APS6132Q

Advanced Programmable Switch

APS Networks

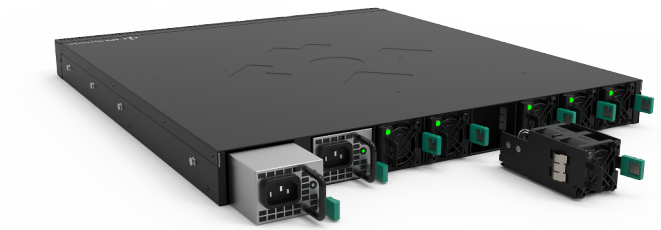
The APS Networks APS6132Q switch is designed as a spine switch for the most demanding network security and enterprise use cases, using the P4 programming language. The unit enables multiple applications to run on 32x QSFP28 ports at line rate. The APS6132Q boosts with the quad pipeline Tofino switch ASIC and is designed with an octal core CPU for demanding compute-intensive applications. It is our highest-end Intel Tofino-based platform delivering an aggregated bandwidth of 3.2Tb/s non-blocking throughput.

Benefits

- Fully programmable P4 architecture
- Quad pipeline 3.2Tb/s throughput
- PTP Time Synchronization (optional)
- Supports 10/25/40/50/100Gb/s data rates
- Internal CPU to network ASIC connectivity
- Hot Swappable PSUs & Fan Units

Designed on Open Frameworks

The APS6132Q is designed around open framework principles. The BMC is designed using the RunBMC Framework from Open Compute Project (OCP) running OpenBMC software whilst the APS Board Support Package enables the development of P4 applications using the Intel® P4 Studio SDE.



Use Cases

- Enterprise Networking: Top of Rack layer 2/3 P4 programmable network switching
- Security applications: Network Packet Broker / Layer 4 Load Balancer / P4 Firewall
- Media & Broadcast: Seamless switching edge switch

Main Features

- Intel Tofino – 3.2Tb/s network ASIC
- 8-core Intel Xeon D-1700 CPU
- 32 Ports 100Gb/s
- Open BMC Management
- PTP Optional
- Quick fit rack slides

Why APS Networks?

Security by Design	Made in Europe	PTP Timing
Programmable	Modular	Innovative

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Technical Details

Model	APS6132Q
Network Ports	32x 100Gb QSF28
Max. 100Gb Ports	32
Max. 50Gb Ports	64
Max. 40Gb Ports	32
Max. 25Gb Ports	128
Max. 10Gb Ports	128
Management Port	1x 1Gb RJ45 (100/1000Mb)
SDN Controller / Control Plane Ports	2x 1Gb SFP Ports
USB	1
Network ASIC	Tofino – 3.2Q
Throughput	3.2Tb/s
Packets per second	Up to 3.0Bpps
Latency	From 600ns
ASIC Packet Buffer	20MB
ASIC Pipelines	4
Hot Swap PSU	2 (1+1 redundant)
Hot Swap Fans	6 (N+1 redundant)
Typical Power Draw	300W
Max. Power Draw	700W
Max. PSU	800W Titanium (AC)
Acoustics	TBD
MTBF	TBD

Physical	
Rack Units	1RU
Dimensions (WxHxD)	46 x 4.3 x 48 cm
Weight	11 kgs
Rack Mount	Rack rail sliding solution
Hardware Warranty	3 year return to manufacturer

CPU

Intel XEON D-1713NT (8-core)

- 364GB RAM
- 1024GB SSD
- Trusted Platform Module (TPM) 2.0
- Optional SSD (1TB)

Power Supply	Options
AC (Front to Back Cooling)	90Vac – 264 Vac
AC F/B Inlet Socket	IEC 60320 C14
AC (Back to Front Cooling)	90Vac - 264Vac
AC B/F Inlet Socket	IEC 60320 C16
AC Input Frequency	47Hz - 63Hz
AC Efficiency	96%
DC (Front to Back Cooling)	-72Vdc to -40Vdc
DC (Back to Front Cooling)	-72Vdc to -40Vdc
DC Efficiency	92%

Software	
Support Software (OS)	Linux
Supported Applications	SONiC / STRATUM
SDE	Intel P4 Studio

Environment	
Operating Temperature	0°C - 40°C
Non-Operating Temperature	-20° - 70°C
Humidity	5% to 95% (non-condensing)
Altitude	0–2000m (0-6000ft)

Optional Upgrade	PTP Board (Precision Time Protocol)