APS Networks®
APS2156D-G

APS Networks

Main Features

- Intel® Tofino™ 1 – 2.0Tb/s network ASIC
- Intel® ATOM or Xeon D-1700 CPU Processor
- 48 Ports 10/25Gb/s+8 Ports 100Gb/s
- OpenBMC Management

Benefits

- Fully programmable P4 architecture
- Dual pipeline 2.0Tbs throughput
- PTP Time Synchronisation (optional)
- Supports 10/25/40/50/100Gb/s data rates
- MultiGig 10/100/1000Mb/s rates on SFP28 Ports
- MacSec Security on 48x SFP28 ports (optional)
- Internal CPU to network ASIC connectivity

General Product Description

The **APS Networks® APS2156D-G** switch is a TOR switch for enterprise networks or security solutions using the P4 programming language. The unit enables enterprise L2/L3 switching across the 48x SFP28 ports and the 8x QSFP28 at line rate and supports 10/25/40/50 and 100Gb/s data rates. The **APS2156D-G** is designed for multigig data rates which enable 10/100/1000Mb/s port speeds on the SFP28 ports. Combined with internal CPU Ethernet connectivity, a range of CPU processors, optional PTP and the ability to implement MacSec on the SFP28 ports the **APS2156D-G** is ideal for the development of P4 enabled solutions whilst providing secure connectivity to servers and uplink networks.

Use Cases

- Enterprise Networking: Top of Rack layer 2/3 P4 programmable network switch

- Security applications: Network Packet Broker / Layer 4 Load Balancer / P4 Firewall

- Media & Broadcast: Seamless switching edge switch

Technical Details

Model	APS6132Q-G
Network Ports	48x SFP28 & 8x QSFP28
Max. 100Gb Ports	8
Max. 50Gb Ports	16
Max. 40Gb Ports	8
Max. 25GB Ports	80
Max. 10Gb Ports	80
Max. 1Gb Ports	48
Management Port	1x 1Gb RJ45 (10/100/1000MB)
Console Port	1x RJ45 Serial
SDN Controller / Control Plane Ports	2x 1Gb SFP Ports
USB	1
Network ASIC	Tofino™ 1 - 2.0D
Throughput	2.0Tb/s
Packets Per Second	up to 3.0Bpps
Latency	from 600ns
ASIC Packet Buffer	22MB
ASIC Pipelines	2
Hot Swap PSU	2 (1+1 redundant)
Hot Swap Fans	6 (N+1 Redundant)
Typical Power Draw	450W
Max. Power Draw	700W
Max. PSU	1200W Titanium
Acoustics	TBD
MTBF	TBD

Software	
Supported Software (OS)	Debian / Ubuntu
Supported Applications	SONiC / STRATUM
SDE	Intel® P4 Studio

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

Variation: CPU

- Intel® ATOM C3538 (quad-core)
- Intel® Xeon D-1713NT (quad-core)
- Intel® Xeon D-1736NT (eight-core)

Power Supply	Options
AC (Front to Back Cooling)	90Vac - 264Vac
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%

Environment	
Operating Temperature	0°C - 40°C (32°F - 104°F)
Non-Operating (Storage) Temperature	-20°C - 70°C (-20°F - 158°F)
Humidity	5% to 95% (non-condensing)
Altitude	0 - 2000m (0 - 6000ft)

Optional Upgrades

- PTP (Precision Time Protocol)
- MacSec
- Multi Gig 10/100/1000Mb/s