IP is the future of telecom success, yet for many service providers, traditional voice is still a vital part of a profitable bottom line. Now you can have the best of both worlds—a pathway to the IP future while maximizing traditional voice revenue—with the GENBAND C15™.

The GENBAND C15 is a second-generation Carrier VoIP softswitch that provides a powerful platform for IP communication services while continuing to meet subscriber demand for traditional voice services. This IMS-ready softswitch is ideally suited for small and medium-sized service providers. It offers the fullrange of legacy network interfaces and regulatory features needed in today's network operations environment. Service providers who use existing GENBAND DMS-10 and DMS-100 equipment, or DCO and EWSD solutions, will benefit from the C15's easy migration and reuse of legacy line equipment.

Full IP Integration

The C15 opens a clear IP roadmap. Service providers typically upgrade to a softswitch platform to gain the ability to manage IP access devices and services. The GENBAND C15 is delivers the protocols and services needed to support IP communications services. IP services are tightly integrated with PSTN services in this softswitch, ensuring subscribers enjoy a transparent communication experience regardless of access method.

Expansive Capabilities

It provides the features consumers want, and the functionality service providers need. This robust softswitch offers a wide range of IP voice services, access methods and capabilities. Those include fully featured residential service, VoIP with service transparency, and Centrex/Centrex IP and fully-featured SIP lines with service transparency. Other supported features include directory number hunt, local number portability, end office or Access Tandem operation.

*for NA version only

The C15 service architecture incorporates a SIP proxy server and a back-to-back user agent. A convenient Graphical User Interface allows quick and easy provisioning, while a robust GUI-based portal allows subscriber self-care and advanced voice application control. The C15 features integrated voice mail, multi-port conference capabilities and AMA collection. Other features include SS7 A link concentration, AIN 0.1, E911, CALEA surveillance and call logging.

Clear Operational Benefits

The GENBAND C15 offers measurable IP communications advantages. It combines a compact physical footprint with high-port density, providing scalability and modular growth and very affordable start-up costs for smaller systems. The C15 features low power consumption: just 425 Watts in the starter system and 1305 Watts when fully configured. With an IP infrastructure and switching fabric, this GENBAND softswitch delivers a fully feature set for both IP and TDM subscribers. The C15 features an integrated session border controller (SBC), integrated TDM gateways for seamless inter-working between VoIP and TDM subscribers, and native SIP call control. By leveraging the C15, service providers can re-use existing GENBAND (Nortel) line peripherals, while positioning themselves to fully exploit future IP applications.

An Open IP-Based Architecture

GENBAND's C15 has a simple architecture that consists of an IP fabric and Ethernet transport between a Core Module and scalable gateway Port Modules. That architecture includes:

Core Module (CM). The Core Module provides the processing for voice and media services, maintenance, administration and provisioning. The CM also provides the IP fabric for connecting media and voice endpoints. The CM is internally redundant and is provided in a 2U rack mount chassis.

Port Module (PM). The Port Module provides the gateway function for 5 TDM interfaces. Port Modules for copper interfaces include DS-1. DS-3, and DS-30A (interface to GENBAND specific line peripherals). There is also an Optical Port Module that provides VT1.5 mapped OC-3 interfaces. The PM is internally redundant and also provides fully integrated and selectable session border control. Port Modules are provided in a rack mount chassis. They may be configured locally with the host C15 so that they are fully integrated with the softswitch or deployed remotely with Emergency Stand-Alone (ESA) capability.

Application Server. This application platform enables supplemental services, including announcements, unified messaging, conferencing, and web server for advanced subscriber feature control and self care. Application Servers are provided in a redundant pair of 1U chassis.

Alarm Module. The Alarm Module provides collection and reporting of alarms.

The C15 core and gateway port modules are packaged in an AdvancedTCA® chassis and are interconnected with GigaBit Ethernet. This open architecture supports a wide range of deployment topologies. Because the switching core of the C15 is a true IP fabric, it provides the foundation that service providers need today, while establishing a robust and flexible foundation to support future service offerings. To meet geographic requirements, optical Ethernet transport solutions may be used to distribute the core module and the gateway port modules.

