Netberg Aurora 220

- Redundant power and cooling
- Cost-effective L3 switching
- OpEN API automation
- Datacenter-optimized design
- 8x 10G SFP+ ports

The Aurora 220 is a cost-effective 1/10G Layer 3 switch for datacenter and enterprise environment, where the all-10G connection is not required yet. Built around Broadcom Helix4 silicon and embedded ARM CPU, the Aurora 220 decrease CAPEX to almost traditional L2 switch level.

Its unique combination of 48 10-BaseT/100-BaseTX/1000-BaseT ports and eight 1G/10G SFP+ ports in a compact 1U form-factor is well-suited for highly scalable network architectures. The Aurora 220 can support direct and reverse airflow for different datacenter architectures.

Fully-featured Layer 3 switching, IPv6 support, industry-standard CLI interface, and a full set of Simple Network Management Protocol (SNMP) MIB's along with advanced datacenter features are available within pre-installed ICOS NOS.

About us

Netberg is founded by a seasoned team of engineers with vast expertise in hardware and software. Aimed to provide the best performance and quality, Netberg offers an impressive product line, from standard rackmount servers to complete rack solutions, based on OCP (Open Compute Project)/Scorpio specifications.

Key featues:

- Interfaces: 48 RJ45 GbE Ports, 8 SFP+ 10GbE Ports, Management (1000Base-T), mini-USB Console Port and USB2.0 (Type A)
- ARM embedded CPU, 1GHz
- 2/4GB DRAM, 2GB Flash
- Broadcom StrataXGS® BCM56344 Helix 4 Switching Silicon
- Switching Capacity: 150 Gbps, 4MB Packet Buffer
- Routing Tables: Uniform MAC/VLAN/L3 hosts up to 96K, LPM 16K IPv4
- Jumbo Packet: 12K bytes
- 460W 1+1 RPSU, 100V~240V AC / 50~60Hz
- 2 N+1 redundant fans, Front-to-Back/Back-to-Front Airflow
- Fan LED, System status LED, PSU1 status LED, PSU2 status LED, Reset button
- Operating temperature: 0~45°C
- Operating humidity: 20-95% maximum relative humidity (non-condensing)
- FCC, CE, RoHS6
- Broadcom ICOS software stack

Address: 2F-1 No.36, Park St., Nangang District, Taipei, 11560 Taiwan R.O.C. Tel: + 886-2-26537088, Email: sales@netbergtw.com

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ICOS 3.0 software stack. To be updated along with the development.

Layer 2 features

Layer 2 features

Link aggregation:

- 802.3ad with LACP
- Max number of group: 8
- Unicast/Multicast traffic balance
- Virtual Port Channel (MLAG)

VLAN:

- IEEE 802.1Q
- Port-Based
- Private VLAN
- Voice VLAN

Spanning Tree:

- IEEE 802.1D
- IEEE 802.1w
- IEEE 802.1s
- Spanning Tree Fast Forwarding
- Edge port (same as Fast Forwarding)
- Auto Edge
- BPDU Filter/Guard
- Loop Guard
- TCN Guard
- Root Guard

Storm Control:

- Broadcast
- Unknown Multicast
- DLF (Unknown Unicast)

IGMP Snooping:

- IGMP Snooping v1/v2/v3
- IGMP v1/v2 querier support
- IGMP Immediate Leave
- MLD Snooping
- Jumbo frame
- IEEE 802.3x Flow Control
- Q-in-Q

Layer 3 Features

- Number of IP interfaces: 128
- Multinetting/CIDR
- /31 subnet support
- IP ARP
- Proxy ARP
- Local proxy ARP
- IRDP
- Static route
- ECMP
- OSFP v2/v3
- BGP v4/v6
  - RFC4893
- Virtual routing and forwarding (VRF) awareness in BGP:
- BGP extended communities
  - BGP route leaking
  - BGP dynamic neighbors
- Multicast:
  - Multicast groups
  - IGMP v1/v2/v3
  - MLD v1/v2
  - DVMRP
  - PIM-DM v4/v6
  - PIM-SM v4/v6
  - IGMP proxy
- VRRP
- Loopback
- Routes:
  - IPv4
  - IPv6
  - ARP entry
  - ND entries
  - IP IGMP/MLD
  - PIM-SM/DM v4/v6
  - DVMRP
- Source IP configuration
- Policy-based routing (PBR)
- IPv6 Tunneling
- IPv6 Loopback
- DHCPv6 relay
- DHCPv6 server

Data center

- ONIE enabled boot loader
- FIP snooping
- Congestion Notification (CN)
- ETS
- PFC
- DCBX for PFC (CEE v1.0)
- DCBX for ETS (CEE v1.0)
- OpenFlow 1.0
- Open Ethernet Networking (OpEN) API
- Puppet/Chef support
- VXLAN
- NVGRE

Security

- Static/Dynamic Port Security (MAC-based)
- 802.1x:
  - Port based
  - MAC based
  - VLAN assignment
  - Guest VLAN
  - Unauthenticated VLAN
  - QoS assignment
- ACL:
  - L2: MAC SA/DA, CoS, EtherType
  - L3: IPv4 SA/DA, subnet based
  - L3: IPv6 SA/DA, flow-label, DSCP
  - L4: TCP/UDP port
  - Time-based ACL
  - ACL counters
- RADIUS:
  - Authentication
  - Accounting
- TACACS+:
  - Authentication
- HTTPS & SSL
- SSH 1.5/2.0
- User authentication:
  - Local
  - RADIUS/TACACS+
  - AAA
- DoS control
- MAC filter
- IP Source Guard
- Dynamic ARP inspection
- DHCP snooping
- Control Plane Policy (CoPP)

IPv6

- V4/V6 dual stack
- ICMPv6
- ICMPv6 redirect
- IPv6 Path MTU Discovery
- IPv6 Neighbor Discovery
- Stateless Autoconfiguration
- Manual Configuration
- DHCPv6
- SNMP over IPv6
- HTTP over IPv6
- SSH over IPv6
- IPv6 Telnet support
- IPv6 DNS resolver
- IPv6 RADIUS support
- IPv6 TACACS+ support
- IPv6 Syslog support
- IPv6 SNTP support
- IPv6 TFTP support
- Remote IPv6 ping

Management

- Standard Linux shell tools
- Linux application integration
- Industry standard CLI
- CLI filtering
- Telnet/SSH
- Software/configuration upload/download using TFTP/XMODEM/HTTP/FTP/SCP/SFTP
- SNMP v1/v2c/v3
- RMON 1,2,3,9 groups
- BOOTP client/relay
- DHCP:
  - Client
  - Server
  - Relay
  - L2 option 82 relay
  - L3 option 82 relay
- Event log
- DNS Client
- Utility: remote ping, traceroute
- SNTP v4
- LLDP: 802.1AB, 802.MED
- CDP
- UDLD
- Port mirroring:
  - SPAN: one-to-one, many-to-one
  - SPAN with ACL filter
  - SPAN with VLAN
  - RSPAN
- sFlow v5
- Cable test
- Email alerting
- Auto install
- RESTCONF interface
- NetSNMP

QoS

- Number of priority queue: 8
- Scheduling:
  - WRR
  - Strict priority
  - Hybrid (WRR+Strict priority)
- CoS:
  - 802.1p-based CoS
  - IP TOS Precedence based CoS
  - IP DSCP based CoS
- DiffServ:
  - 32 classes
  - 13 rules per class
  - No. class in policy: 64
  - No. policy in class: 28
- Auto VoIP

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