Data Sheet

Product Highlights

Density and Performance

- 7280CR3MK-32P4S: 32x 100G and 4x 400G
- 7280CR3MK-32D4S: 32x 100G and 4x 400G
- 7280SR3M-48YC8: 48x 25G and 8x 100G
- Wire speed L2 and L3 forwarding
- Up to 4.8Tbps of wire speed performance with 8GB of buffer
- Broad connectivity with 25G SFP, 100G QSFP and 400G OSFP / QSFP-DD
- Up to 256K MAC Addresses
- Over 2M IPv4 Unicast Routes
- Over 5M IPv4 Routes with 7280R3K
- · Algorithmic ACLs for 100K rules

Wire-speed Encryption

- MACsec, IPsec and VXLANsec encryption
- Optimized for secure DCI and site-site encryption in a compact footprint

Cloud Grade Routing

- Secure Internet Peering
- Carrier Edge VPN Services
- Next Generation EVPN Services for 5G/ MEC, CIN, & Metro
- Carrier Core transport (LDP, RSVP-TE, SR-TE) and HA with FRR and TI-LFA
- Next Generation timing (PTP and SyncE*)
- Open programmable APIs (JSON-RPC, NETCONF) for provisioning, telemetry, path selection/topology discovery

Data Center Optimized Design

- Ultra-deep packet buffers
- Virtual Output Queues per port to eliminate head of line blocking
- Redundant & hot-swap power and fans
- Front-to-rear or rear-to-front cooling

Virtualization and Provisioning

- CloudVision
- EVPN for next generation DC
- LANZ for microburst detection
- Zero Touch Provisioning (ZTP)
- Accelerated sFlow (RFC3176)

Resilient Control Plane

- High Performance x86 CPU
- Up to 64GB System memory / 120 GB SSD

Arista Extensible Operating System

- Single binary image
- Fine-grained truly modular network OS
- Stateful Fault Containment & Repair
- Full access to Linux shell and tools
- Extensible platform bash, python, C++

Overview

The Arista 7280R3 Series of fixed systems, including the 7280R3 and the 7280R3K, are key components of the Arista 7000 Series portfolio of data center switches. 7280R3 encryption capable systems are high performance compact routing platforms with built-in wire speed strong encryption that is purpose built for the highest performance environments, and to meet the needs of large scale data centers. They deliver scalable L2 and L3 resources and high density with advanced features for encryption, network monitoring, precision timing and network virtualization to deliver scalable and deterministic network performance while simplifying designs and reducing Opex. The built-in encryption capabilities remove the need for external encryption devices and provides security against intrusion, passive wire tapping and other playback attacks. AES-256-GCM encryption meets regulatory compliance requirements and provides data protection without loss of performance.

Arista's encryption solutions utilize proven encryption technology to protect traffic for simple, reliable and scalable data center interconnect and for securing links between tiers in leaf and spine data center designs. MACsec offers security in the data link layer and is transparent and non-disruptive to L2/L3 traffic, while Arista TunnelSec™ enables encryption for IP or overlay traffic. Flexible 100GbE QSFP and 400GbE OSFP or QSFP-DD pluggable optics ensure a broad choice of cost effective connections.

7280R3 encryption systems can be deployed in a wide range of open networking solutions including secure Data Center Interconnect (DCI), large scale layer 2 and layer 3 cloud designs, overlay networks and virtualized or traditional enterprise data center networks. Deep packet buffers and large routing tables allow for internet peering applications. The broad range of interfaces and density choice provides deployment flexibility.



Arista 7280R3 MACsec systems

Arista EOS

All Arista products including the 7280R3 Series runs the same Arista EOS software, binary image simplifying network administration with a single standard across all switches. Arista EOS is a modular switch operating system with a unique state sharing architecture that cleanly separates switch state from protocol processing and application logic. Built on top of a standard Linux kernel, all EOS processes run in their own protected memory space and exchange state through an in-memory database. This multi-process state sharing architecture provides the foundation for in-service-software updates and self-healing resiliency together with stateful switchover without the loss of data plane forwarding.

Arista EOS enables advanced monitoring and automation capabilities such as Zero Touch Provisioning, LANZ, VM Tracer and Linux based tools to be run natively on the switch.



Model Overview

The Arista 7280R3 Series with encryption delivers high performance, large packet buffers, high scale and availability with wire speed AES-256-GCM encryption. EOS provides feature rich layer 2 and layer 3 forwarding suited for leaf, spine and DCI roles, connecting to existing and next generation systems with a choice of interface speeds.



7280CR3MK-32P4S or -32D4S: 32 ports QSFP100 and 4 ports OSFP 400G or QSFP-DD

- 32x 100G QSFP ports with TunnelSec enable 32 x 100GbE or 40G, 64 x 50G-2 or breakout to 4x 10G, 25G on alternate ports.
- 4 x 400G OSFP/QSFP-DD for flexible capacity expansion with both 100G and 400G optics
- 4.8Tbps of wire speed performance with 8GB of buffer and 2Bpps of performance



7280SR3M-48YC8: 48 ports 25G SFP and 8 ports QSFP100

- 48x 25G SFP ports with MACsec allow choice of 1G, 10G and 25G.
- 8 x 100G QSFP ports with MACsec for flexible allow choice of 8 x 100GbE, or 40G, and breakout to 10G, 25G and 50G.
- 2.4Tbps of wire speed performance with 4GB of buffer and 1Bpps of performance

Wire-speed Encryption with TunnelSec

The 7280CR3MK-32P4S and 7280CR3MK-32D4S platforms support Arista's TunnelSec technology, enabling line-rate, industry standard, authenticated strong encryption using the AES-256-GCM block cipher. TunnelSec devices offer IEEE 802.1AE MAC Security (MACsec), IPsec (RFC 4303) and VXLANsec for flexible encryption of layer 2, layer 3 or overlay networks. While MACsec operates at the link layer, offering point to point encryption, IPsec and VXLANsec enable the construction of encrypted IP tunnels that traverse multiple unencrypted hops between router or VTEP endpoints enabling line-rate strong encryption across third party infrastructure for WAN or DCI deployments. The flexibility to offer multiple types of encryption enables a broad range of deployments and removes the need for additional encryption devices while providing orders of magnitude improvements in latency and throughput when compared to traditional appliance based implementations. TunnelSec interfaces support encryption at all interface speeds, from 10G to 100G without a performance penalty. Encryption services are an EOS licensed feature and requires a license file to enable the encryption feature. License information is included in the ordering information section of this document.

Software Defined Cloud Networks

Arista Software Defined Cloud Networking (SDCN), combines the principles that have made cloud computing the unstoppable force that it is: automation, self service provisioning, and linear scaling of both performance and economics coupled with the trend in Software Defined Networking that delivers: network virtualization, custom programmability, simplified architectures, and lower capital expenditure. This combination creates a best-in-class software foundation for maximizing the value of the network to both the enterprise and service provider data center. A new architecture for the most mission-critical location within the IT infrastructure that simplifies management and provisioning, speeds up service delivery, lowers costs and creates opportunities for competitive differentiation, while putting control and visibility back in the hands of the network and systems administrators.

Cloud Grade Routing

The 7280R3 series are key components of Arista's portfolio of Cloud Grade Routing platforms that encompasses a wide choice of fixed and modular systems. Combining Arista EOS's proven and feature rich Service Provider functionality, telemetry and open programmability with industry leading scale, density and power efficiency, the R3 series systems are designed for versatile deployment in a wide variety of open networking environments.

Next generation multi-service environments require flexibility, security and open programmability to leverage the power efficiency and proven scale of cloud networks. The R3 Series routing solutions include large scale layer 2, layer 3 and EVPN based telco and cloud data center designs, low latency MEC overlay fabrics, data center interconnect (DCI) with long haul optics, provider edge networks with scaleable L2 and L3 VPN services, high density 100G/400G traffic engineered MPLS and SR-TE cores, 5G infrastructure and metroaggregation for the backhaul of E-LINE services.



The Four Pillars of Arista's Software Defined Cloud Networking:

Universal Cloud Network

- · Scalable standards-based MLAG at Layer 2, ECMP for Layer 3 and VXLAN for network virtualization flexibility
- Non blocking leaf-spine architecture for 10K-500K hosts

Cloud Control

- Standards based EOS with AEM, ZTP/ZTR, LANZ and DANZ
- Automated Monitoring for visibility and telemetry

Network Wide Virtualization

- Multi-vendor API Support with eAPI
- Support for VMWare and NSX with VXLAN and VMTracer
- Support for Openstack OVSDB

Network Applications and Automated Management

- Single point of network-wide state with Arista CloudVision
- Networked applications for workload mobility, smart systems rollback and upgrades and workflow telemetry
- Open Partner integration

Scaling Data Center High Performance Interconnects

The Arista 7280R3 Series deliver non-blocking switching capacity that enables dramatically faster and simpler network designs for data centers and lower both capital and operational expenses. A wide range of modular systems with a single consistent EOS allows for flexible selections at all tiers of the network and deployment scenarios including layer 2 MLAG, layer 3 ECMP, VXLAN Overlay and Internet Peering.

