

## Advanced Programmable Switch

The APS Networks **BF2556X-1T** delivers bleeding-edge programmable networking in a practical form factor for smaller network edge and vertical industry applications. Our 1RU 25Gb switch offers the full benefits of the powerful APS hardware platform with support for a unique breadth of speeds across 1/2.5/5/10/25/40/50/100Gb.



**Data-Plane Programmability with P4 on the 2.0 Tbps Intel® Tofino™ ASIC:** Switch and prioritize network traffic based on industry/application-specific protocols and custom packet metadata. Create bespoke wire-speed switching functionality, implement load-balancing and realize NFV.



**Powerful Carrier-Grade Hardware:** Effortlessly run northbound SDN controller interfaces (P4 runtime, gNMI | gNOI and legacy control-plane protocols). Install custom software and applications on the switch: Xeon 8-core CPU, 128GB SSD and 32GB RAM, redundant and hot-swappable power supplies and fans.



**Built for SDN control:** Multiple dedicated port options for switch management enable failover connection to SDN controllers and logical separation of the switch between different controllers: Out-of-band Ethernet, console port (RS232), two dedicated SFP cages.



**Supported speeds from 1Gb to 100Gb:** 48x25Gb + 8x100Gb in 1RU Chassis, Port 1 - Port 16: Support 1/2.5/5/10/25Gb, Port 17 - Port 48: Support 10/25Gb.



**IEEE 1588v2 Precision Time Protocol:** Unique to the APS range, with resolution of 4ns and frequency lock by OCXO. Timestamping is a vital enabler for real-world use cases across industries.



**Switch Abstraction Layer (SAL):** Unified management layer enables custom applications and functions to act on individual switch components; allows configuration and management of the time synchronization function (PTP); and provides a gRPC interface and C++ API for application development.



**Integrated ONIE bootloader:** Dynamic updating and hardware repurposing with a wide choice of operating systems.

### Cross-Industry

SDN · NFV · Load Balancing · Datacenter Optimization · Application Performance · Security · Precise Time Stamping · In-Band Network Telemetry · Network Analytics · Observability · Reliability · Troubleshooting

### Media & Broadcast

IP Studio · SDI/Ethernet · Live Broadcast (Seamless Video Stream Switching) · CDN Development · Video Encoding and Decoding

### Telecoms

BNG Development · 5G Integration · Mobile Network Cell Handover · Intelligent Edge · NGI

# BF2556X-1T

## Technical Specifications

Product Model	BF2556X-1T
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 1/2.5/5Gb Ports	16 (ports 1 to 16)
Throughput	2.0 Tbps
Packets per Second	up to 3.0 Bpps
Latency	from 600ns
Time Synchronization	transparent & boundary clock
CPU	8-core x86
System Memory	32 GB
Flash Storage Memory	2 x 16MB
System SSD Storage	128 GB
System / Packet buffer Memory	22 MB
Number of Pipelines	2
Management Ports	1x 1G RJ45 (10/100/1000)
RS-232 Serial Ports	1 (RJ45)
SDN Controller / Control Plane Ports	2 x 1G SFP cages
USB Ports	1
Hot-swap Power Supplies	2 (1+1 redundant)
Hot-swap Fans	4 (N+1 redundant)
Typical / Max Power Draw	106W / 490W
Power Supplies	850W max. (AC)
Frequency (AC)	47Hz to 63Hz
Power Supply Options	AC
Airflow	Port-side intake and exhaust
Rack Units	1RU
Physical Dimensions (WxHxD) (in cm and inches)	68 x 58 x 20cm (26.77" x 22.83" x 7.87")
Weight (in kg and lbs)	8.49kg (18.7 lbs) net weight
Rack Mount Kit	easy to install rail sliding kit
Boot Loader	ONIE
Supported Open Source Software	mion, ONL, SONiC, Stratum, Ubuntu
Commercial Software	Please refer to our website for current list
SDE	Intel® P4 Studio
Acoustics	67.63 dBA at 50% fan speed, 78 dBA at 70% fan speed, and 93.9 dBA at 100% fan speed
MTBF	347,890 hours
Warranty	
Hardware Warranty	3 years bring-in warranty

Power Supply	1U AC Power Supply
Input Voltage	100-240VAC
Typical Input Current	10 - 5A
Input Frequency	47/63Hz
Input Connector	IEC 320-C13
Efficiency (Typical)	93% Platinum
Compliance and Certification	
EMC	Emissions: FCC, EN55022, EN61000-3-2, EN61000-3-3 or EN61000-3-11, EN61000-3-12 (as applicable) Immunity: EN55024 Emissions and Immunity: EN300 386
Safety	UL/CSA 60950-1, EN 60950-1, IEC 60950-1 CB Scheme with all country differences
Certifications	RMC, C-Tick (Australia); VCCI (Japan); CCC (PRC); KCC (South Korea); North America (NRTL); CE, Reach (EU); BSMI (Taiwan); Anatel (Brazil); CB; UL; ROHS; ECCN EAR99
European Union Directives	2006/95/EC Low Voltage Directive 2004/108/EC EMC Directive 2011/65/EU RoHS Directive 2012/19/EU WEEE Directive
Environment	
Operating Temperature	32 to 104°F (0 to 40°C)
Non-operating (Storage) Temperature	-20 to 158°F (-20 to 70°C)
Humidity	5 to 95% (noncondensing)
Altitude	0 to 6000 ft (0 to 2000 m)
Specification	
Safety	UL 60950-1 Second Edition; CAN/CSA-C22.2 No. 60950-1 Second Edition; EN 60950-1 Second Edition; IEC 60950-1 Second Edition; AS/NZS 60950-1; GB4943
EMC: Emissions	47CFR Part 15 (CFR 47) Class A; AS/NZS CISPR22 Class A; CISPR22 Class A; EN55022 Class A; ICES003 Class A; VCCI Class A; EN61000-3-2; EN61000-3-3; KN22 Class A; CNS13438 Class A
EMC: Immunity	EN55024; CISPR24; EN300386; KN 61000-4 series
RoHS	The product is RoHS-6-compliant, with exceptions for leaded-ball grid-array (BGA) balls and lead press-fit connectors
Ordering Part Numbers	
BF2556X-1T with port-to-power airflow	BF2556X-1T-A1F
1-year advanced exchange support, software updates and setup support	SUP-BF2556X-1T-1Y
3-year advanced exchange support, software updates and setup support	SUP-BF2556X-1T-3Y
5-year advanced exchange support, software updates and setup support, incl. 2 year warranty extension	SUP-BF2556X-1T-5Y
Spare Rack Sliding Kit	RSK1
Additional 1TB SSD upgrade option	APS-SSD-1TB
Upgrade to a total of 64GB RAM (2 modules needed)	APS-RAM-32GB

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