

DATA SHEET

3926



Ciena's 3926 Platform is a compact, smart CPE that delivers 10 Gb/s service delivery of IP and Ethernet with ultimate flexibility for modular, add-on network functions of business or mobile backhaul services.

The 3926 features a high-capacity 82 Gb/s switching fabric supporting six 1GbE/10GbE SFP+ ports, two 100M/1GbE SFP+ ports, and one modular slot for Ethernet and Virtual Network Function (VNF) services. The 3926 can address today's most challenging network scenarios, providing flexibility and future-ready attributes that de-risk business decisions while allowing for fast time to market.

With the use of optional field-replaceable modules, operators can limit the endless upgrade cycles that only add cost and inefficiency to the network infrastructure. Network Functions Virtualization (NFV) enables agility and scalability to facilitate transformation of networks by hosting multiple VNFs at the customer premises or network edge.

A set of x86 Intel-based server modules can host a wide range of functions required at the network edge such as encryption, service activation testing, virtual routing, virtual edge computing, and virtual firewalls. Sized according to the number and nature of the VNFs, the server modules can accommodate functions that can be chained, remotely provisioned, upgraded, maintained, and managed with no truck rolls. The 3926 offers a virtually limitless set of service combinations quickly and reliably.

Similarly, a set of TDM Circuit Emulation modules can be field deployed to carry up to 16 x DS1/E1 or any combination of 6 x DS1/E1 + 4 x DS3/E3 + 4 x OC-3/12/STM4/16 or 1 x OC48/STM16 service ports. Reliable timing distribution and synchronization eliminate the need to maintain expensive gear simply for transporting these still- valuable, revenue-generating services across the network.

Features and benefits

- Offers 82 Gb/s of non-blocking switching capacity in a compact service demarcation device, running Ciena's SAOS for advanced OAM and QoS functions
- Features low footprint 1RU in a non-blocking architecture with:
 - 6 x 1GbE/10GbE SFP+ ports
 - 2 x 100M/1GbE ports
- Allows a field-replaceable module for distributed VNF hosting on an Intel x86 server module or Ethernet (16 x 1GbE) service supporting:
 - 16 x DS1/E1
 - 6 x DS1/E1 + 4 x DS3/E3 + 4 x OC3/12 / STM1/4 or 1 x OC48/ STM16
- Leverages Ciena's MCP multi-layer support for end-to-end network management control and planning
- Allows for orchestration via Ciena's Blue Planet® MDSO or third party; a truly open platform for integration of best-in-breed software functions
- Employs Zero-Touch Provisioning (ZTP) for rapid, secure, and error-free turn-up of services
- Complies with MEF 3.0 E-Line, E-LAN, E-Tree
- Features redundant or simplex AC or DC power and MACsec variant

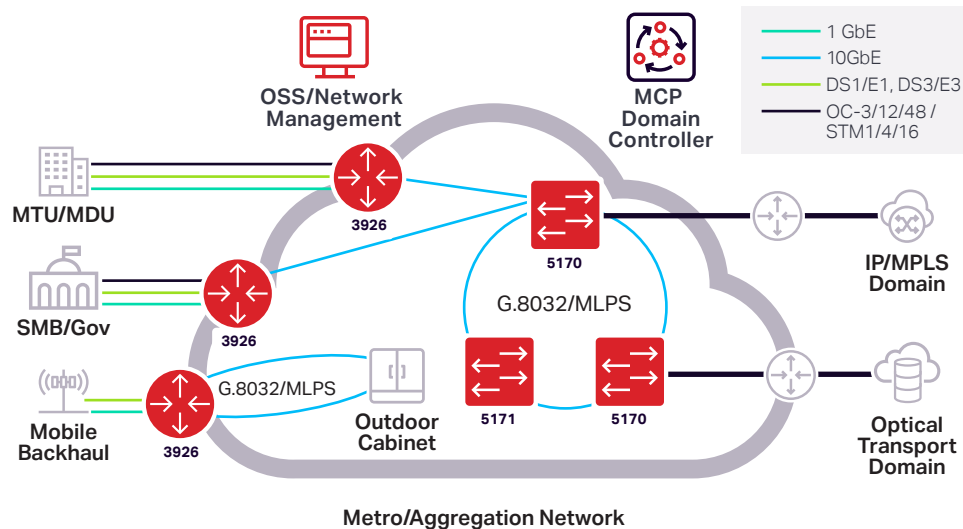


Figure 1. Sample outside service delivery and aggregation functions

Efficient 10GbE service delivery

The 3926 is a carrier-grade platform based on the Service-Aware Operating System (SAOS) used in all Ciena's Routing and Switching products. SAOS delivers benefits across all Ethernet, IP, and aggregation platforms, with a field-proven and extensive set of features.

The 3926 provides unmatched flexibility to address multiple applications, business models, and deployment environments without sacrificing service capabilities or Quality of Service (QoS). To accomplish this, the 3926 employs a variety of redundant and resilient routing and switching transport options for services.