Arista's **Multi-Chassis Link Aggregation** (MLAG) technology supports a leaf and spine active/active L2 network topology. An **Equal Cost Multi-Path (ECMP)** design at Layer 3 scales the network in a fully non-blocking, low-latency, two-stage network that provides predictable and consistent application performance. The flexibility of the L2 and L3 multi-path design options combined with support for open standards provides maximum flexibility, scalability and network wide virtualization that scales to hundreds of thousands of hosts in a single two-tier design. Both designs support overlay networks via EVPN/VXLAN and can integrate with standards-based overlay controller solutions.

The Arista 7280R3 Series **FlexRoute** engine provides the flexible scalability to support deployment as a routing platform with Internet scale routing. Arista FlexRoute along with EOS NetDB enables innovation not natively available in merchant chipsets. Arista EOS provides operational savings through visibility, automation and improved network operations.

Enhanced Features for High Performance Cloud Networks

The Arista 7280R3 delivers a suite of advanced traffic control and monitoring features to improve the agility of modern high performance environments, with solutions for automation, data monitoring, precise timing and next-generation virtualization.

Automating the data center enables customers to dynamically provision computing resources in the most efficient manner while also meeting business needs by maintaining service level agreements (SLAs). Arista EOS automates complex IT workflows and simplifies network operations while reducing or even eliminating downtime. Arista EOS rich automation capabilities not only reduce the human error element in network operations but also enable IT operators to make the network work the way they want.

Arista offers solutions for a variety of approaches to cloud-like network automation. Addressing the needs of the largest public cloud environments as well as applying those lessons learned in the turnkey CloudVision automation offering.

Advanced Event Management (AEM)

Advanced Event Management (AEM), a sub-system of Arista EOS, is a powerful and flexible tool to automate tasks and customize the behavior of EOS and the operation of the overall data center switching infrastructure. Simplifying the overall operations, AEM provides the tools to customize alerts and actions. AEM allows operators to fully utilize the intelligence within EOS to respond to real-time events, automate routine tasks, and automate actions based on changing network conditions.



7280R3 Series with Encryption | Platform Overview

Precise Data Analysis

Arista Latency Analyzer (LANZ) and Precision Data Analyzer (DANZ) are integrated features of EOS. DANZ provides a solution to monitoring and visibility challenges at 100Gbps and 400Gbps giving IT operations the ability to proactively deliver feedback on congestion events, filter, replicate, aggregate and capture traffic without affecting production performance. LANZ provides precise real-time monitoring of micro-burst and congestion events before they impact applications, with the ability to identify the sources and capture affected traffic for analysis.

CloudVision

CloudVision is a network-wide approach for workload orchestration and workflow automation as a turnkey solution for Cloud Networking. CloudVision extends the EOS publish subscribe architectural approach across the network for state, topology, monitoring and visibility. This enables enterprises to move to cloud-class automation without needing any significant internal development.

Precision Timing (IEEE 1588)

Arista's hardware derived Precision Time Protocol solution provides a robust mechanism for accurate in-band time distribution in high performance environments, offering both Boundary and Transparent clock modes. The system clock can be synchronized using IEEE 1588 PTP.

Virtualization

The foundation for Arista's Network Virtualization solutions is VXLAN, an open IETF specification designed to standardize an overlay encapsulation protocol. Arista solutions range from OVSDB and Openstack integration to BGP EVPN in conjunction with EOS CloudVision®, a platform for network-wide workload orchestration and workflow automation.

The 7280R3 builds on the deep buffer wire-speed gateway with EVPN/VXLAN for layer-2 and layer-3 stretch within data center as well as DCI use cases. The 7280R3 is the perfect solution for transit gateway between EVPN domains connected over MPLS.

7280R3 Deterministic Network Performance

The Arista 7280R3 Series uses a deep buffer virtual output queue (VOQ) architecture that eliminates head-of-line (HOL) blocking and virtually eliminates packet drops even in the most congested network scenarios. An advanced traffic scheduler fairly allocates bandwidth between all virtual output queues while accurately following queue disciplines including weighted fair queueing, fixed priority, or hybrid schemes. As a result, the Arista 7280R3 can handle the most demanding data center requirements with ease, including mixed traffic loads of real-time, multicast, and storage traffic while still delivering low latency.

Algorithmic ACLs

Algorithmic ACLs combine both software and hardware to enable more flexible and scalable solutions for access control, policy based forwarding and network telemetry. Combining general purpose memory with advanced software algorithms delivers higher scale, performance and efficiency with lower power and is more cost effective than traditional solutions. Algorithmic ACLs leverage efficient packet matching algorithms that in turn enables flow matching for access control, policy and visibility. The net benefits are a high performance policy engine with both increased functionality and scale in a cost and power efficient solution. Algorithmic ACLs are available on the 7280R3 and 7280R3K Series of products.

- Enables IPv4 and IPv6 access control at the same scale
- L4 rule ranges are programmed efficiently without expansion or reduced capacity
- Multiple actions can be performed on a single packet or flow
- User defined filters allow flexible packet classification based on offsets for custom actions
- Supports rich policy with consistent semantics that would exhaust classical resources

Inband Network Telemetry

Inband network telemetry, or INT, is a standards approach to providing deep visibility into traffic in real-time, with no impact on switch performance. INT provides per-flow monitoring of traffic drops, latency, congestion and the network path. INT information can be exported in IPFIX or sFlow formats to a management system or collector such as Arista CloudVision, for predictive analytics and deep forensics to measure latency per device and across the network, trace packets and reconstruct path topology as well as detecting hotspots. Inband Network Telemetry is available on the 7280R3 and 7280R3K Series of products, with the ability to originate, pass and terminate, along with mirroring to external collectors.



7280R3 Series with Encryption | Technical Specifications

7280R3 Accelerated sFlow

SFlow is a powerful tool used commonly by network operators for advanced network telemetry, capacity planning, security analysis and quality of experience monitoring. Traditional sFlow utilizes a system CPU for processing samples of hundreds of thousands of flows. In modern high performance systems guaranteed high rate sampling requires the capability to both sample and process packet rates of billions of packets per second. With the 7280R3 Series Accelerated sFlow feature the sampling and processing of flow samples into sFlow datagrams is handled via integrated sFlow engines capable of supporting 1:500 sampling rates on full wire speed systems or higher rates with selective sampling based on triggers and filters. All sFlow v5 information is included in the sFlow records ensuring consistent integration with existing standard sFlow collection and analysis tools and no loss of information.

Routing Table Scale

Network scalability is directly impacted by the size of a systems forwarding tables. In many systems a 'one size fits all' approach is adopted using discrete fixed size tables for each of the common types of forwarding entry. The Arista 7280R3 Series leverage a database for forwarding resources which can be allocated for MAC, Routing, Host and ARP tables with a choice of forwarding profiles that optimizes these tables. The flexibility coupled with the range of system forwarding profiles ensures optimal resource allocation for a wide range of network topologies and use cases including Internet Peering, virtualization, Carrier Edge and Security as well as datacenter spine and leaf.

FlexRoute™

The Arista FlexRoute Engine provides support for the full internet routing table, in hardware, with IP forwarding at Layer 3 and with sufficient headroom for future growth in both IPv4 and IPv6 route scale to more than 2 million routes. The innovative FlexRoute Engine with its patented algorithmic approach to building layer 3 forwarding tables on Arista R-Series Universal Spine and Leaf platforms is unique to Arista and a key enabler in calling these platforms routers. The large scale 7280R3K Series expand FlexRoute support to over 5M routes.