A true IP/SIP softswitch, the C15's small size and simple design help reduce engineering and installation costs. The C15 core control, gateway port modules, and operations administration and maintenance interfaces are all housed in a single chassis solution. This compact approach is economical for small offices and conveniently scales to support much larger applications. As communication needs increase, gateway port modules are easily added to serve that growth. The C15 can be deployed to replace an existing TDM switch or as an IP overlay to the network.

A Clear Path to IMS

The GENBAND C15 opens a clear and logical roadmap to IMS. The IP Multimedia Subsystem (IMS) is a standards-based architecture that enables access and service convergence in an IP environment. The C15 leverages the SIP signaling standards as its native protocol, giving this GENBAND softswitch built-in IMS compatibility. Get the best of both worlds: A solid foundation for IP success … and a cost-effective way to leverage existing infrastructure to deliver reliable and profitable traditional voice services.

CAPACITY

- 250,000 BHCA (Busy Hour Call Attempts)
- Largest configuration, configured with a total of 10 Port Modules
  —Up to 100,000 lines (combination of TDM and
    VoIP) with 10% trunking
- Smallest configuration, configured with 1 Combination Port Module:
  —Up to 3,100 lines (combination of TDM and VoIP) with 10% trunking

VOIP INTERFACES

- Physical Interface:
- Gigabit Ethernet IEEE 802.3ab

- Protocols and applications:
  —H.248 Trunk gateways
  —MGCP
  —NCS
  —H 248 Line gateways
  —Session Initiation Protocol (SIP) Lines including SIP enabled fiber to the premise solutions
  —Session Initiation Protocol (SIP) direct packet trunks

TDM INTERFACES

GENBAND understands that TDM-based access is a reality in today's public switched telephony network and it will be present during the migration to a fully IP-enabled network. The C15 is equipped with a rich set of PSTN services and access protocols. For current DMS-10 and DMS-100 customers, the C15 will host LCM based line peripherals and remotes to enable an important cost savings in line and loop plant. For current DCO and EWSD customers, GENBAND's solution with the GENBAND G2 and G6 universal gateways allows the C15 to host DCO and EWSD line peripherals and remotes. The following TDM services and access technologies are available:

Physical interfaces:
- DS-1 (32 ports per module)
- DS-3 (2 ports per module)
- DS-30A (Interface to Nortel line peripherals with 32 ports per module)
- OC-3 (4 fully protected ports per module)

Protocols and applications:
- SS7 ISUP
- SIP lines and trunks
- MGCP
- H.248 lines and trunks
- NCS
- SS7 A-link concentration
- AIN
- Equal Access and Access Tandem toll operation
- MF interoffice (North American signaling)
- ISDN Primary Rate Interface (PRI)
- Nortel line peripherals and remotes
- CLASS residential custom calling
- CENTREX including Meridian Business Sets
- E-911
- Local Number Portability
- Web Portal for subscriber self care and feature control
- On demand multi-port conferencing
- Integrated voice mail
- Calling name database

*for NA version only

- One Number Service
- CALEA Number Portability
- GR-303

OPERATIONS

The operation of a Communication Server is critical to providing reliable and cost-effective services. The C15 was designed for ease and economy of operation and built important functions into the platform:

- Common XML-based element manager, command line interface or Windows GUI
- Integrated AMA collection — Telcordia BAF recording with FTP retrieval
- Integrated media and application server
- Integrated alarm detection and reporting with discrete alarm inputs and outputs
- SNMP email or paging alert for alarms integrated test head for line and loop testing
- Effective Quality of Service tools to monitor VoIP user experiences
- Effective tools and professional expertise to facilitate a smooth cutover from all switch types.

POWER REQUIREMENTS

- Total system power consumption fully equipped = 1305 Watts
- Core Module = 193 Watts
- Copper Port Module = 59 Watts
- Optical Port Module = 235 Watts

ABOUT GENBAND

GENBAND is a global leader of Next Generation Network (NGN) solutions, helping fixed,mobile and cable service providers around the world evolve communications networks through IP innovation. The company offers the industry's most comprehensive, standards-based switching portfolio, with products deployed in over two-thirds of the world's 100 largest service provider networks. Headquartered in Frisco, Texas, GENBAND operates Centers of Excellence globally and serves customers and partners in more than 80 countries.