Fine-grained SLA monitoring and enforcement

The 3926 includes a hardware engine to provide RFC 2544 and Y.1564 service activation testing, enabling 10 Gb/s line-rate traffic measurements across virtual circuits. This approach can improve end-customer satisfaction, enabling operations personnel to proactively respond to network events and increasing performance visibility for end-customer SLA reporting, including birth record generation.

Rich Operations, Administration, and Maintenance (OAM) capabilities

As network operators and their customers increasingly rely on new routing and switching networks, providers must maintain guaranteed service levels. Networks must support a broad array of OAM capabilities to ensure network operators can proactively and reactively maintain and report on the ongoing health of their metro Ethernet networks and

services. The 3926 also supports a comprehensive set of hardware-assisted OAM capabilities. The 3926 is architected to power Service Level Agreement (SLA) metrics and OAM at a high scale—enabling operators to take full advantage of the port density and 82 Gb/s fabric for delivering the maximum number of services at the lowest cost.

Flexible deployment options

The design of the 3926 also provides the flexibility to enable deployment in a wide range of physical operating environments, supporting:

- Extended temperature range (-40°C to +65°C)
- Hot-swappable dual power supply options for higher reliability with support for 110/220 universal AC, -24, +24, and -48 VDC mobility and telecoms powering and 124 HVDC smart grid power
- Timing distribution and synchronization
- Hop-by-hop or end-to-end MACsec encryption

Synchronization and timing

The cost-effectiveness and versatility of networking is driving the convergence of services and placing new network synchronization requirements onto the access/aggregation network. Provision of accurate frequency, phase, or time references from the network is also beginning to emerge as a service in its own right. The 3926 provides the ability to address these requirements with support for synchronous Ethernet (SyncE), IEEE 1588v2, and Stratum 3E holdover. Additionally, the 3926 provides external interfaces for synchronization including BITS, GPS, frequency reference, and 1pps phase reference.

Zero-Touch Provisioning

Cost-effectiveness and service velocity have become critical competitive advantages for network operators. In many cases, service velocity is the determining factor in winning new service sales. The 3926 implements Ciena's unique ZTP capabilities, allowing network operators to rapidly deploy new services in a fully automated manner. By reducing or eliminating costly and time-consuming manual intervention, provisioning errors are eliminated via ZTP. Most importantly, ZTP improves service deployment velocity and significant competitive advantage.

Simplified multi-layer management and control

Ciena's Manage, Control and Plan (MCP) software offers a unique and comprehensive solution for the administration of mission-critical networks that span access, metro, and core domains, and provides unprecedented multi-layer visibility from the photonic to the data layers. With this innovative management approach, MCP supports a programmable and automatable solution that provides a fully open approach to installing, manipulating, and monitoring service behaviors in an SDN environment.

IP Router Configuration (SAOS 10.x)

When configured with SAOS software stream 10.x, the 3926 operates as an IP router supporting NETCONF/YANG to enable an open SDN environment with full visibility via telemetry and automated provisioning using open APIs. The 3926 is purpose-built to provide TDM, Layer 2, and Layer 3 services over carrier-grade infrastructure by supporting a rich suite of Ethernet, IP/MPLS, BGP, IS-IS, and OSPF. The 3926 is open and standardized, making it the perfect platform for deployments in both greenfield and brownfield deployments. SAOS 10.x, in Figure 2, supports the 16 x 1GbE module.



Figure 2. 3926 16 x 1GbE, 16 x DS1/E1 and TDM combo modules

Universal Access Configuration (SAOS 6.x)

When configured with the SAOS 6.x software stream, the 3926 provides a wide range of service offerings, including TDM, MEF 3.0-compliant E-Line, E-LAN, and E-Tree, and VNF services over a carrier-grade, connection-oriented infrastructure. It also supports a rich suite of L2 Ethernet, MPLS, OAM, Sync, and QoS capabilities to support a broad range of applications.

Additionally, the 3926 employs a variety of redundant and resilient routing and switching transport options for services, including Multi-Chassis LAG (MC-LAG), G.8032 rings, MPLS-TP, 802.1q VLANs, and 802.1ad provider VLANs (Q-in-Q). Furthermore, the 3926 has an embedded line-rate Service Activation Test (SAT) engine (RFC2544, Y.1564) with traffic generation to a full 10 Gb/s to guarantee strict, market-differentiating SLAs without relying on costly external test equipment.

The 3926 is also equipped with a single field-replaceable expansion slot for delivery of TDM and VNF services. Network operators can choose either the high-density 16 x DS1/E1 module or 6 x DS1/E1 + 4 x DS3/E3 + 4 x OC3/12/STM1/4 or 1 x OC48/STM16 combo module to deliver legacy TDM services—including 2G/3G mobile backhaul—over a performance-grade, routing and switching network enabled by circuit and pseudowire emulation in the module.