Maximum Network Design Flexibility

- Scalable designs with up to a 512-way ECMP provides flexibility and balances traffic evenly across the largest leaf-spine designs
- MLAG designs are effective at almost any layer of the network and maximize cross-sectional bandwidth with fast failover times measured in 100's of milliseconds for link failures.
- VXLAN gateway, bridging and routing with VMTracer features to enable next generation data center designs
- Scalable routing tables to support internet route peering
- Wide choice of dense 100G and 400G interfaces with broad support for flexible 25G or 50G modes.
- Support for standards based IEEE 25GbE with mix and match support for simple and cost effective migration
- Virtual output queue (VOQ) architecture and deep packet buffering to eliminate head of line blocking with low latency
- ACL scalability with up to 100K entries per forwarding engine allows for rich policy control
- Flexible allocation of L2 and L3 forwarding table resources for more design choice
- PTP, Accelerated sFlow, DANZ and multi-port mirroring tools provide network wide visibility and monitoring to detect traffic bursts, monitor latency and congestion and allow capacity planning to improve application performance and availability

7280R3 High Availability

The Arista 7280R3 switches were designed for continuous operations with system wide monitoring of both hardware and software components, simple serviceability and provisioning to prevent single points of failure. Key high availability features include:

- 1+1 hot-swappable power supplies and hot-swap fans provide dynamic temperature control combined with N+1 redundancy
- Color coded PSU's and fans that deliver platinum level power efficiency
- Live software patching
- Self healing software with Stateful Fault Repair (SFR)









Supported Features in EOS

A list of supported features can be found at: https://www.arista.com/en/support/product-documentation/supported-features

Layer 2 Features

- 802.1w Rapid Spanning Tree
- 802.1s Multiple Spanning Tree Protocol
- Rapid Per VLAN Spanning Tree (RPVST+)
- 4096 VLANs
- · O-in-O
- 802.3ad Link Aggregation/LACP
 - 256 Ports / Channel
 - 2048 groups per system (subject to system density)
- MLAG (Multi-Chassis Link Aggregation)
 - Uses IEEE 802.3ad LACP
 - 512 ports per MLAG
- 802.1Q VLANs/Trunking
- 802.1AB Link Layer Discovery Protocol
- 802.3x Receive Flow Control
- IGMP v1/v2/v3 snooping
- Storm Control
- Layer 2 sub-interfaces

Layer 3 Features

- Static Routes
- Routing Protocols: OSPF, OSPFv3, BGP, MP-BGP, IS-IS, and RIPv2
- BGP FlowSpec, BMP, BGP-RPKI, PIC
- 512-way Equal Cost Multipath Routing (ECMP)
- Unequal Cost Multipath Routing with BGP communities
- VRF, Inter-VRF Route Leaking
- Bi-Directional Forwarding Detection (BFD)
- Micro BFD (RFC 7130)
- Unicast Reverse Path Forwarding (uRPF)
- · VXLAN Bridging and Routing
- VRRP / VRRPv3
- · Virtual ARP (VARP)
- Policy Based Routing (PBR)
- Route Maps & RCF (Routing Control Functions)
- Layer 3 sub-interfaces
- Route-target pruning, Route-target constraints
- Route Reflector, Optimal Route Reflector

Multicast

- IGMP v2/v3
- MLD v2
- Protocol Independent Multicast (PIM-SM / PIM-SSM)
- PIM-BiDir *
- Anycast RP (RFC 4610)
- Multicast Source Discovery Protocol (MSDP)
- Multicast Only FastReroute (MoFRR)

Advanced Monitoring and Provisioning

- Latency Analyzer and Microburst Detection (LANZ)
 - Configurable Congestion Notification (CLI, Syslog)
 - Streaming Events (GPB Encoded)
- Zero Touch Provisioning (ZTP)

- Advanced Mirroring
 - Port Mirroring (14 sessions)
 - · Enhanced Remote Port Mirroring
 - SPAN/TAP M:N Aggregation
 - L2/3/4 Filtering Post-card Telemetry
- Advanced Event Management suite (AEM)
 - CLI Scheduler
 - · Event Manager
 - · Event Monitor
 - Linux tools
- Integrated packet capture/analysis with TCPDump
- Restore and Configure from USB
- RFC 3176 sFlow
- Optional SSD for logging and data capture
- . IPFIX

Security Features

- · Control Plane Protection (CPP)
- Ingress / Egress ACLs using L2, L3, L4 fields
- Ingress / Egress ACL Logging and Counters
- MAC ACLs
- UDF (User Defined Fields)
- · ACL Deny Logging
- ACL Counters
- · Atomic ACL Hitless restart
- DHCP Relay / Snooping
- MAC Security
- RADIUS/TACACS+
- · ARP trapping and rate limiting
- · Scalable traffic policies
- MACsec (IEEE 802.1AE)
- IPsec
- VXLANsec

Quality of Service (QoS) Features

- Up to 8 queues per port / sub-interface
- Strict priority queueing
- · DSCP based classification and remarking
- Egress shaping / Weighted round robin (WRR)
- WFQ, CIR*, ETS*, Fixed Priority
- Policing / Shaping, H-QoS
- Explicit Congestion Notification (ECN) marking
- 802.1Qbb Per-Priority Flow Control (PFC)
- 802.1Qaz Enhanced Transmission Selection (ETS)
- Data Center Bridging Extensions (DCBX)
- · Virtual Output Queueing
- Distributed Scheduler

Precision Timing

- Synchronous Ethernet with ESMC
- IEEE 1588-2008 PTP T-GM, T-BC, T-TSC
- G.8275.1, G.8275.2, G.8261, G.8264

^{*} Not currently supported in EOS



7280R3 Series with Encryption | Features

Network Management

- CloudVision
- Configuration rollback and commit
- 100/1000 Management Port
- RS-232 Serial Console Port
- USB Port
- SNMP v1, v2, v3
- · Management over IPv6
- Telnet and SSHv2
- Syslog
- AAA
- Industry Standard CLI
- Beacon LED for system identification
- · System Logging
- Environment monitoring

MPLS

- LDP, RSVP-TE, FRR, BGP-LU, BGP-LS
- Bandwidth reservation, auto-bandwidth, split-tunneling
- ISIS-SR, OSPF-SR*, SR-TE, TI-LFA, BGP-SR, BGP-LU for EPE, ISIS
- Seamless BFD with Round Trip Time
- · Class Based Forwarding
- Flow-Aware Transport (RFC 6391), Entropy label (RFC 6790)

L2/L3 VPN

- IP-VPN (RFC 4364), 6PE, 6vPE, inter-as option A,B&C
- LDP pseudowires (Type-4 & Type-5)
- · VPLS with LDP signaling, BGP-AD
- VPLS with BGP signaling*
- Multicast VPN (NG-MVPN) mLDP with default MDT, data MDT*
- EVPN-VXLAN (L2 & L3)
- EVPN-MPLS (L2 & L3)
- EVPN VLAN based & VLAN-aware services
- EVPN Multihoming
- EVPN VPWS & VPWS-FXC with MPLS
- EVPN integrated Routing & Bridging (IRB)
- EVPN E-tree with MPLS
- EVPN L2 multicast, L3 OISM with VXLAN
- EVPN-VXLAN to EVPN-MPLS, EVPN-VXLAN to EVPN-VXLAN, EVPN-VXLAN to IP-VPN GWs

Extensibility

- Linux Tools
 - · Bash shell access and scripting
 - RPM support
 - Custom kernel modules
- · Software Defined Networking (SDN)
 - · OpenStack Neutron Plug-in support
- · Programmatic access to system state
 - EOS SDK, Python, C++, GO

- · Chef, Puppet
- eAPI (HTTP & HTTPS), NETCONF, RESTCONF, GNMI
- OpenConfig yang models, EOS native models
- Native KVM/QEMU support

Ethernet OAM

- Ethernet CFM (UP, DOWN MEPs)
- LM (Loss Measurement), SLM (Synthetic Loss Measurement), DM (Delay Measurement)
- RFC2544 (Initiator & reflector)
- TWAMP (Two Way Active Measurement Protocol)
- Link Fault signaling
- EOS connectivity monitor
- MPLS ping & trace route, VCCV support

Standards Compliance

- 802.1D Bridging and Spanning Tree
- 802.1p QOS/COS
- 802.1Q VLAN Tagging
- 802.1w Rapid Spanning Tree
- 802.1s Multiple Spanning Tree Protocol
- 802.1AB Link Layer Discovery Protocol
- 802.3ad Link Aggregation with LACP
- 802.3x Flow Control
- 802.3ab 1000BASE-T
- 802.3z Gigabit Ethernet
- 802.3ae 10 Gigabit Ethernet
- · 802.3by 25 Gigabit Ethernet
- 802.3ba 40 Gigabit Ethernet
- 802.3ba 100 Gigabit Ethernet
- 802.3bs 400 and 200 Gigabit Ethernet • 802.3cm 400 Gigabit over multimode fiber
- RFC 2460 Internet Protocol, Version 6 (IPv6)
- RFC 2461 Neighbor Discovery for IP Version 6 (IPv6) • RFC 2462 IPv6 Stateless Address Autoconfiguration
- RFC 2463 Internet Control Message Protocol (ICMPv6)
- IEEE 1588-2008 Precision Time Protocol

SNMP MIBs

• MIBs available at https://www.arista.com/en/support/ product-documentation/arista-snmp-mibs

OpenConfig paths

• Supported paths available at https://www.arista.com/en/ support/toi/path-support

