



HPE NonStop network I/O adapter, Telco CLIM

Telecommunication applications today utilize a variety of special protocols to manage and control the massive switching network that makes our wireless and land-based phone systems work. It is a very complex environment that demands the highest levels of reliability and fault tolerance.

The Telco Cluster I/O Module (CLIM), along with the IP CLIM and the Storage CLIM, is a part of the progressive I/O infrastructure for **HPE Integrity NonStop servers** that run the L-series and J-series NonStop OS.

The Telco CLIM for the HPE Integrity NonStop X NS7 systems is available in two commercial, AC-powered models:

- Four 10GBASE-T and one 1GBASE-T copper ports
- Four 10GBASE-SR optical ports and one 1GBASE-T copper port

The Telco CLIM for the HPE Integrity NonStop X NS7 carrier-grade systems is available in two DC-powered and Network Equipment-Building System (NEBS) level-3 compatible models:

- Four 10GBASE-T and one 1GBASE-T copper ports
- Four 10GBASE-SR optical ports and one 1GBASE-T copper port

The entry-class Telco CLIM comes with five 1GBASE-T copper port and available in an AC-powered model for HPE Integrity NonStop X NS3 systems and a DC-powered model for HPE Integrity NonStop X NS3 DC systems.

The Telco CLIM for the HPE Integrity NonStop i systems comes with five 1GBASE-T copper ports. It is available in an AC-powered model for commercial, AC-powered HPE Integrity NonStop i systems and in an NEBS level-3 compliant model for carrier-grade HPE Integrity NonStop i systems.

The Telco CLIM provides support for three protocols:

- The protocol MTP Level-3 User Adaptation Layer (M3UA)
- Session Initiation Protocol (SIP)
- Diameter protocol

M3UA enables the Signaling System 7 (SS7) protocol to run over IP. SIP is a signaling protocol that is widely used for setting up and tearing down multimedia communication sessions such as voice and video calls over the internet. Diameter is an AAA protocol, a type of computer networking protocol for authentication, authorization, and accounting, and is a successor to Remote Authentication Dial-In User Service (RADIUS). Diameter controls communication between the authenticators and any network entity requesting authentication.



Key features and benefits

- Provides high-speed Ethernet connectivity
- Supports M3UA, Diameter, and SIP protocols
- Delivers higher performance¹
- Delivers higher availability
 - With dual RAID 1 OS boot disks, the Telco CLIM continues to run if one disk fails; the failed disk can be replaced online.
- Provides better fault tolerance
- Provides lower cost per port
- Requires no change to applications
- Supports InfiniBand or ServerNet III connectivity to NonStop systems
- Is supported by improved Open System Management (OSM)

Coexistence and compatibility

Telco CLIM can coexist with existing Gigabit Ethernet 4-port ServerNet Adapter (G4SA) Ethernet controllers and HPE NonStop G16SE enclosure on the same NonStop i system. Additionally, Telco CLIM can coexist with the IP CLIM and the Storage CLIM on the same NonStop X or NonStop i system.

Configuration and packaging

The number of Telco CLIMs that can be supported on different NonStop platforms depends on the number of IP and Storage CLIMs on the system, on the system fabric connectivity rules, and on marketing propositions. Consult the respective configuration guide for the platform that you are considering.

Compatibility with RVUs

The software to support the Telco CLIM on different platforms is available on the relevant Release Version Update (RVU) vehicles of the L-series and J-series NonStop OS. Refer to the manual for your targeted platform to determine which RVU supports the Telco CLIM.

Manageability

OSM provides a highly automated and integrated management command and control that is familiar to users of prior NonStop systems. With OSM, operators do not need to learn Linux® command and control and the NonStop software seamlessly interfaces with the Telco CLIM subsystem, enabling you to manage Telco CLIMs as you have managed other NonStop controllers in prior systems.

HPE Integrity NonStop systems deploy a novel I/O infrastructure found on HPE ProLiant Gen10 servers, specially adapted for HPE NonStop platforms as controllers, for high-speed connectivity. The Telco CLIM controllers support multiple high-speed Ethernet links and the M3UA, SIP, and Diameter protocols.

¹ Your performance can vary depending on your application, message sizes, and traffic patterns and conditions.



Technical specifications

(applies to all versions of the Telco CLIM, except where stated)

Specifications	Description
Hardware	HPE ProLiant DL380 Gen10 with one Intel® Xeon® processor
Form factor	2U
Weight	33 lb (15 kg)
Maximum watts RMS	AC power: 185W/DC power 265W
Power factor (max. is 1.0)	0.98
Dimensions (h x w x d)	3.44 x 17.54 x 26.75 in.
Plug NEMA (plug type)	AC power: IEC-320-C14/DC power: Lug Terminal
Number of power plugs	2
NonStop system types supported	HPE Integrity NonStop X and HPE Integrity NonStop i systems
Release vehicle	<ul style="list-style-type: none"> • L18.08 for HPE Integrity NonStop X NS7 systems. Telco CLIMs are supported on prior RVUs L17.02 or later with SPRs and the appropriate CLIM installation software. • L18.08 for HPE Integrity NonStop X NS3 systems. Telco CLIMs are supported on prior RVU L17.02 with SPRs and the appropriate CLIM installation software. • J06.22 for HPE Integrity NonStop i systems: Telco CLIMs are supported on prior RVUs J06.20 or later with SPRs.



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Services from HPE Pointnext

HPE Pointnext leverages our strength in infrastructure, partner ecosystems, and the end-to-end lifecycle experience, to accelerate powerful, scalable IT solutions to provide you the assistance for faster time to value. HPE Pointnext provides a comprehensive portfolio including Advisory and Transformational, Professional, and Operational Services to help accelerate your digital transformation.

Operational Services

HPE Datacenter Care: This is our most comprehensive support solution tailored to meet your specific data center support requirements. It offers a wide choice of proactive and reactive service levels to cover requirements ranging from the most basic to the most business-critical environments.

HPE Datacenter Care Service is designed to scale to any size and type of data center environment while providing a single point of contact for all your support needs for Hewlett Packard Enterprise as well as selected multivendor products.

HPE Critical Service: This high-performance reactive and proactive support is designed to help minimize downtime. It offers an assigned support team, which includes an account

support manager (ASM). This service offers access to the HPE Global NonStop Solution Center, 24x7 hardware and software support, 6-hour call-to-repair commitment, enhanced parts inventory, and accelerated escalation management.

HPE Proactive 24: It provides proactive and reactive support delivered under the direction of an ASM. It offers 24x7 hardware support with 4-hour on-site response, 24x7 software support with a 2-hour response, and flexible call submittal.

HPE Foundation Care: This provides support for HPE servers, storage, networking hardware, and software to meet your availability requirements with a variety of coverage levels and response times.

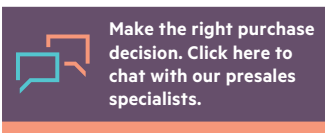
Advisory and Transformation Services

HPE Pointnext designs the transformation and builds a road map tuned to your unique challenges including **Hybrid IT**, Workload and Application Migration, Big Data, and the Intelligent Edge. HPE leverages proven architectures and blueprints, as well as integrates with partner products and solutions. We also engage the Professional and Operational Services teams as needed.

Professional Services

HPE Pointnext creates and integrates configurations that get the most out of software and hardware, and works with your preferred technologies to deliver the ideal solution. Services provided by the HPE Pointnext team, certified channel partners, or specialist delivery partners include installation and deployment services, mission-critical and technical services, and education services.

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