Figure 3. 3926-92x chassis and X-Large FRU

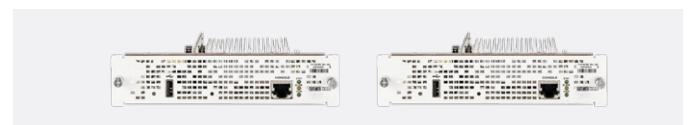


Figure 4. Medium and large NFV server modules

	Medium		Large		X-Large
	170-0122-901	170-0122-903	170-0128-901	170-0128-903	170-0403-901
Processor	D-1527		D-1548		D-2796NT
Cores/Threads	4/8		8/16		20/40
Core Freq.	2.2 GHz		2.0 GHz		2.0 GHz
RAM	16 GB	16 GB	32 GB	64 GB	64 GB
SSD	120 GB	480 GB	480 GB	1.9 TB	1.9 TB
Target #VNFs	2-3		3		4+

Table 1. NFV server module details

*3926-92x cannot host pre-existing 170-012x Sm/Med/Large NFV FRUs. Only FRU it can support, no TDM FRU.

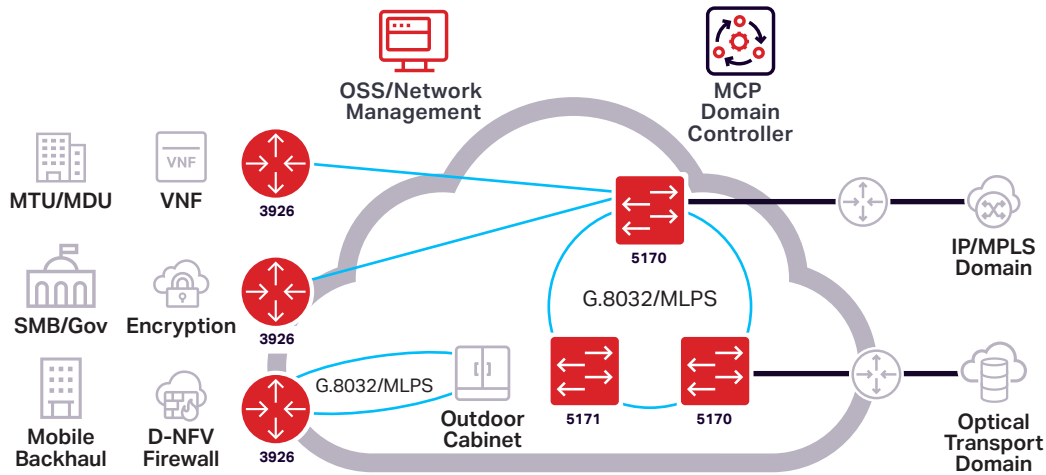


Figure 5. Typical D-NFV deployment with 3926 as smart CPE

As customers retire legacy TDM or require VNF service, network operators can choose between using medium or large NFV server modules to run a variety of VNF applications.

NFV server modules utilize a multi-core Intel Xeon D-1500 processor for VNF hosting and control. Their capacities can support multiple VNFs with different performance requirements driven by user demand and targeted cost points.

The platform serves as a smart CPE, complementing other hosting approaches offered in central office, data center, or cloud deployments.

Distributed-NFV software (optional)

The server module can be deployed with or without Ciena's D-NFVI Software, which addresses key

challenges of distributed NFV in a large-scale network, allowing for rapid implementation of the latest advances in NFV technology. The solution provides flexibility in addressing key concerns with scale, security, lifecycle orchestration, vendor lock-in, and cost challenges.

Ciena's D-NFVI Software comprises three main components:

- Ciena's Base Virtualization OS includes an environment with kernel, user space, and application runtime framework, as required by the VNFs to be deployed
- Ciena's vSwitch, a Data Plane Development Kit (DPDK)-based switch that provides service function chaining as well as Ethernet and OAM functions
- Ciena's NFVI Agent allows operators to configure and chain VNFs by means of a NETCONF/YANG API