^{*} Not currently supported in EOS



Max 406 Ports (using QSFP+)¹ 36 36 36 Max 25/10G Ports¹ 96 96 96 Max 1G Ports¹ — — — Max Total Interfaces² 96 96 96 Becryption Support TunnelSec (OSFP100 Ports) TunnelSec (OSFP100 Ports) TunnelSec (OSFP100 Ports) Throughput (FDX) 4.8 (9.6) Tbps 4.8 (9.6) Tbps 4.8 (9.6) Tbps Packets/Second 2.8 pps 2.8 pps 2.8 pps Latency From 3.8 us From 3.8 us From 3.8 us CPU Quad-Core x86 Quad-Core x86 Eight-Core x86 System Memory 6.4 GB 6.4 GB 6.4 GB Packet Buffer Memory 8.GB 8.GB 8.GB USB Ports 1 1 1 Flash Storage Memory 8.GB 8.GB 120 GB 100/1000 Mgmt Ports 1 1 1 RS-23 Serial Ports 1 1,4 (9.45) Hot-swap Fans 3 (N+1 redundant) 1 Airflow Direction Front t	Model	7280CR3MK-32P4S	7280CR3MK-32D4S	7280CR3MK-32D4A
Max 100G Ports¹ 48 48 48 Max 50G Ports¹ 96 96 96 Max 40G Ports (using QSFP+)¹ 36 36 36 Max 25/10G Ports¹ 96 96 96 Max 16 Ports ¹ — — — Max 16 Ports ¹ 96 96 96 Max 16 Ports ¹ — — — Max 16 Ports ¹ 96 96 96 Max 16 Ports ¹ — — — Max 16 Ports ¹ — — — Max 16 Ports ² 96 96 96 Max 16 Ports ² — — — Max 16 Ports ² 96 96 96 Max 16 Ports ² 96 96 96 Max 16 Ports ² 96 96 96 Box 22 Ports ? 48 (9.6) Tops 2 48 (9.6) Tops 2 18 (9.6) Tops 2 Packets/Second 2 Box 3 2 Box 3 2 Box 3 2 Box 3 3 GB 3 GB 3 GB 3 GB </td <td>Ports</td> <td>32 x QSFP100, 4 x OSFP</td> <td>32 x QSFP100, 4 x QSFP-DD</td> <td>32 x QSFP100, 4 x QSFP-DD</td>	Ports	32 x QSFP100, 4 x OSFP	32 x QSFP100, 4 x QSFP-DD	32 x QSFP100, 4 x QSFP-DD
Max 50G Ports¹ 96 96 96 Max 40G Ports (using QSFP+)¹ 36 36 36 Max 1G Ports¹ 96 96 96 Max 1G Ports¹ − − − Max 1G Ports¹ − − − − Max 1G Ports¹ −	Max 400G Ports ¹	4	4	4
Max 40G Ports (using QSFP+)¹ 36 36 96 Max 1G Ports¹ 96 96 96 Max 1G Ports¹ — — — Max Total Interfaces² 96 96 96 Max Total Interfaces² 96 96 96 Encryption Support TunnelSec (QSFP100 Ports) TunnelSec (QSFP100 Ports) TunnelSec (QSFP100 Ports) Throughput (FDX) 4.8 (9.6) lbps 4.8 (9.6) lbps 4.8 (9.6) lbps Packets/Second 2 Rpps 2 Rpps 2 Rpps Latency From 3.8 us From 3.8 us From 3.8 us CPU Quad-Core x86 Quad-Core x86 Eight-Core x86 System Memory 6 GB 8 GB 8 GB 8 GB USB Ports 1 1 1 1 Flash Storage Memory 8 GB 8 GB B GB 120 GB 120 GB SSD Storage 120 GB 120 GB 120 GB 120 GB 120 GB Hot-swap Power 2 (11 redundant) 1 1 1 1	Max 100G Ports ¹	48	48	48
Max 25/10G Ports¹ 96 96 96 Max 1G Ports¹ — — — Max Total Interfaces² 96 96 96 Encryption Support TunnelSec (QSFP100 Ports) TunnelSec (QSFP100 Ports) TunnelSec (QSFP100 Ports) Throughput (FDX) 4.8 (9.6) Tbps 4.8 (9.6) Tbps 4.8 (9.6) Tbps Packets/Second 2 Bpps 2 Bpps 2 Bpps Latency From 3.8 us From 3.8 us From 3.8 us CPU Quad-Core x86 Quad-Core x86 Eight-Core x86 System Memory 64 GB 64 GB 64 GB Packet Buffer Memory 8 GB 8 GB 8 GB USB Ports 1 1 1 1 Flash Storage Memory 8 GB 8 GB — 3 SSD Storage 12 GB 12 GB 12 GB 100/1000 Mgmt Ports 1 1 (RJ 45) 1 Hot-swap Fans 3 (N+1 redundant) 1 1 Airflow Direction From 1 to rear and Rear to front 1	Max 50G Ports ¹	96	96	96
Max 1G Ports¹ — — — Max Total Interfaces² 96 96 96 Encryption Support TunnelSec (QSFP100 Ports) 4.8 (9.0) Tbps 4.8 (9	Max 40G Ports (using QSFP+) ¹	36	36	36
Max Total Interfaces 2 96 96 Encryption Support TunnelSec (QSFP100 Ports) TunnelSec (QSFP100 Ports) TunnelSec (QSFP100 Ports) Throughput (FDX) 4.8 (9.6) Tbps 4.8 (9.6) Tbps 4.8 (9.6) Tbps Packets/Second 2 Bpps 2 Bpps 2 Bpps Latency From 3.8 us From 3.8 us From 3.8 us CPU Quad-Core x86 Quad-Core x86 Eight-Core x86 System Memory 6 G G B 6 G G B 6 G G B Packet Buffer Memory 8 G B 8 G B 8 G B USB Ports 1 1 1 Flash Storage Memory 8 G B 8 G B 8 G B USB Ports 1 1 1 Flash Storage Memory 8 G B 8 G B 8 G B USB Ports 1 1 1 RS-232 Serial Ports 1 (RU-45) 1 Hot-swap Power 2 (1+1 redundant) 2 Hot-swap Power 3 (N+1 redundant) 3 (N+1 redundant) Airflow Direction 1 (T 3 x 1, 7.2 x 2.20 in (3	Max 25/10G Ports ¹	96	96	96
Encryption Support TunnelSec (QSFP100 Ports) A 8 (9.6) Tbps 4.8 (9.6) Tbps 2.8 pps 4.8 (9.6) Tbps 2.8 pps 2.8 pps 2.8 pps 4.8 (9.6) Tbps 4.8 (9.6) Tbps 2.8 pps 2.8 pps 3.8 us 4.8 (9.6) Tbps 2.8 pps 4.8 (9.6) Tbps 2.8 pps 4.8 (9.6) Tbps 2.8 pps 4.8 (9.6) Tbps	Max 1G Ports ¹	_	_	_
Throughput (FDX) 4.8 (9.6) Tbps 4.8 (9.6) Tbps 4.8 (9.6) Tbps Packets/Second 2 Bpps 2 Bpps 2 Bpps Latency From 3.8 us From 3.8 us From 3.8 us CPU Quad-Core x86 Quad-Core x86 Fight-Core x86 System Memory 64 GB 64 GB 64 GB Packet Buffer Memory 8 GB 8 GB 8 GB USB Ports 1 1 1 Flash Storage Memory 8 GB 8 GB — SSD Storage 120 GB 120 GB 120 GB 100/1000 Mgmt Ports 1 (RU-45) Hot-swap Power 2 (1+1 redundant) 4 Hot-swap Fans 3 (N+1 redundant) 4 Airflow Direction Front to rear and Rear to front Rack Units 1 U Size (WxHxD) 173 x 1,72 x 22.0 in (43.99 x 4.37 x 55.83 cm) 45 W / 875 W Weight 27 lbs (12.27 kg) 545 W / 875 W Fan Tray FAN-7011H FAN-7011H Power Supplies PWR-1011 (AC or DC)	Max Total Interfaces ²	96	96	96
Packets/Second 2 Bpps 2 Bpps 2 Bpps Latency From 3.8 us From 3.8 us From 3.8 us CPU Quad-Core x86 Quad-Core x86 Eight-Core x86 System Memory 64 G8 64 G8 64 G8 Packet Buffer Memory 8 G8 8 G8 8 G8 USB Ports 1 1 1 Flash Storage Memory 8 G8 8 G8 — SSD Storage 120 G8 120 G8 120 G8 100/1000 Mgmt Ports 1 (RI-45) Hot-swap Power 2 (1+1 redundant) — Hot-swap Fans 3 (N+1 redundant) — Airflow Direction Front to rear and Rear to front Rack Units 1 U Size (WxHxD) (43.99 x 4.37 x 55.83 cm) 545 W / 875 W Weight 27 lbs (12.27 kg) Fan Tray FAN-7011H Power Supplies PWR-1011 (AC or DC) For Education EOS Feature License Group 3 Company	Encryption Support	TunnelSec (QSFP100 Ports)	TunnelSec (QSFP100 Ports)	TunnelSec (QSFP100 Ports)
Latency From 3.8 us From 3.8 us From 3.8 us CPU Quad-Core x86 Quad-Core x86 Eight-Core x86 System Memory 64 GB 64 GB 64 GB 64 GB Packet Buffer Memory 8 GB 8 GB 8 GB 8 GB USB Ports 1 1 1 1 Flash Storage Memory 8 GB 8 GB — SSD Storage 120 GB	Throughput (FDX)	4.8 (9.6) Tbps	4.8 (9.6) Tbps	4.8 (9.6) Tbps
