

Oracle Communications Acme Packet 3950



Built on compact one unit (1U) form factor, Acme Packet 3950 session border controller (SBC) is designed to ensure voice network security while delivering high quality service and availability. Telephony Denial of Service (TDoS) and Fraud can severely impact an organization and its customers. The Acme Packet 3950 SBC is designed to deliver a consistent and secure experience across Internet Protocol (IP) network borders for service providers and for small to medium enterprise.

Overview

The Acme Packet 3950 SBC is specifically designed to meet the price-performance and manageability requirements of small to medium enterprise and service providers. Ideal for entry-level session border controller access and interconnect deployments and Session Initiation Protocol (SIP) trunking services, the Acme Packet 3950 delivers Oracle's SBC capabilities in a 1U form-factor. With support for high availability (HA) configurations, quad port T1/E1 TDM fallback, dual AC or DC power supplies, hardware-assisted transcoding and Quality of Service (QoS) measurement, the Acme Packet 3950 SBC is a natural choice when uncompromising reliability and performance are needed.

With models designed for the smallest branch office to the largest data center, the Acme Packet SBC product family supports distributed, centralized, or hybrid SIP trunking topologies.



Figure 1. Acme Packet 3950

Features

Acme Packet 3950 addresses the unique connectivity, security, and control challenges enterprises and service providers often encounter when managing real-time voice, video, and UC sessions. It also helps enterprises and service providers contain voice transport costs and overcome the unique regulatory compliance challenges associated with IP telephony.

Applications

- Service provider entry-level SBC for access and interconnect
- Small to medium enterprise-session border controller
- E911 Call Center
- SIP trunk demarcation device
- Hosted communication services

Key features

- Enterprise Operations
Monitor connections: probe & data
- Transmitted bytes packet for media sessions
- Turn-key, 1U form factor
- Hardware-assisted transcoding for optimal performance
- Per session QoS measurement
- 4 Port T1/E1 TDM card for dial- out/dial-in survivability
- Redundant HA configurations
- Supports up to 10,000 concurrent sessions and 125,000 registered devices
- HA, redundant components

Key benefits

- Cost savings with uncompromised functionality
- Straightforward deployment and operation
- High service quality and reliability
- Supports centralized, distributed or hybrid SIP trunking deployment models

TDM fallback capabilities ensure continuous dial-in/dial-out service at remote sites in the event of WAN or SIP trunk failures. Stateful high availability configurations protect against link and hardware failures.

Capabilities

Acme Packet 3950 SBC features and capabilities

FEATURE	CAPABILITIES
Security	<ul style="list-style-type: none"> • Granular access control • IP address and SIP signaling concealment • Layer three through five topology hiding and signaling overload controls • IP telephony spam protection • Stateful deep packet inspection • Signaling and media encryption
Interoperability	<ul style="list-style-type: none"> • SIP message normalization • Response code translation • Session Description Protocol (SDP) and Dual Tone Multi-Frequency (DTMF) manipulation • Number and uniform resource identifier (URI) manipulation • Signaling message header manipulation • Protocol interworking: Transmission Control Protocol (TCP), User Datagram Protocol (UDP), Stream Control Transmission Protocol (SCTP) • Encryption interworking: Transport Layer Security (TLS), Mutual TLS, Secure Real-time Transport Protocol (SRTP) • Network address translation (NAT) and firewall traversal • IP address translation: private/public • Transcoding • Session routing based on Microsoft Active Directory query • Microsoft Teams Direct Routing • Message Session Relay Protocol (MSRP)
Reliability	<ul style="list-style-type: none"> • Standby SIP registrar with caching for remote site survivability • Stateful signalling and media failover • Quality of service (QoS) marking, virtual local area network (VLAN) mapping, access control • Registration storm avoidance • Call rate limit enforcement • Trunk load balancing • Stateful session routing • QoS-based routing
Regulatory Compliance	<ul style="list-style-type: none"> • Session prioritization for emergency services • Internet Engineering Task Force (IETF) standard SIP Recording (SIPREC) interface • Call detail records (CDRs) with local or remote storage via RADIUS
Cost Management	<ul style="list-style-type: none"> • Least cost routing • Codec Negotiation
Management	<ul style="list-style-type: none"> • Browser-based GUI (Oracle Enterprise Session Border Controller only) • SIP monitoring and tracing tool • SNMP, Syslog, SFTP, REST, RADIUS interfaces

Network session delivery and control infrastructure

Oracle's network session delivery and control infrastructure enables enterprises and service providers to manage the many challenges in the delivery of IP voice, video, and data services and applications.