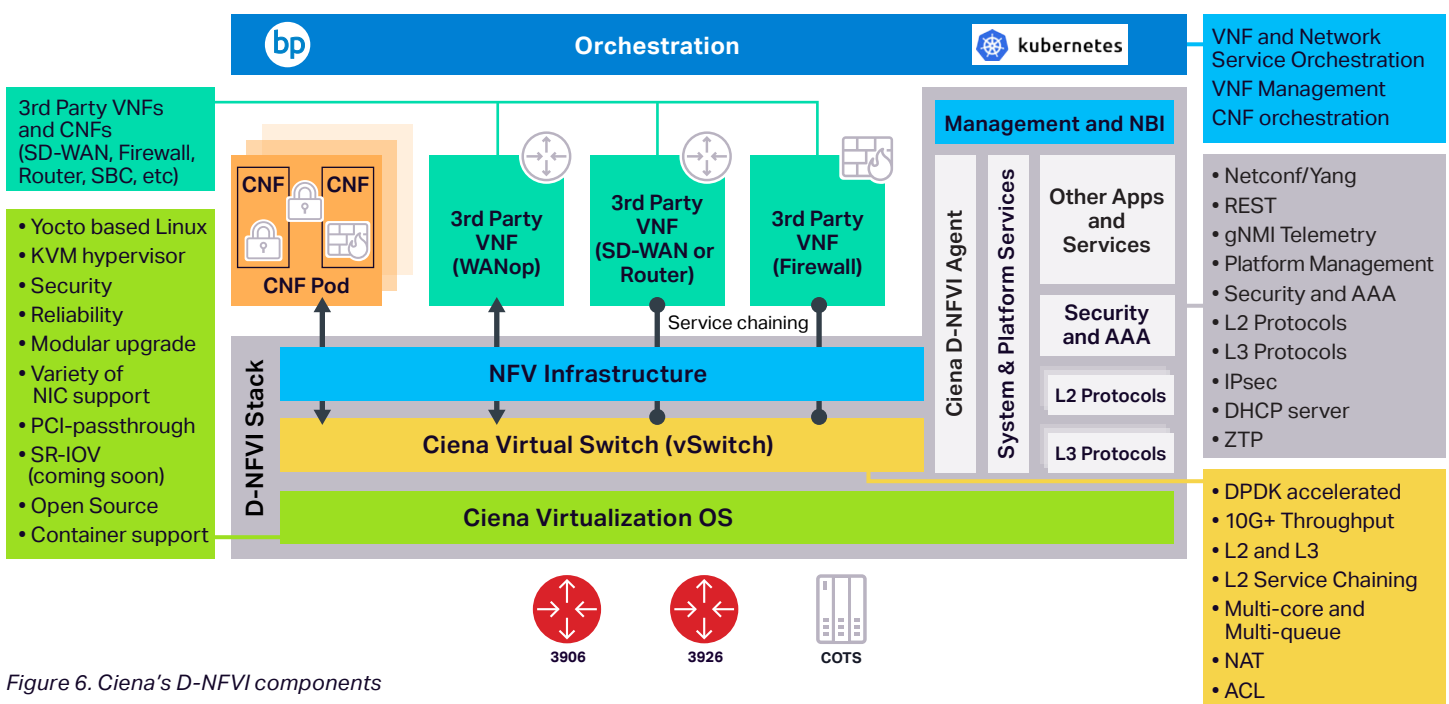


Figure 6. Ciena's D-NFVI components

Technical information (SAOS 10.x) – Router Configuration

Interface

- 16 x 1GbE SFP (FRU)

Ethernet

- Hierarchical Quality of Service (HQoS) including Ingress Metering/Egress shaping
- IEEE 802.1ad Provider Bridging (Q-in-Q) VLAN full S-VLAN range
- IEEE 802.1D MAC Bridges
- IEEE 802.1p Class of Service (CoS) prioritization IEEE 802.1Q VLANs
- IEEE 802.3 Ethernet
- IEEE 802.3ab 1000Base-T via copper SFP/IEEE 802.3ad Link Aggregation Control Protocol (LACP)
- IEEE 802.3z Gigabit Ethernet Layer 2 Control Frame Tunneling
- Link Aggregation (LAG): Active/Active; Active/Standby
- Jumbo frames to 9216 bytes
- Per-VLAN MAC Learning Control
- VLAN tunneling (Q-in-Q) for Transparent LAN Services (TLS)

MEF CE 3.0 Compliant

- E-LAN: EP-LAN, EVP-LAN
- E-LINE: EPL, EVPL
- E-Tree: EP-Tree, EVP-Tree
- Carrier Ethernet OAM
- Dying Gasp with Syslog and SNMP Traps
- IEEE 802.1ab Link Layer Discovery Protocol (LLDP)
- IEEE 802.1AE-2018 - IEEE Standard for Local and metropolitan area networks-Media Access Control (MAC) Security
- IEEE 802.1ag Connectivity Fault Management (CFM)
- ITU-T Y.1731 Performance Monitoring (SLM; DMM) Y.1731 Client Signal Fail (CSF)

Synchronization

- External Timing Interfaces:
 - BITS in or out (1.544Mb/s, 2.048MHz and 2 Mb/s)
 - GPS in or out (1.544MHz, 2.048MHz, and 10MHz)
 - 1pps and ToD in or out

- Line Timing Interfaces:
 - 1GbE/10GbE In and Out
- ITU-T G.8262/G.8264 EEC option1 and option2
- ITU-T G.8262 Synchronous Ethernet
- Stratum 3E oscillator