CPU Quad-Core x86 Quad-Core x86 Eight-Core x86 System Memory 64 GB 64 GB 64 GB Packet Buffer Memory 8 GB 8 GB 8 GB USB Ports 1 1 1 Flash Storage Memory 8 GB 8 GB SSD Storage 120 GB 120 GB 120 GB 100/1000 Mgmt Ports 1 1 RS-232 Serial Ports 1 (RJ-45) Hot-swap Power 2 (1+1 redundant) Hot-swap Fans 3 (N+1 redundant) Airflow Direction Front to rear and Rear to front Reak Units 1 U Size (WxHxD) 17.3 x 1.72 x 22.0 in (43.99 x 4.37 x 55.83 cm) 545 W / 875 W Weight 27 lbs (12.27 kg) 545 W / 875 W Weight 27 lbs (12.27 kg) FAN-7011H Power Supplies PWR-1011 (AC or DC) EOS Feature License Group 3	Packets/Second	2 Bpps	2 Bpps	2 Bpps
System Memory 64 GB 64 GB 64 GB 64 GB Packet Buffer Memory 8 GB 8 GB 8 GB USB Ports 1 1 1 Flash Storage Memory 8 GB 8 GB — SSD Storage 120 GB 120 GB 120 GB 100/1000 Mgmt Ports 1 (RJ-45) Hot-swap Power 2 (1+1 redundant) 4 Hot-swap Fans 3 (N+1 redundant) 4 Airflow Direction Front to rear and Rear to front 8ck Units 1 Size (WxHxD) 17.3 x 1.7 x x 2.2 0 in (43.99 x 4.37 x 55.83 cm) 545 W / 875 W Weight 27 lbs (12.27 kg) 545 W / 875 W Weight 27 lbs (12.27 kg) FAN-7011H Power Supplies PWR-1011 (AC or DC) EOS Feature License Group 3	Latency	From 3.8 us	From 3.8 us	From 3.8 us
Packet Buffer Memory 8 GB 8 GB 8 GB USB Ports 1 1 1 Flash Storage Memory 8 GB 8 GB — SSD Storage 120 GB 120 GB 120 GB 100/1000 Mgmt Ports 1 (RJ-45) Hot-swap Power 2 (1+1 redundant) — Hot-swap Fans 3 (N+1 redundant) — Airflow Direction Front to rear and Rear to front Rack Units 1 U Size (WxHxD) 17.3 x 1.72 x 22.0 in (43.99 x 4.37 x 55.83 cm) Typical/Max Power Draw 3 535 W / 851 W 545 W / 875 W Weight 27 lbs (12.27 kg) Fan Tray FAN-7011H Power Supplies PWR-1011 (AC or DC) EOS Feature License Group 3	CPU	Quad-Core x86	Quad-Core x86	Eight-Core x86
USB Ports 1 1 1 Flash Storage Memory 8 GB 8 GB — SSD Storage 120 GB 120 GB 120 GB 100/1000 Mgmt Ports 1 RS-232 Serial Ports 1 (RJ-45)	System Memory	64 GB	64 GB 64 GB	
Flash Storage Memory 8 GB	Packet Buffer Memory	8 GB	8 GB	8 GB
SSD Storage 120 GB 120 GB 120 GB 100/1000 Mgmt Ports 1 RS-232 Serial Ports 1 (RJ-45) Hot-swap Power 2 (1+1 redundant) Hot-swap Fans 3 (N+1 redundant) Airflow Direction Front to rear and Rear to front Rack Units 1 U Size (WxHxD) 173 x 1.72 x 22.0 in (43.99 x 4.37 x 55.83 cm) 545 W / 875 W Weight 27 lbs (12.27 kg) Fan Tray FAN-7011H Power Supplies PWR-1011 (AC or DC) EOS Feature License Group 3	USB Ports	1	1 1	
100/1000 Mgmt Ports 1 RS-232 Serial Ports 1 (RJ-45) Hot-swap Power 2 (1+1 redundant) Hot-swap Fans 3 (N+1 redundant) Airflow Direction Front to rear and Rear to front Rack Units 1 U Size (WxHxD) 17/3 x 1.72 x 22.0 in (43.99 x 4.37 x 55.83 cm) Typical/Max Power Draw 3 535 W / 851 W 545 W / 875 W Weight 27 lbs (12.27 kg) Fan Tray FAN-7011H Power Supplies PWR-1011 (AC or DC) EOS Feature License Group 3	Flash Storage Memory	8 GB	8 GB	_
RS-232 Serial Ports 1 (RJ-45) Hot-swap Power 2 (1+1 redundant) Hot-swap Fans 3 (N+1 redundant) Airflow Direction Front to rear and Rear to front Rack Units 1 U Size (WxHxD) 17.3 x 1.72 x 22.0 in (43.99 x 4.37 x 55.83 cm) Typical/Max Power Draw 3 535 W / 851 W 545 W / 875 W Weight 27 lbs (12.27 kg) Fan Tray FAN-7011H Power Supplies PWR-1011 (AC or DC) EOS Feature License Group 3	SSD Storage	120 GB	120 GB	120 GB
Hot-swap Power 2 (1+1 redundant) Hot-swap Fans 3 (N+1 redundant) Airflow Direction Front to rear and Rear to front Rack Units 1 U Size (WxHxD) 17.3 x 1.72 x 22.0 in (43.99 x 4.37 x 55.83 cm) Typical/Max Power Draw 3 535 W / 851 W 27 lbs (12.27 kg) Fan Tray FAN-7011H Power Supplies PWR-1011 (AC or DC) EOS Feature License 3 (N+1 redundant) 3 (N+1 redundant) 3 (N+1 redundant) 3 (N+1 redundant) 4 (N+1) Front to rear and Rear to front 1 U 5 1 1 0 1 7 7 3 x 1.72 x 22.0 in (43.99 x 4.37 x 55.83 cm) 545 W / 875 W 545 W / 875 W Fan Tray FAN-7011H Power Supplies Group 3	100/1000 Mgmt Ports		1	
Hot-swap Fans 3 (N+1 redundant) Airflow Direction Front to rear and Rear to front 1 U Size (WxHxD) 17.3 x 1.72 x 22.0 in (43.99 x 4.37 x 55.83 cm) Typical/Max Power Draw 3 535 W / 851 W 545 W / 875 W Weight 27 lbs (12.27 kg) Fan Tray FAN-7011H Power Supplies PWR-1011 (AC or DC) EOS Feature License Group 3	RS-232 Serial Ports		1 (RJ-45)	
Airflow Direction Rack Units 1 U Size (WxHxD) Typical/Max Power Draw 3 535 W / 851 W 27 lbs (12.27 kg) Fan Tray FAN-7011H Power Supplies PWR-1011 (AC or DC) EOS Feature License Front to rear and Rear to front 1 U 17.3 x 1.72 x 22.0 in (43.99 x 4.37 x 55.83 cm) 545 W / 875 W 545 W / 875 W FAN-7011H Fower Supplies Group 3	Hot-swap Power	2 (1+1 redundant)		
Rack Units 1 U Size (WxHxD) 17.3 x 1.72 x 22.0 in (43.99 x 4.37 x 55.83 cm) Typical/Max Power Draw 3 535 W / 851 W 545 W / 875 W Weight 27 lbs (12.27 kg) Fan Tray FAN-7011H Power Supplies PWR-1011 (AC or DC) EOS Feature License Group 3	Hot-swap Fans		3 (N+1 redundant)	
Size (WxHxD) 17.3 x 1.72 x 22.0 in (43.99 x 4.37 x 55.83 cm) Typical/Max Power Draw 3 535 W / 851 W 545 W / 875 W Weight 27 lbs (12.27 kg) Fan Tray FAN-7011H Power Supplies PWR-1011 (AC or DC) EOS Feature License Group 3	Airflow Direction		Front to rear and Rear to front	
Size (WXHXD) (43.99 x 4.37 x 55.83 cm) Typical/Max Power Draw 3 535 W / 851 W 545 W / 875 W Weight 27 lbs (12.27 kg) Fan Tray FAN-7011H Power Supplies PWR-1011 (AC or DC) EOS Feature License Group 3	Rack Units		1 U	
Weight27 lbs (12.27 kg)Fan TrayFAN-7011HPower SuppliesPWR-1011 (AC or DC)EOS Feature LicenseGroup 3	Size (WxHxD)			
Fan Tray FAN-7011H Power Supplies PWR-1011 (AC or DC) EOS Feature License Group 3	Typical/Max Power Draw ³	535 W / 851 W 545 W / 875 W		
Power Supplies PWR-1011 (AC or DC) EOS Feature License Group 3	Weight	27 lbs (12.27 kg)		
EOS Feature License Group 3	Fan Tray	FAN-7011H		
	Power Supplies	PWR-1011 (AC or DC)		
Minimum EOS 4.25.2F 4.27.2F	EOS Feature License	Group 3		
	Minimum EOS	4.2	5.2F	4.27.2F

^{1.} Maximum port values are uni-dimensional, may require the use of break-outs and are subject to transceiver/cable capabilities. Detailed information can be found here.