Distributed enterprises leverage Acme Packet 3950 as a cost effective, reliable, feature-rich remote office SBC that is easy to install and administer.

Service providers leverage Acme Packet 3950 as customer premise equipment (CPE) to enable SIP trunking and hosted communications services. It serves as a flexible and resilient service demarcation point that can be easily managed from the service provider Network Operations Center (NOC).

The following Oracle products are part of the network session delivery and control infrastructure:

- Oracle Communications Session Border Controller
- Oracle Communications Session Router
- Oracle Communications Subscriber-Aware Load Balancer
- Oracle Communications Core Session Manager
- Oracle Enterprise Session Border Controller
- Oracle Communications Session Delivery Manager
- Oracle Session Delivery Management Cloud

System capacity, performance, and availability

Acme Packet 3950 supports up to 10,000 sessions, offers high availability (HA) operation for nonstop service, and supports quality of service (QoS) measurement and hardware-assisted transcoding.

Acme Packet 3950 SBC system capacity, performance, and availability¹

CAPABILITY	DESCRIPTION
Session capacity	Up to 10,000 concurrent sessions Up to 7,500 SIPREC sessions Up to 5,000 MSRP sessions
SIP Subscriber Capacity	Up to 125,000 registered subscribers (UDP) Up to 100,000 registered subscribers (TCP/TLS)
High Availability	Active/standby systems (1-to-1 redundancy) with check-pointing of signalling, media, and configuration state for no loss of service
SRTP Capacity	Up to 5,000 call legs
Transcoding Capacity	Up to 5,800 transcoded sessions

¹ Performance and capacity numbers vary by signaling protocol, call flow, codec, configuration, and feature usage.
Performance and capacity based on Oracle Communications Session Border Controller S-Cz9.0 software release.

Supported configurations

Acme Packet 3950 operates Oracle's Acme Packet Operating Software (Acme Packet OS) to deliver flexible product configuration and deployment options. The below table describes the Oracle product configurations supported by Acme Packet 3950.

Acme Packet 3950 supported configurations

PRODUCT	DESCRIPTION
Oracle Communications Session Border Controller	Session border controller (SBC) integrating controls for real-time communications signaling and media traffic
Oracle Enterprise Session Border Controller	Securely Connects Enterprise VoIP and UC systems to SIP Trunking and Wide Area Network Services

Hardware

Acme Packet 3950 provides the system throughput and redundancy features typically found in higher end systems. It combines best in class hardware and software to provide organizations with the protection they need against a variety of attacks. It can be mounted in a 19" or 23" rack.

Acme Packet 3950 includes two 10 GbE and four 1 GbE interfaces for signaling, media, and data traffic. The system supports Small Form-Factor Pluggable (SFP) transceivers for 1 GbE interfaces and Enhanced Small Form-Factor Pluggable (SFP+) transceivers for 10 GbE interfaces to accommodate both fiber optic and twisted pair copper cabling options.

Hardware options

Transcoding Module

Up to eight transcoding modules are supported. These modules will support up to 5,800 transcoded sessions.

Quad Port T1/E1 TDM Module

The Acme Packet 3950 supports an optional quad span T1 or quad span E1 interface module for TDM fallback. In centralized SIP trunking topologies the module preserves voice services in the event of a corporate WAN connectivity failure. In distributed SIP trunking topologies the module preserves voice services in the event of a local SIP trunk interface failure. The four port TDM module supports dial out and dial in calls.

Acme Packet 3950 details

Details of the Acme Packet 3950 system's physical properties, power specifications, and regulatory compliance are listed in the tables below.