Networking Protocols

- ISO10598 IS-IS intra-domain routing protocol
- RFC 1195 Use of OSI Is-Is for Routing in TCP/IP and Dual Environments
- RFC 1321 The MD5 Message-Digest Algorithm
- RFC 1812 Requirements for IP Version 4 Routers
- RFC 1930 Guidelines for creation, selection, and registration of an Autonomous System (AS)
- RFC 1997 BGP Community Attribute RFC 1998 An Application of the BGP Community Attribute in Multi-home Routing
- RFC 2270 Using a Dedicated AS for Sites Homed to a Single Provider
- RFC 2328 OSPF Version 2 BGP Prefix Independent Convergence draftietf-rtgwg-bgp-pic-08.txt; EVPN VPWS Flexible Cross-Connect Service; draft-ietf-bess-evpn-vpws-fxc-01.txt
- RFC 2439 BGP Route Flap Damping
- RFC 2475 An Architecture for Differentiated Services
- RFC 2519 A Framework for Inter-Domain Route Aggregation
- RFC 2597 Assured Forwarding PHB Group RFC 2697 A Single Rate Three Color Marker RFC 2698 A Two Rate Three Color Marker
- RFC 2764 A Framework for IP Based Virtual Private Networks
- RFC 2873 TCP Processing of the IPv4 Precedence Field
- RFC 2865 Remote Authentication Dial in User Service (RADIUS)

- RFC 2918 Route Refresh Capability for BGP-4RFC 3031 Multiprotocol Label Switching Architecture
- RFC 3032 MPLS label stack encoding
- RFC 3107 Carrying Label Information in BGP-4
- RFC 3260 New Terminology and Clarifications for Diffserv
- RFC 3359 Reserved Type, Length and Value (TLV) Codepoints in Intermediate System to Intermediate System
- RFC 3443 MPLS TTL processing
- RFC 3719 Recommendations for Interoperable Networks using IS-IS
- RFC 3787 Recommendations for Interoperable IP Networks using IS-IS
- RFC 4250 Protocol Assigned Numbers
- RFC 4271 A Border Gateway Protocol 4 (BGP-4) RFC 4360 BGP Extended Communities Attribute
- RFC 4364 BGP/MPLS IP Virtual Private Networks (VPNs)
- RFC 4632 Classless Inter-domain Routing (CIDR): The Internet Address Assignment and Aggregation Plan
- RFC 4684 Constrained Route Distribution for Border Gateway Protocol/ Multiprotocol Label Switching (BGP/MPLS) Internet Protocol (IP) Virtual Private Networks (VPNs)
- RFC 4760 Multiprotocol Extensions for BGP-4
- RFC 4762 Virtual Private LAN Service (VPLS) Using Label Distribution Protocol (LDP) Signaling (HVPLS)
- RFC 5004 Avoid BGP Best Path Transitions from One External to Another
- RFC 5036 LDP Specification
- RFC 5037 Experience with the LDP protocol
- RFC 5301 Dynamic Hostname Exchange Mechanism for IS-IS
- RFC 5302 Domain-Wide Prefix Distribution with Two-Level IS-IS
- RFC 5303 Three-Way Handshake for IS-IS Point-to-Point Adjacencies
- RFC 5309 Point-to-Point Operation over LAN in Link State Routing Protocols
- RFC 5398 Autonomous System (AS) Number Reservation for Documentation Use
- RFC 5462 Multiprotocol Label Switching (MPLS) Label Stack Entry: "EXP" Field Renamed to "Traffic Class" Field
- RFC 5492 Capabilities Advertisement with BGP-4RFC 5561 LDP Capabilities
- RFC 5668 4-Octet AS Specific BGP Extended Community
- RFC 5681 TCP Congestion Control
- RFC 6241 Network Configuration Protocol (NETCONF)
- RFC 6310 Pseudowire (PW) Operations, Administration, and Maintenance (OAM) Message Mapping
- RFC 6793 BGP Support for Four-Octet Autonomous System (AS) Number Space
- RFC 7737 Label Switched Route (LSP) Ping and Traceroute Reply Mode Simplification
- SR-MPLS TI-LFA Topology Independent Fast Reroute using Segment Routing draft-ietf-rtgwg-segment-routing-ti-lfa-01
- RFC 8572 Secure Zero Touch Provisioning (SZTP)
- RFC 7911 Advertisement of Multiple Paths in BGP

Technical information (SAOS 10.x) – Router Configuration continued

Network Management

- Alarm Management & Monitoring Configuration
- Comprehensive Management via CLI
- Event and Alarm Notification/Generation
- gRPC base Telemetry
- IPv4 & IPv6 Management Support
- Management via NetConf/YANG Models RADIUS, AAA
- Remote Auto configuration via TFTP, SFTP
- Remote Link Loss Forwarding (RLLF)
- RFC1350 Trivial File Transfer Protocol (TFTP)
- RFC2131 DHCP Client
- RFC5905 NTP Client
- Secure File Transfer Protocol (SFTP)
- Secure Shell (SSHv2)
- Software upgrade via FTP, SFTP
- Syslog Accounting
- TACACS + AAA
- Zero-Touch Provisioning