^{2.} Where supported by EOS, each system supports a maximum number of interfaces. Certain configurations may impose restrictions on which physical ports can be used

^{3.} Typical power consumption measured at 25C ambient with 50% load on all ports



Model	7280SR3M-48YC8	7280SR3MK-48YC8A		
Ports	48 x SFP 1/10/25G, 8 x QSFP100	48 x SFP 1/10/25G, 8 x QSFP100		
Max 400G Ports ¹	_	_		
Max 100G Ports ¹	8	8		
Max 50G Ports ¹	16	16		
Max 40G Ports (using QSFP+) ¹	8	8		
Max 25/10G Ports ¹	80	80		
Max 1G Ports ¹	48	48		
Max Total Interfaces ²	80	80		
Encryption Support	MACsec (All Ports)	MACsec (All Ports)		
Throughput (FDX)	2.0 (4.0) Tbps	2.0 (4.0) Tbps		
Packets/Second	1 Bpps	1 Bpps		
Latency	From 3.8 us	From 3.8 us		
CPU	Quad-Core x86	Eight-Core x86		
System Memory	8 GB	64 GB		
Packet Buffer Memory	4 GB	4 GB		
USB Ports	1	1		
Flash Storage Memory	8 GB	_		
SSD Storage	— 120 GB			
100/1000 Mgmt Ports	1			
RS-232 Serial Ports	1 (RJ-45)			
Hot-swap Power	2 (1+1	2 (1+1 redundant)		
Hot-swap Fans	3 (N+1	redundant)		
Airflow Direction	Front to rear	Front to rear and Rear to front		
Rack Units		1 U		
Size (WxHxD)	17.3 x 1.72 x 22.0 in (43.99 x 4.37 x 55.83 cm)			
Typical/Max Power Draw ³	302 W / 576 W	312W / 590 W		
Weight	27 lbs (12.27 kg)			
Fan Tray	FAN-7011M			
Power Supplies	PWR-1011 (AC or DC)			
EOS Feature License	Group 2			
Minimum EOS	4.25.2F 4.30.2			

^{1.} Maximum port values are uni-dimensional, may require the use of break-outs and are subject to transceiver/cable capabilities. Detailed information can be found here.

^{2.} Where supported by EOS, each system supports a maximum number of interfaces. Certain configurations may impose restrictions on which physical ports can be used

^{3.} Typical power consumption measured at 25C ambient with 50% load on all ports



Switch Model	7	280R3 Serie	es		7:	280R3K Ser	ies	
Profile	L3	L3-Traffic Policy	Balanced	L3-XL	L3-XXL	L3-XXXL	Balanced-XL	L3-Host-XL ²
ARP Entries	88k	88k	80k	112k	112k	80k	96k	192k
MAC Addresses	224k	192k	224k	256k	192k	384k	256k	256k
IPv4 Unicast Routes	1450k	800k	800k	2250k	2850k	3950k	1850k	1650k
Additional IPv4 Unicast Routes with FlexRoute	+ 1792k	+ 1536k	+ 1792k	+ 2048k	+ 1536k	+ 3072k	+ 2048k	+ 2048k
IPv6 Unicast Routes	433-483k	250-267k	250-267k	683-750k	833-950k	1100-1317k	567-617k	500-550k
Multicast Routes	112k	96k	112k	128k	96k	192k	128k	128k
TCAM ACL Entries (Per chip)	24k	24k	24k	24k	24k	24k	24k	24k
Traffic Policy ACL IPv4 Prefixes	30k	561k	30k	561k	374k	30k	561k	561k
Traffic Policy ACL IPv6 Prefixes	10k	187k	10k	187k	125k	10k	187k	187k
ECMP	512-Way	512-Way	512-Way	512-Way	512-Way	512-Way	512-Way	512-Way
CFM ¹	-	-	Yes	-	-	=	Yes	-

Maximum values dependent on shared resources in some cases

Power Supply Specifications

Power Supply	PWR-1011AC	PWR-1011 DC
Input Voltage	100-240V AC	-48 to -60 V DC
Typical Input Current	12 - 6A	23A Max (-48V)
Input Frequency	50/60Hz	DC
Output Power	1100 W	1000 W
Input Connector	IEC 60320 C14	AWG #6 Max
Efficiency	93% Platinum	94%

^{1. 7280}SR3-48YC8 and 7280SR3M-48YC8 support a reduced CFM feature set

^{2.} The L3-Host-XLprofile is supported on 7280CR3K-36S, 7280SR3K-48YC8, 7280SR3K-48YC8A and 7280SR3MK-48YC8A only



Standards Compliance

FCC A

ICES-003 Issue 7 EN 55032:2015 EN IEC 61000-3-2:2019

EN 61000-3-3 KS C 9832

EMC

VCCI-CISPR 32:2016

AS/NZS CISPR 32:2015 +A1 2020

EN 300 386

TEC/SD/DD/EMC-221

CNS 15936

BS EN 55032:2015+A11:2020 BS EN IEC 61000-3-2 BS EN 61000-3-3

Immunity

EN 55035:2017+A11:2020

EN 300 386 KS C9835

BS EN 55035:2017+A11:2020

EN 62368-1:2020+A11:2020 EN 62368-1:2014+A11:2017

IEC 62368-1: 2018

Safety

Korea KC Safety KC 62368-1 (2021-08)

CSA/UL 62368-1:2019 NOM 019-SCFI-1998 CNS 15598-1 AS/NZS 62368.1:2022

BSMI (Taiwan)

FCC Class A (United States)

ICES-003 (Canada) CE (European Union) KCC (South Korea) NRTL (North America)

Certifications

RCM (Australia / New Zealand)

UKCA (United Kingdom)

VCCI (Japan) TEC (India) ANATEL (Brazil) ICASA (South Africa) NOM Equivalency (Mexico)

European Union Directives 2014/35/EU Low Voltage Directive

2014/30/EU EMC Directive 2012/19/EU WEEE Directive 2011/65/EU RoHS Directive

2015/863/EU Commission Delegated

Directive

Further Information

Product Certification Portal

Environmental Characteristics

Operating Temperature	0 to 40°C (32 to 104°F)
Storage Temperature	-40 to 70°C (-40 to 158°F)
Relative Humidity	5 to 90%
Operating Altitude	0 to 10,000 ft, (0-3,000m)



Arista Optics and Cables

The Arista 7280R3 Series supports a wide range of 10G to 400G pluggable optics and cables. For a complete list of modules, detailed technical specifications and the first EOS Software release which provides support for a specific module, visit

https://www.arista.com/en/products/transceivers-cables.