Details of Acme Packet 3950

PHYSICAL PROPERTIES	DETAILS
Dimensions (not including mounting hardware)	<ul style="list-style-type: none">• Height: 43.7 mm (1.72 in)• Width: 434.3 mm (17.10 in)• Depth: 518.0 mm (20.40 in)
Weight	<ul style="list-style-type: none">• 10.0 kg (22.0 lbs)
Temperature	<ul style="list-style-type: none">• Operating: 32°F to 104°F, 0°C to +40°C• Storage: -4°F to 149°F, -20°C to +65°C
Relative humidity	<ul style="list-style-type: none">• 10% to 85%, under non-condensing operating conditions
Airflow	<ul style="list-style-type: none">• 104 CFM (max) front to back
Power Dissipation	<ul style="list-style-type: none">• 220W typical, 340W maximum
Chassis	<ul style="list-style-type: none">• 1 RU, rackmount in four-post cabinet or two-post center mount• Four 1Gbps Ethernet interfaces (SFP) or two 10 Gbps Ethernet interfaces (SFP+) for signaling and media• Two 10/100/1000 Mb/sec interfaces with RJ-45 for HA• One 10/100/1000 Mb/sec interface with RJ-45 for management• One RS-232 serial console interface with RJ-45 connector
POWER SPECIFICATIONS	DETAILS
Power supply	<ul style="list-style-type: none">• Dual power supplies: Redundant, load sharing, 800W maximum
AC power option	<ul style="list-style-type: none">• Voltage: Auto-ranging 100 VAC to 240 VAC wide input with power factor correction• Frequency: 50/60 Hz• Current: 4.2A x 2 rating
DC power option	<ul style="list-style-type: none">• Voltage: -48 VDC (+/- 10%) nominal in North America (maximum range: -40 VDC to -72 VDC)• Current: 25A x 2 rating• Cable: 10 AWG recommended minimum, with at least three conductors rated for at least 140°F (60°C)
HARDWARE OPTIONS	DETAILS
Onboard transcoding module	<ul style="list-style-type: none">• Up to 8 onboard transcoding DSP modules• Supported codecs:<ul style="list-style-type: none">» Wireline – G.711 10, G.711 20, G.722, G.723.1, G.726, G.729A/B, iLBC, Opus, SILK» Wireless – AMR-NB, AMR-WB, GSM-FR, EVRC, EVRC-B• T.38 fax interworking

Quad span T1/E1 module	<ul style="list-style-type: none"> • Four T1/E1 interfaces (RJ48), provides TDM dial out and dial in • Configuration of SPAN 1 is duplicated to other SPANs • SPANs cannot be configured individually • Channel mapping is fixed
REGULATORY	DETAILS
Certifications ^{1,2} Compliance Model Number: LCMN1AD	<ul style="list-style-type: none"> • NRTL TUV (US/Canada) • CE (European Union) • ANATEL (Brazil) • TEC (India) • BSMI (Taiwan) • EAC (Russia, Belarus, Kazakhstan) • KCC (South Korea) • RCM (Australia / New Zealand) • VCCI (Japan) • iCASA (South Africa)
Safety ²	<ul style="list-style-type: none"> • EN 62368-1 • IEC 60950-1, IEC 62368-1 CB scheme with all country differences • UL 62368-1 • CSA 22.2 No. 62368-1
EMC Emissions Standards ²	<ul style="list-style-type: none"> • ICES-003 Class A • EN 55032 Class A • ETSI EN 300 386 for Telecommunications Centers and for Other Than Telecommunications Centers • VCCI Class A limits • KN32 Class A • CNS 13438 Class A • 47CFR15 Subpart B (FCC) Class A • CISPR32 Class A • AS/NZS CISPR32 Class A
EMC Immunity Standards ²	<ul style="list-style-type: none"> • EN55035 • EN61000-3-2 • EN61000-3-3 • ETSI EN 300 386 for Telecommunications Centers and for Other Than Telecommunications Centers
Other ²	<ul style="list-style-type: none"> • 2014/35/EU Low Voltage Directive • 2014/30/EU EMC Directive • 2011/65/EU RoHS Directive • 2012/19/EU WEEE Directive

¹ Other country regulations/certifications may apply

² All standards and certifications referenced are to the latest official version. For additional detail, please contact your sales representative

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