Technical information (SAOS 6.x) – Universal Access Configuration

Interfaces

- 16 x DS1E1
- 6 x DS1/E1 + 4 x DS3/E3 + 4 x OC3/12 / STM1/4 or 1 x OC48/STM16
- 4 Core NFV compute FRU
8 Core NFV compute FRU

Ethernet

- Hierarchical Quality of Service (HQoS) including Ingress Metering/Egress shaping
- IEEE 802.1ad Provider Bridging (Q-in-Q) VLAN full S-VLAN range
- IEEE 802.1D MAC Bridges
- IEEE 802.1p Class of Service (CoS) prioritization IEEE 802.1Q VLANs
- IEEE 802.3 Ethernet
- IEEE 802.3ab 1000Base-T via copper SFP
- IEEE 802.3ad Link Aggregation Control Protocol (LACP)
- IEEE 802.3u Fast Ethernet IEEE 802.3z Gigabit Ethernet
- IEEE 802.3-2008 10-Gigabit Ethernet Jumbo frames to 9216 bytes
- Layer 2 Control Frame Tunneling
- Link Aggregation (LAG): Active/Active; Active/Standby
- MEF 10.2 Egress Bandwidth Shaping per EVC per CoS
- MEF 10.3 Excess/Uncoupled Bandwidth Sharing (Token Cascading)
- MEF 10.3/35.1 Performance Monitoring KPIs MSTP/RSTP
- Multi-chassis LAG (MC-LAG) active/standby Per-VLAN MAC Learning Control
- Private Forwarding Groups

- VLAN tunneling (Q-in-Q) for Transparent LAN Services (TLS)

MEF 3.0 Certified

- E-LAN: EP-LAN, EVP-LAN
- E-LINE: EPL, EVPL
- E-Tree: EP-Tree, EVP-Tree
- Carrier Ethernet OAM
- Dying Gasp with Syslog and SNMP Traps EVC
- Dying Gasp with Syslog and SNMP Traps EVC Ping (IPv4)
- Generation and Reflection at 10GbE
- IEEE 802.1ab Link Layer Discovery Protocol (LLDP)
- IEEE 802.1ag Connectivity Fault Management (CFM)
- IEEE 802.3ah EFM Link-fault OAM
- ITU-T Y.1564 Ethernet Service Activation Test Methodology
- Y.1731 Client Signal Fail (CSF)
- RFC 2544 Benchmarking Methodology for Network Interconnect Device
- RFC 5618 TWAMP Responder and Receiver TWAMP Sender

Synchronization

- External Timing Interfaces:
 - BITS in or out (1.544Mb/s, 2.048MHz and 2 Mb/s)
 - Frequency in or out (1.544MHz, 2.048MHz, and 10MHz)
 - 1pps and ToD in or out
- GR-1244
- ITU-T G.781 ITU-T G.813
- ITU-T G.824/G.823
- ITU-T G.8262/G.8264 EEC option1 and option2 ITU-T G.8262 Synchronous Ethernet

- Line Timing Interfaces:
 - 1GbE/10GbE In and Out
- Stratum 3E oscillator

Networking Protocols

- Alarm Indication Signaling (AIS) with Link
- Down Indication (LDI) and Remote Defect Indication (RDI)
- Automatic Pseudowire Reversion Control
- DHCPv4 Relay Agent with Option 82
- G.8032/IGMP interworking
- IGMPv3 with SSM IGMP over MPLS-TP
- ITU-T G.8032 v1, v2, v3 Ethernet Ring Protection Switching
- Layer 2 Control Frame Tunneling over MPLS Virtual Circuits
- LSP Dynamic provisioning 1:1 Tunnel
- MPLS Label Switch Path (LSP) Tunnel Groups
- MPLS Label Switch Path (LSP) Tunnel
- MPLS Multi-Segment Pseudo wires
- MPLS Virtual Private Wire Service (VPWS)
- OSPF/IS-IS for Dynamic MPLS-TP Control Plane
- RFC 2205 RSVP IS-IS L1/L2
- RFC 3031 MPLS architecture
- RFC 3107 Carrying Label Information in BGP-4
- RFC 3209 RSVP-TE: Extensions to RSVP for LSP RFC 3630 OSPF-T
- RFC 4447 Pseudo wire Setup & Maintenance using Label Distribution Protocol (LDP)
- RFC 4448 Encapsulation Methods for Transport of Ethernet over MPLS Networks (PW over MPLS)
- RFC 4664 Framework of L2VPN (VPLS/VPWS)
- RFC 4665 Service Requirement of L2 VPN
- RFC 4762 VPLS (Virtual Private LAN Service) and Hierarchical VPLS (H-VPLS)
- RFC 5654 MPLS-Transport Profile (TP) LSP Static provisioning, LSP Dynamic provisioning, 1:1 Tunnel protection
- RFC 5884 LSP Bidirectional Forwarding Detection (BFD) via GAL/G-Ach channels
- RFC 6215 MPLS Transport Profile User-to-Network and Network-to-Network Interfaces
- RFC 6426 MPLS On-demand Connectivity Verification and Route Tracing
- RFC 6428 LSP and PW Connectivity Verification and Trace Route Static ARP and MAC Destination Address Resolution
- VCCV (Virtual Circuit Continuity Check) Ping and Trace Route VCCV BFD based PW Pseudowire Switchover Multicast