Supported Optics and Cables 1

Interface Type	400G OSFP ports
400GBASE-CR8	OSFP to OSFP: 1m-3m lengths
400GBASE-AOC	OSFP to OSFP: 1m-30m lengths
400GBASE-SR8	100m OM3/4 Parallel MMF
400GBASE-DR4	500m Parallel SM
400GBASE-XDR4	2km Parallel SM
400GBASE-FR4	2km Duplex SM
400GBASE-2FR4	2km 2 x Duplex SM
400GBASE-LR4	10km Duplex SM
400GBASE-PLR4	10km Parallel SM
400GBASE-ZR	120km (with optical amplification)
200GBASE-CR4	OSFP to 2xQSFP: 1m to 3m lengths
200GBASE-SR4	100m (using OSFP-400G-SR8)
200GBASE-FR4	2km (using OSFP-400G-2FR4)
100GBASE-CR2	OSFP to 4xQSFP: 1m to 3m lengths
100GBASE-CR4 ²	OSFP to 2xQSFP: 1m to 3m lengths
50GBASE-CR	OSFP to 8xSFP: 1 to 3m lengths
50GBASE-CR2 ²	OSFP to 4xQSFP: 1m to 3m lengths
25GBASE-CR ²	OSFP to 8xSFP: 1m to 3m lengths

Supported Optics and Cables 1

Interface Type	400G QSFP-DD ports
400GBASE-CR8	QSFP-DD to QSFP-DD: 1m-2.5m lengths
400GBASE-AOC	QSFP-DD to QSFP-DD: 1m-30m lengths
400GBASE-SR8	100m OM3/4 Parallel MMF
400GBASE-DR4	500m Parallel SM
400GBASE-XDR4	2km Parallel SM
400GBASE-FR4	2km Duplex SM
400GBASE-LR4	10km Duplex SM
400GBASE-PLR4	10km Parallel SM
400GBASE-ZR	120km (with optical amplification)
200GBASE-CR4	QSFP-DD to 2xQSFP: 1m to 2.5m lengths
200GBASE-SR4	100m (QDD-400G-SR8 / QSFP-200G-SR4)
200GBASE-FR4	2km (using QSFP-200G-FR4)
100GBASE-CR2	QSFP-DD to 4xQSFP: 1m to 3m lengths
100GBASE-CR4 ²	QSFP-DD to 2xQSFP: 1m to 3m lengths
50GBASE-CR	QSFP-DD to 8xQSFP: 1m to 3m lengths
50GBASE-CR2 ²	QSFP-DD to 4xQSFP: 1m to 3m lengths
25GBASE-CR ²	QSFP-DD to 8xSFP: 1m to 3m lengths

^{1.} For a complete list of transceivers, please refer to the Transceiver Datasheet and check EOS release notes for support

^{2.} Requires OSFP / QSFP-DD port to be configured for 200G, 8 x 25G NRZ lanes. Allows interop with 100G QSFP and 25G SFP ports



7280R3 Series with Encryption | Optics

Supported Optics and Cables ¹

Interface Type	40G QSFP ports
10GBASE-CR	QSFP+ to 4xSFP+: 0.5m-5m lengths
40GBASE-CR4	QSFP+ to QSFP+: 0.5m-5m lengths
40GBASE-AOC	3m to 100m lengths
40GBASE-UNIV	150m OM3 / 150m OM4, 500m SM
40GBASE-SRBD	
	100m OM3 /150m OM4 Duplex MMF 100m OM3 /150m OM4 Parallel MMF
40GBASE-SR4	
40GBASE-XSR4	300m OM3 /400m OM4 Parallel MMF
40GBASE-PLRL4	1km (1km 4x10G LR/LRL)
40GBASE-PLR4	10km (10km 4x10G LR/LRL)
40GBASE-LRL4	1km Duplex SM
40GBASE-LR4	10km Duplex SM
40GBASE-ER4	40km Duplex SM
100GbE	100G QSFP ports
100GBASE-SR4	70m OM3 / 100m OM4 Parallel MMF
100GBASE-XSR4	150m OM3 / 300m OM4 Parallel MMF
100GBASE-SWDM4	70m OM3 / 100m OM4 Duplex MMF
100GBASE-SRBD	70m OM3 / 100m OM4 Duplex MMF
100GBASE-LR	10km Duplex SM
100GBASE-LR4	10km Duplex SM
100GBASE-LRL4	2km Duplex SM
100GBASE-XCWDM4	10km Duplex SM
100GBASE-CWDM4	2km Duplex SM
100GBASE-FR	2km Duplex SM
100GBASE-DR	500m Duplex SM
100GBASE-PSM4	500m Parallel SM
100GBASE-AOC	1m to 30m lengths
100GBASE-ERL4	40km Duplex SM
100GBASE-CR4	QSFP to QSFP: 1m to 5m lengths
50GBASE-CR2	QSFP to 2xQSFP: 1m to 5m lengths

Supported Optics and Cables 1

10GbE	SFP+ ports
10GBASE-CR	SFP+ to SFP+: 0.5m-5m lengths
10GBASE-AOC	SFP+ to SFP+: 3m-30m lengths
10GBASE-SRL	100m OM3 /150m OM4 Duplex MMF
10GBASE-SR	300m OM3 / 400m OM4 Duplex MMF
10GBASE-LRL	1km Duplex SM
10GBASE-LR	10km Duplex SM
10GBASE-ER	40km Duplex SM
10GBASE-ZR	80km Duplex SM
10GBASE-T	Up to 30m over Cat6a
10GBASE-DWDM	80km Duplex SM
1GbE SX/LX/TX	550m / 10km / 100m
25GbE	25G SFP Ports
25GBASE-CR	SFP25 to SFP25: 1m-5m lengths
25GBASE-AOC	SFP+ to SFP+: 3m-30m lengths
25GBASE-MR-XSR	25G: 200m OM3 / 300m OM4 Duplex MMF 10G: 300m OM3 / 400m OM4 Duplex MMF
25GBASE-MR-SR	25G: 70m OM3 / 100m OM4 Duplex MMF 10G: 300m OM3 / 400m OM4 Duplex MMF
25GBASE-SR	70m OM3 / 100m OM4 Duplex MMF
25GBASE-LR	10km Duplex SM
25GBASE-MR-LR	10km Duplex SM

 $^{1.} For a complete \ list of transceivers, please \ refer to the Transceiver \ Datasheet \ and \ check \ EOS \ release \ notes \ for \ support$

^{2.} Requires OSFP / QSFP-DD port to be configured for 200G, 8 x 25G NRZ lanes. Allows interop with 100G QSFP and 25G SFP ports



7280R3 Series with Encryption | Ordering Information

Product Number	Product Description
DCS-7280CR3MK-32P4S-F	Arista 7280R3, 32x100GbE QSFP and 4x400GbE OSFP switch router, MACsec, large route, front to rear air, 2 x AC
DCS-7280CR3MK-32P4S-R	Arista 7280R3, 32x100GbE QSFP and 4x400GbE OSFP switch router, MACsec, large route, rear to front air, 2 x AC
DCS-7280CR3MK-32P4S#	Arista 7280R3, 32x100GbE QSFP and 4x400GbE OSFP switch router, MACsec large route, configurable fans and psu
DCS-7280CR3MK-32P4S-FLX-F	Arista 7280R3, 32x100GbE QSFP and 4x400GbE OSFP switch router, MACsec, large route, front to rear air, 2 x AC. Over 256K Routes, MPLS and VXLAN
DCS-7280CR3MK-32P4S-FLX-R	Arista 7280R3, 32x100GbE QSFP and 4x400GbE OSFP switch router, large route, MACsec, rear to front air, 2 x AC. Over 256K Routes, MPLS and VXLAN
DCS-7280CR3MK-32P4S-FLX#	Arista 7280R3, 32x100GbE QSFP and 4x400GbE OSFP switch router, large route, MACsec, configurable fans and psu. Over 256K Routes, MPLS and VXLAN
DCS-7280CR3MK-32D4S-F	Arista 7280R3, 32x100GbE QSFP and 4x400GbE QSFP-DD switch router, MACsec, large route, front to rear air, 2 x AC
DCS-7280CR3MK-32D4S-R	Arista 7280R3, 32x100GbE QSFP and 4x400GbE QSFP-DD switch router, MACsec, large route, rear to front air, $2 \times AC$
DCS-7280CR3MK-32D4S#	Arista 7280R3, 32x100GbE QSFP and 4x400GbE QSFP-DD switch router, MACsec large route, configurable fans and psu
DCS-7280CR3MK-32D4S-FLX-F	Arista 7280R3, 32x100GbE QSFP and 4x400GbE QSFP-DD switch router, MACsec, large route, front to rear air, 2 x AC. Over 256K Routes, MPLS and VXLAN
DCS-7280CR3MK-32D4S-FLX-R	Arista 7280R3, 32x100GbE QSFP and 4x400GbE QSFP-DD switch router, large route, MACsec, rear to front air, 2 x AC. Over 256K Routes, MPLS and VXLAN
DCS-7280CR3MK-32D4S-FLX#	Arista 7280R3, 32x100GbE QSFP and 4x400GbE QSFP-DD switch router, large route, MACsec, configurable fans and psu. Over 256K Routes, MPLS and VXLAN
DCS-7280CR3MK-32D4A-S-F	Arista 7280R3, 32x100GbE QSFP and 4x400GbE QSFP-DD switch router, MACsec, large route, front to rear air, 2 x AC (Secure Boot Enabled)
DCS-7280CR3MK-32D4A-S-R	Arista 7280R3, 32x100GbE QSFP and 4x400GbE QSFP-DD switch router, MACsec, large route, rear to front air, 2 x AC (Secure Boot Enabled)
DCS-7280CR3MK-32D4A-S#	Arista 7280R3, 32x100GbE QSFP and 4x400GbE QSFP-DD switch router, MACsec large route, configurable fans and psu (Secure Boot Enabled)
DCS-7280CR3MK-32D4A-S-FLX-F	Arista 7280R3, 32x100GbE QSFP and 4x400GbE QSFP-DD switch router, MACsec, large route, front to rear air, 2 x AC. Over 256K Routes, MPLS and VXLAN (Secure Boot Enabled)
DCS-7280CR3MK-32D4A-S-FLX-R	Arista 7280R3, 32x100GbE QSFP and 4x400GbE QSFP-DD switch router, large route, MACsec, rear to front air, 2 x AC. Over 256K Routes, MPLS and VXLAN (Secure Boot Enabled)
DCS-7280CR3MK-32D4A-S-FLX#	Arista 7280R3, 32x100GbE QSFP and 4x400GbE QSFP-DD switch router, large route, MACsec, configurable fans and psu. Over 256K Routes, MPLS and VXLAN (Secure Boot Enabled)
DCS-7280SR3M-48YC8-F	Arista 7280R3, 48x25GbE SFP and 8x100G QSFP switch router, MACsec, front to rear air, 2 x AC
DCS-7280SR3M-48YC8-R	Arista 7280R3, 48x25GbE SFP and 8x100G QSFP switch router, MACsec, rear to front air, 2 x AC
DCS-7280SR3M-48YC8#	Arista 7280R3, 48x25GbE SFP and 8x100G QSFP switch router, MACsec, configurable fans and psu



