

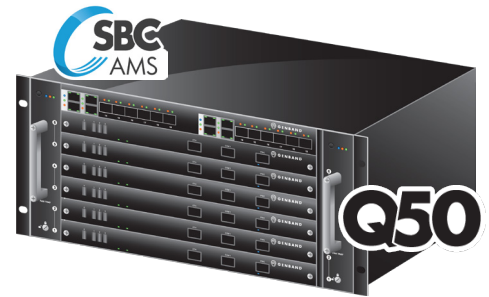


Q50 Media Platform

Powerful, high scale media platform for Next Gen Distributed Session Border Controller

Overview

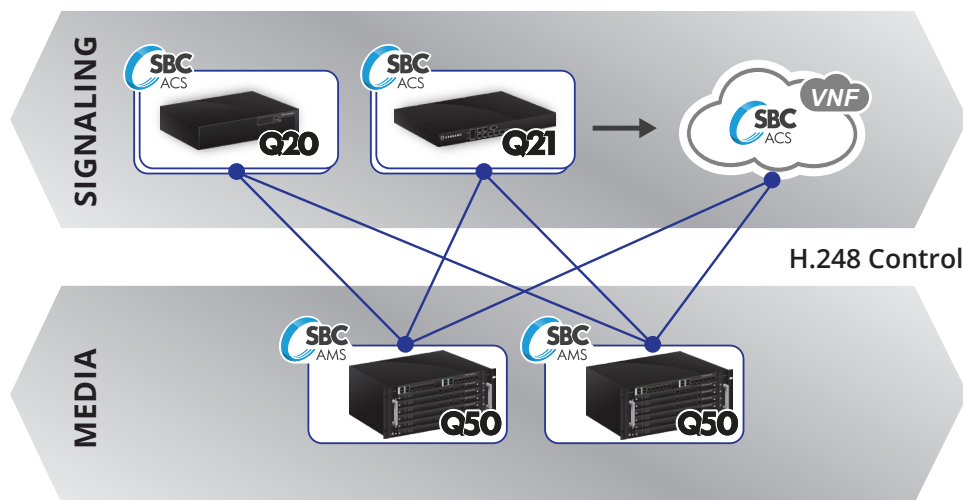
The rapid adoption of IP for real time voice and multimedia communications is resulting in a growing array of IP networks, user devices and endpoints. Customers expect secure access to these advanced networks and services, in real time, all the time. At the network edge, issues like security, interoperability, system complexity, protocol interworking, variations in vendor implementations, and service assurance are critical issues for network operators. Demands for deployment flexibility and traffic scalability including migration to cloud and virtual architectures, make it even more important to employ high performance Session Border Controllers (SBCs) to adapt to the latest communication networks requirements and trends.



GENBAND is an acknowledged industry innovator in session border control, developing market leading products to meet the needs of real time IP communications. GENBAND delivers carrier grade, intelligent SBCs, including cloud enabled SBC solutions, to turn these challenges into opportunities and ensure seamless and secure real time communications experiences. GENBAND Session Border Controllers are deployed in many of the world's largest IP networks of all kinds - fixed, mobile, cable, enterprise and Over-the-Top (OTT) networks.

Distributed SBC – power where you need it the most

GENBAND's Distributed Session Border Controller (D-SBC) solution marks the latest evolution of GENBAND's SBC portfolio. By enhancing the existing software-centric SBC architecture to separate and distribute the signaling and media traffic, both logically and physically, GENBAND is extending the deployment flexibility and efficiency of the SBC in multiple ways. GENBAND's D-SBC solution consists of "SBC-ACS" Advanced Control Software, running on GENBAND's Q20 or Q21 appliances, or virtualized in the cloud; and "SBC-AMS" Advanced Media Software, running on the Q50 platform. The Q50 is a high density, high capacity fully redundant COTS (commercial-off-the-shelf) media processing and transcoding server. Separation of the signaling and media functions allows for independent scalability of signaling and media resources, whether on an appliance or in the cloud, to optimize network investments and markedly reduce operator CAPEX, especially in NFV deployment scenarios. Sharing and pooling sharing of media and transcoding resources across multiple SBC instances and applications brings additional cost benefits and efficiencies.



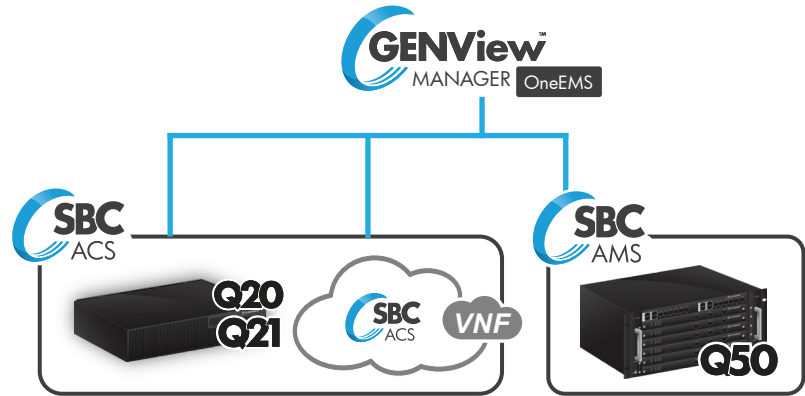
GENBAND Distributed SBC Solution

Data Sheet

Deployment Flexibility

GENBAND's Q50 provides substantial and measurable deployment benefits. The use of COTS platforms delivers a price/performance ratio that leads the industry, and the software-centric architecture extends deployment flexibility enabling the Q50 to address a wide-range of performance needs while ensuring lowest total cost of ownership (TCO). Key attributes of the D-SBC and Q50 deployment include:

- Support for MxN network models, where multiple signaling SBC-ACS's (M) control and share multiple SBC-AMS Q50 media resources (N), with each SBC-ACS able to use multiple Q50's, and vice versa, to intelligently pool media resources for optimum efficiency
- Intel Crystal Forest server architecture with software based DPDK IP media plane processing and acceleration for high scale software based media handling
- High capacity, high performance on-board transcoding to provide a truly powerful media solution
- Advanced 6x 10GE non-blocking architecture for high media throughput



The Q50 is optimally sized to support up to 200,000 concurrent media sessions in a small footprint with market leading energy efficiency. It is ideal for environments with high media handling and transcoding needs or distributed deployment models such as those required by large carriers or service providers, yet equally well suited to medium size service providers and enterprises, who are looking for high scale, high-density media platform where throughput is important.

Smart Management

The innovative GENView Manager, a smart management solution for GENBAND's SBC family, reduces operational complexity and simplifies day-to-day operations. It provides centralized management of configuration, fault, performance and security, as well as intelligent insight into network performance through powerful data collection, reporting and analytical tools. GENView Manager monitors, analyzes, reports, and enforces quality and performance at the network borders, providing visibility into edge traffic that enables network operators to gain predictability and assurance for the delivery of secure rich real time multimedia services.

GENView Manager OneEMS for Distributed SBC utilizes a new high performance fully virtualized software based architecture which is aligned to support the distribution of SBC-ACS and SBC-AMS components irrespective of the physical platforms on which they run. GENView Manager OneEMS provides a web-based provisioning and management interface running on an appliance in standalone or High Availability (HA) mode or in a virtualized cloud environment.

Delivering Holistic Visibility and Dynamic Adaptation

- Quality/QoS Monitoring: providing visibility into how the network is delivering service
- Comprehensive Reporting: enhanced reporting exposing historic and real-time network performance
- Provisioning Simplification: via modelling using solution profiles and customer profile
- Deployment Flexibility & Scalability; highly scalable virtual machine based software, cloud ready

System Features and Functions: AMS Advanced Media Software on Q50

- High Density Transcoding
- High Density Media Pass-through
- IPv4, IPv6 or IPv4/IPv6 interworking
- NAT Network Address and Port Translation
- Command Line Interface (CLI) for local and SSH access
- Standard H248 IP control protocol

Data Sheet

IP Network Security

- Media NAT traversal, rogue RTP detection
- Denial of Service (DoS/DDoS) protection
- Per flow bandwidth call admission control (CAC)

Media & Transcoding Adaptation

- Extensive CODEC support for wireline, wireless and OTT deployments: G.711 a-law, G.711 μ -law, G.722, G.729, iLBC, EVRC, EVRC-B, AMR, AMR-WB
- DSCP packet marking for ToS/CoS as part of QoS assurance
- Static and proactive codec transcoding and trans rating
- Mid call transcoding support
- Call hold and resume
- Fax interworking T.38
- DTMF interworking, SIP INFO, RFC 2833, tone relay
- Per session network quality statistics: jitter, packet loss, latency, R-Factor

Redundancy & Resiliency

- Single Chassis fully redundant N+1 blade HA with stateful call migration
- Up to 5 Active Blades, 1 Standby Blade, 6 total
- Redundant 10GigE Non-blocking Ethernet Switch, SFP+ Modules
- Redundant power & cooling

Performance & Capacity

- Concurrent Session Capacity - up to 40,000/blade or 200,000/system(pass-thru) including up to 105,200/system transcoded (G.711 <> G.729)
- Media Sessions Per Second (CPS) up to 1250/system
- Upgradable DSP blade modules
- Advanced 6x 10GE non-blocking SFP+ architecture

Element Management - GENView Manager (OneEMS)

- Web-based management/GUI access via secure HTTPS access for ease of configuration
- Northbound APIs: REST
- Secure RADIUS-based user authentication & authorization
- Role-based user access
- SNMP V2 V3 status and statistics
- Local logging of events, alarms, and traps
- 1:1 redundant management control ports

Q50 Hardware Specifications**Chassis:**

- 5U ATCA compliant 6 slot Chassis (option: 8U with front to back air baffle kit)
- 19" 4 post rack mount
- Inches: 19" Wide x 8.625" High x 18.27" Deep
- Metric: 48.3 cm Wide x 21.95 cm High x 46.4 cm Deep
- Maximum weight = 90lbs (40kg)

Front Panel:

- LED Status Indicators
- 6x Dual Rate 1G/10G SFP+ ports active (fully redundant with 12 ports)
- Serial console port

Power Option:

- DC operation; AC operation with power converter
- Redundant power input modules

Heat Dissipation:

- Power consumption estimated (max) (5+1 blades 100% DSP) = 2400W

DC Power Option:

- Input voltage: -40 to -72 V DC
- Peak Current: 60A

Environmental:

- RoHS 2011/65/EC
- Operating Temperature Range 5°C to 40°C. -5°C to 55°C short term.

Regulatory:

- IEC/EN60950-1
- CAN/CSA C22.2 60950-1
- FCC 47 CFR Part 15 part B, Class A
- ICES 003 Issue 5 Class A
- GR-63-CORE
- GR-1089-CORE
- ETSI EN 300 019
- ETSI EN 300 386
- ETSI ETS 300 753
- ETSI EN 300 132
- IEC 61000-4
- CE

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