Network Management

- Alarm Management & Monitoring Configuration
- Comprehensive Management via CLI Event and Alarm Notification/Generation
- IPv4 & IPv6 Management Support Integrated Firewall

Technical information (SAOS 6.x) – Universal Access Configuration continued

Network Management continued

- Local Console Port
- Per-VLAN Statistics Port State Mirroring
- RADIUS Client and RADIUS Authentication
- Remote Auto configuration via TFTP, SFTP
- Remote Link Loss Forwarding (RLLF)
- RFC 959 File Transfer Protocol (FTP)
- RFC 1035 DNS Client
- RFC 1213 SNMP MIB II
- RFC 1350 Trivial File Transfer Protocol (TFTP)
- RFC 1493 Bridge MIB
- RFC 1573 MIB II Interfaces
- RFC 1643 Ethernet-like Interfacing MIB
- RFC 1757 RMON MIB-including persistent configuration
- RFC 2021 RMON II and RMON Statistics RFC 2131 DHCP Client
- RFC 3877 Alarm MIB
- RFC 4291 IPv6 addressing (for management plane)
- RFC 4443 ICMPv6
- RFC 4862 Stateless address auto-configuration RFC 5905 NTP Client
- Secure File Transfer Protocol (SFTP)
- Secure Shell (SSHv2)
- SNMP v1/v2c/v3
- SNMP v3 authentication and Message Encryption
- Software upgrade via FTP, SFTP
- Syslog Accounting
- TACACS + AAA
- Telnet Server
- Virtual Link Loss Indication (VLLI)
- Zero Touch Provisioning

Technical information (Common)

Interfaces

Fixed Ethernet Ports:

- 2 x 100M/1GbE SFP
- 6 x 1GbE/10GbE SFP+
- 1 x Module Slot

Other:

- 1 x 10//100/1000M RJ-45 mgmt. port 1 x serial console (RJ-45, EIA-561)
- 1 x USB
- 1 x RJ45 BITS
- 1 x Mini coax frequency in or out 1 x Mini coax 1 PPS in or out
- 1 x coax GNSS antenna

Agency Approvals

- Australia RCM (Australia/ New Zealand)
- CE mark (EU)
- EMC Directive (2014/30/EU)
- ETSI 300 019 Class 1.2, 2.2, 3.2

- GR-1089 Issue 6 – NEBS Level 3, Zone 4 Earthquake
- GR-63-CORE, Issue 4 – NEBS Level 3
- LVD Directive (2006/95/EC) NOM (Mexico)
- NRTL (NA)
- RoHS2 Directive (2011/65/EU)
- VCCI (Japan)

Service Security

- Access Control Lists (ACLs) on data ports and management communication
- Broadcast Containment Egress Port Restriction
- Hardware-based DOS Attack Prevention Layer 2, 3, 4 Protocol Filtering
- User Access Rights Local user authorization

Physical Characteristics

Dimensions:

- 17.5" (W) x 9.9" (D) x 1.75" (H);
- 444mm (W) x 252mm (D) x 44mm (H)

Standards Compliance

Emissions:

- CISPR 22 Class A
- CISPR 32 Class A
- EN 300 386
- EN 55032
- FCC Part 15 Class A
- GR-1089 Issue 6
- Industry Canada ICES-003 Class A
- VCCI Class A

Environmental:

- RoHS2 Directive (2011/65/EU)
- WEEE 2002/96/EC

Operating Temperature:

- -40 F to + 149 F (-40 C to + 65C)

Storage Temperature:

- -40 F to + 158 F (-40 C to + 70C)

Immunity (EMC):

- GR-1089 Issue 6
- CISPR 24
- EN 300 386
- EN 55024

Power:

- ETSI EN 300 132-2
- ETSI EN 300 132-3

Safety:

- ANSI/UL 60950-1 2nd edition 2007
- CAN/CSA C22.2 No. 60950-1-07
- EN 60950-1
- IEC 60825-1 2nd edition (2007)
- IEC 60825-2 3rd edition (2004)