7280R3 Series with Encryption | Ordering Information

Product Number	Product Description
DCS-7280SR3M-48YC8-FLX-F	Arista 7280R3, 48x25GbE SFP and 8x100G QSFP switch router, MACsec, front to rear air, 2 x AC. Over 256K Routes, MPLS and VXLAN
DCS-7280SR3M-48YC8-FLX-R	Arista 7280R3, 48x25GbE SFP and 8x100G QSFP switch router, MACsec, rear to front air, 2 x AC. Over 256K Routes, MPLS and VXLAN
DCS-7280SR3M-48YC8-FLX#	Arista 7280R3, 48x25GbE SFP and 8x100G QSFP switch router, MACsec, configurable fans and psu. Over 256K Routes, MPLS and VXLAN
DCS-7280SR3MK-48YC8A-S-F	Arista 7280R3, 48x25GbE SFP and 8x100G QSFP switch router, MACsec, large route, front to rear air, 2 x AC (Secure Boot Enabled)
DCS-7280SR3MK-48YC8A-S-R	Arista 7280R3, $48x25$ GbE SFP and $8x100$ G QSFP switch router, MACsec, large route, rear to front air, $2x$ AC (Secure Boot Enabled)
DCS-7280SR3MK-48YC8A-S#	Arista 7280R3, 48x25GbE SFP and 8x100G QSFP switch router, MACsec, large route, configurable fans and psu (Secure Boot Enabled)
DCS-7280SR3MK-48YC8A-S-FLX-F	Arista 7280R3, 48x25GbE SFP and 8x100G QSFP switch router, MACsec, large route, front to rear air, 2 x AC. Over 256K Routes, MPLS and VXLAN (Secure Boot Enabled)
DCS-7280SR3MK-48YC8A-S-FLX-R	Arista 7280R3, 48x25GbE SFP and 8x100G QSFP switch router, MACsec, large route, rear to front air, 2 x AC. Over 256K Routes, MPLS and VXLAN (Secure Boot Enabled)
DCS-7280SR3MK-48YC8A-S-FLX#	Arista 7280R3, 48x25GbE SFP and 8x100G QSFP switch router, MACsec, large route, configurable fans and psu. Over 256K Routes, MPLS and VXLAN (Secure Boot Enabled)
PWR-1011-AC-RED	Arista PSU, 1RU, AC/DC, 1000W, FORWARD, 73.5MM
PWR-1011-AC-BLUE	Arista PSU, 1RU, AC/DC, 1000W, REVERSE, 73.5MM
PWR-1011-DC-RED	Arista PSU, 1RU, DC/DC, 1000W, FORWARD, 73.5MM
PWR-1011-DC-BLUE	Arista PSU, 1RU, DC/DC, 1000W, REVERSE, 73.5MM
FAN-7011H-F	Spare fan module for Arista 7000 Series 1RU High Speed Fan (front-to-rear airflow)
FAN-7011H-R	Spare fan module for Arista 7000 Series 1RU High Speed Fan (rear-to-front airflow)
FAN-7011M-F	Spare fan module for Arista 7000 Series 1RU Enhanced Fan Speed (front-to-rear airflow)
FAN-7011M-R	Spare fan module for Arista 7000 Series 1RU Enhanced Fan Speed (rear-to-front airflow)
KIT-7001	Spare tool-free accessory kit (v2) for 1RU Arista switches. 2-post & 4-post mount. (2x C13-C14, 2m)
KIT-7101-D	Spare tool-free accessory kit (v3) for Arista switches. 4-post mount with deep chassis adapters. (2 x C13-C14, 2m)
KIT-7101-RK	Spare tool-free 4-post mount kit (v3). (Compatible with KIT-ADJ-RLR)
KIT-7101-LD-RK	Spare extended tool-free 4-post mount kit (v3), includes deep chassis adapters. (82 - 107cm / 32 - 42")
KIT-GND-EXT-1RU	Arista 7000 Series 1RU Ground Extender Kit for NEBS compliance (All 7280R3 1RU models)
KIT-7101-LD-RK	Spare extended tool-free 4-post mount kit (v3), includes deep chassis adapters. (82 - 107cm / 32 - 42")



7280R3 Series with Encryption | Contact Information

Product Number	Product Description
LIC-FIX-2-MACSEC	MACSEC Encryption License for Arista Group 2 Fixed switches, MACSEC capable ports
LIC-FIX-2-E	Enhanced L3 License for Arista Group 2 Fixed switches, (BGP, OSPF, ISIS, PIM, NAT)
LIC-FIX-2-V	Virtualization license for Group 2 Arista Fixed switches (VMTracer and VXLAN)
LIC-FIX-2-V2	EOS Extensions, Security and Partner Integration license for Arista Group 2 Fixed switches
LIC-FIX-2-Z	Monitoring & Automation license for Arista Group 2 Fixed switches (ZTP, LANZ, TapAgg, API, Time-stamping, OpenFlow)
LIC-FIX-2-FLX-L	FLX-Lite License for Arista Fixed switches Group 2 - Full Routing Up to 256K Routes, EVPN, VXLAN, SR, base MPLS LSR (no TE or link/node protection)
LIC-FIX-2-FLX	FLX License for Arista Fixed Group 2 - Full Routing upto 2M Routes, >24K ACL, EVPN, VXLAN, SR, Adv MPLS-LER/LSR, with TE & link/node protection
LIC-FIX-3-MACSEC	MACSEC Encryption License for Arista Group 3 Fixed switches, MACsec capable ports
LIC-FIX-3-ENCR	Enhanced Security Encryption License for Arista Group 3 Fixed switches, Encryption capable ports, TunnelSec and MACsec (7280CR3MK-32D4S and 7280CR3MK-32P4S only)
LIC-FIX-3-E	Enhanced L3 License for Arista Group 3 Fixed switches, (BGP, OSPF, ISIS, PIM, NAT)
LIC-FIX-3-V	Virtualization license for Group 3 Arista Fixed switches (VMTracer and VXLAN)
LIC-FIX-3-V2	EOS Extensions, Security and Partner Integration license for Arista Group 3 Fixed switches
LIC-FIX-3-Z	Monitoring & Automation license for Arista Group 3 Fixed switches (ZTP, LANZ, TapAgg, API, Time-stamping, OpenFlow)
LIC-FIX-3-FLX-L	FLX-Lite License for Arista Fixed switches Group 3 - Full Routing Up to 256K Routes, EVPN, VXLAN, SR, base MPLS LSR (no TE or link/node protection)
LIC-FIX-3-FLX	FLX License for Arista Fixed Group 3 - Full Routing upto 2M Routes, >24K ACL, EVPN, VXLAN, SR, Adv MPLS-LER/LSR, with TE & link/node protection

Warranty

The Arista 7280R3 Series switches come with a one-year limited hardware warranty, which covers parts, repair, or replacement with a 10 business day turn-around after the unit is received.

Service and Support

Support services including next business day and 4-hour advance hardware replacement are available. For service depot locations, please see: http://www.arista.com/en/service

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5453 Great America Pa	arkway
Santa Clara, California	95054
408-547-5500	

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