Computing on Demand (POD), a public HPC cloud that provides virtual supercomputing capabilities on-demand on a pay-as-you-go basis.

Open Switches for Intelligent Data Centers

As data center deployments become more complex and larger in scale, the networking industry is being changed by the very same impulse that transformed servers and storage in the data center market. Burdened by cost and tired by the constraints of vendor tie-in and difficult to use network switches, customers are now demanding easier and more open solutions to the problem of building infrastructure, with increased cost-effectiveness without sacrificing performance or the ability to satisfy the most challenging data center applications.

To meet these needs, Penguin Computing offers the Arctica family of economical, full-featured managed network switches.

Interfaces

- 48x SFP+ 10GbE ports and 4x QSFP 40GbE ports
- Management (1000Base-T) and serial console (RJ45) Ports, USB (Type A)
- Transceiver / cabling options: SFP+: SR up to 400m, LR up to 10km, CR (passive twinax) up to 7m. QSFP ports up to power level 4; Optical: SR4 up to 400m, LR4 to 10km; Copper: 40GBASE-CR4 (passive twinax) up to 5m

Chassis

- Dimensions: 1.73" (H) x 17.3" (W) x 17" (D)
- Power: Dual redundant power supplies, 100-240VAC auto-ranging, 47-65Hz
- Serviceability: toolless fans with front-to-back and back-to-front airflow options

Hardware Features- Data Plane

- Switching Capacity - 1.28Tbps, 9MByte Buffer
- Latency - \leftarrow 1us port to port
- Routing Tables - MAC 128K, L3 16K, Bridges 4K, Virtual Ports 4K
- Jumbo Packet 12K bytes
- Content Aware Processing - Layer 2-7 packet classification
- Class of Service based queuing
- DWRR, WRR Strict Priority scheduling policies
- ACL-based policies
- Bandwidth allocation based on port group

Hardware Features- Control Plane

- CPU - 1.2GHz Dual Core PowerPC, 2GB ECC DDR3-667, 1GB NAND Flash, 512Mb NOR Flash

OpenFlow - Arctica OS

- OpenFlow management agent
- Port-based Hybrid mode
- VLAN-based Hybrid mode

Layer Two - Arctica OS

- 802.1D STP, 802.1w RSTP, 802.1s MSTP
- 802.1Q VLAN, Protocol VLAN
- 802.3ad Link Aggregation/LACP
- MLAG, Multi Chassis Link Aggregation
- 802.1x Network Access Control
- IGMP/MLD Snooping

Layer Three - Arctica OS

- Hardware-Based IPv4 / IPv6 forwarding
- IPv4/v6 Routing Protocols: OSPF v2/v3, RIP, BGP
- ECMP/WCMP, VRRP
- IGMP v2/v3
- IP Multicast: PIM-SM, PIM-DM