Software ordering information (SAOS 10.x) – Router Configuration

Part Number	Description
170-3926-903	3926, (2) 100M/1GBE SFP, (6) 1GBE/10GBE SFP+, (1) OPTION SLOT, SAOS 10.X EXTENDED TEMP, DUAL DC POWER
170-3926-905	3926, MACSEC,(2)100M/1G SFP,(6)10/1G SFP+,(1)OPTION SLOT, SAOS 10.X,EXT. TEMP,(2)SLOTS AC/DC PWR SUP
170-3926-921	3926, MACSEC,(2)100M/1G SFP,(6)10/1G SFP+,(1)OPTION SLOT,HIGH POWER,SAOS 10.X,EXT. TEMP,(2) AC PWR SUP

Required OS Base System Perpetual Software Licenses

S75-LIC-3926EO-P	SAOS BASE OS, ETHERNET & OAM SOFTWARE LICENSE FOR 3926, PERPETUAL
------------------	---

Optional OS Application

S75-LIC-3926MPLS-P	SAOS ROUTING AND MPLS SOFTWARE LICENSE FOR 3926, PERPETUAL
S75-LIC-3926SYNC-P	SAOS SYNCHRONIZATION SOFTWARE LICENSE FOR 3926, PERPETUAL
S75-LIC-392610GS-P	SAOS 10G SOFTWARE LICENSE FOR 3926, PERPETUAL
S75-LIC-3926SEC-P	SAOS SECURITY SOFTWARE LICENSE FOR 3926, PERPETUAL

SAOS 10.x Field Replaceable Modules

170-0403-901	X-LARGE NFV COMPUTE SERVER FRU FOR 3926-92X, XEON D-2796NT, 64GB RAM, 1.9TB SSD
--------------	---

Software ordering information (SAOS 6.x) – Universal Access Configuration

Part Number	Description
170-3926-904	3926,(2) 100M/1G SFP,(6)10/1G SFP+,(1)OPTION SLOT,SAOS 6.X,EXT. TEMP,(2)SLOTS AC/DC PWR SUP

Required OS Base System Perpetual Software Licenses

S70-0042-900	SAOS ADVANCED ETHERNET & OAM PERPETUAL SOFTWARE LICENSE FOR 3926
--------------	--

Optional OS Application

S70-0042-902	SAOS ADVANCED MPLS APPLICATION PERPETUAL SOFTWARE LICENSE FOR 3926
S70-0042-903	SAOS ADVANCED SYNCHRONIZATION PERPETUAL SOFTWARE LICENSE FOR 3926
S70-0042-905	SAOS ADVANCED 10G PERPETUAL SOFTWARE LICENSE FOR 3926
S70-0042-906	SAOS ADVANCED SECURITY PERPETUAL SOFTWARE LICENSE FOR 3926
S75-LIC-392610G-P	D-NFVI ADVANCED FOR 10G

Additional Hardware ordering information (SAOS 6.x & 10.x) – Router & Universal Access Configuration

Part Number	Description
-------------	-------------

SAOS 6.x & 10.x Power Supply Hardware

170-0013-900	3930/3932/5142/3926, DC PLUGGABLE POWER SUPPLY, WIDE RANGE 24/48V
170-0014-900	3930/3932/5142/3926, AC PLUGGABLE POWER SUPPLY, WIDE RANGE 120/240V

SAOS 10.x Field Replaceable Modules

170-0184-900	3926, (16) 1GE MODULE
--------------	-----------------------

SAOS 6.x Field Replaceable Modules

170-0184-900	3926, (16) 1GE MODULE
--------------	-----------------------

SAOS 6.x Field Replaceable Modules

170-0131-900	3926 (16) DS1/E1 TDM MODULE
170-0122-901	16GB RAM, 120GB SSD, MEDIUM NFV COMPUTE SERVER FRU - 4 CORE
170-0128-900	LARGE NFV COMPUTE SERVER FRU FOR 3906 & 3926, BROADWELL D-1548, 16GB RAM, 120GB SSD
170-0128-901	32GB RAM, 480GB SSD, LARGE NFV COMPUTE SERVER FRU - 8 CORE
170-0122-903	16GB RAM 480GB SSD, MEDIUM NFV COMPUTE SERVER FRU - 4 CORE
170-0128-903	64GB RAM, 1.9TB SSD, LARGE NFV COMPUTE SERVER FRU - 8 CORE
170-0176-900	3926, (6) DS1/E1, (4) DS3/E3 AND (4) OC3/12 STM 1/4 OR (1) OC48/STM16 TDM MODULE

Ciena may make changes at any time to the products or specifications contained herein without notice. Ciena and the Ciena Logo are trademarks or registered trademarks of Ciena Corporation in the U.S. and other countries. A complete list of Ciena's trademarks is available at www.ciena.com. Third-party trademarks are the property of their respective owners and do not imply a partnership between Ciena and any other company. Copyright © 2023 Ciena® Corporation. All rights reserved. DS348 9.2023

[Visit the Ciena Community](#)
Get answers to your questions

[Find out more](#)

ciena[®]