

There are reasons why the GENBAND C20 is the number one softswitch in the world: It delivers world-class IP capabilities; reduces power and real estate costs; and creates robust opportunities for new revenue and higher profit. With the industry's most complete set of softswitch features and technologies, it's no wonder the GENBAND C20 sits at the heart of today's most successful next-generation IP networks.

The C20 can be deployed to manage communications, perform calls, control IP phones and Voice over IP (VoIP) gateways, deliver SIP-based multimedia service, and to function as the centerpiece of an open, standards-based network. The C20 is a second-generation IP multimedia softswitch providing full PSTN replacement and advanced IP voice and multimedia communications. It provides advanced voice and multimedia services for business and residential markets in a single platform that meets IMS and IP standards.



### Converged and Multimedia Applications

GENBAND has created a platform for convergence success. The C20 is part of a family of IP Multimedia Softswitches that deliver groundbreaking converged and multimedia applications to the global marketplace. The C20 Softswitch from GENBAND delivers a full suite of network configurations including International Gateway, National Long Distance, Class 5 residential and business features, Class 5 Cable (NCS), SIP Class 5 and Multimedia capabilities – all on a single platform. The C20 also supports multiple access types including Wireline, Cable, Broadband Access and Wireless Broadband.

Carriers can deploy this carrier-grade IP Multimedia Softswitch to deliver a full suite of voice and multimedia services to business and residential customers as part of a converged services offering.

### New Revenue Opportunities

The C20 is built for service profitability. The versatile C20 family allows service providers to deliver a comprehensive set of field-proven VoIP services to growing markets around the world. This market-leading communications server delivers a robust suite of applications and mobility options, including Unified Communications, IP Business and Consumer Voice and Multimedia.

Service providers can leverage the GENBAND C20 to tailor customized portfolio offerings to specific end-user segments.

**Unified Communications.** GENBAND Unified Communications offers a single, seamless user interface to enterprise communications while simplifying voice, voicemail, e-mail, instant messaging and collaboration applications. GENBAND's C20 SIP services are also fully integrated into Microsoft and IBM UC solutions.

**IP Business Services.** Workers can access 300+ business services through existing Centrex, Voice over IP or through their mobile phone. Services include traditional Centrex, advanced multimedia business tools, FMC and Call Center applications.

**Consumer Voice and Multimedia.** The C20 supports a full range of voice and multimedia services and FMC services, allowing both new and existing service providers to pursue new revenue opportunities while meeting regulatory requirements. With MSANs via H.248 and TISPNs latest draft of SIP MSANs protocol, carriers can easily expand their subscriber base and perform class 5 consolidation.

### Flexible Market Options

Markets vary and business conditions can change, and the C20 delivers the flexibility needed in today's telecom environment and provides legacy DMS customers with a cost-effective migration path to VoIP. The C20 can also provide a high-performance, small-footprint, future-proof VoIP solution for non-DMS customers or those who do not want to leverage their DMS line bays.

The C20 enables service providers to introduce SIP voice and multimedia features to geographically dispersed markets. It provides the scalability

needed to grow a subscriber base in a flexible, targeted way – including small-pocket service areas – while minimizing backhaul costs. The system accommodates existing OSS infrastructures, and offers a comprehensive set of country variants.

## Advanced Technologies and Standards

The GENBAND C20 works with open, standards-based protocols and delivers a flexible set of access and trunk media gateway options and a combined Session Border Controller and IP-IP Media Gateway. This flexible approach allows service providers to grow easily, to take full advantage of new innovations, and to accelerate time-to-revenue efforts.

**Softswitch Intelligence.** Two high-availability call agent processors provide least cost routing, Emergency call handling, Local Number Portability, translations, centralized service delivery and telephony voice applications.

**Open Standards.** The C20 provides media gateway control through open, industry-standard VoIP protocols. Interworking, standards-based protocols support cost-effective customer premises devices delivering traditional and next-generation telephony services.

**Signaling Interface.** The C20 can be provisioned with processors providing an SS7 signaling interface for seamless interworking between circuit-switched and packet-based networks and to support advanced telephony and intelligent networking services.

**Packetized Audio.** An integrated Media Server provides comprehensive packet-based audio features, including announcements, lawful intercepts and end-user recording and customization.

**Trunk Gateway Support.** Open, standards-based protocols provide interfaces to the public telephone network, allowing the C20 to be seamlessly integrated with trunk gateways for all population densities.

**Adaptive Application Engine.** The C20 A2E provides SIP voice lines, video conferencing, collaboration, presence, instant messaging, meet-me conferencing and the personal agent, a web portal for end-user customization and other capabilities.

**Carrier-Grade Operation.** The C20 platforms are available in a Geographical Survivability configuration, providing Softswitch and SIP Application Server node diversity for enhanced reliability.

## Benefits of the C20

- Market Flexibility
  - Support of IP and TDM on the same platform allows Service Providers to address all types of subscribers
  - Mix Carrier Hosted Lines and PBX trunks to address the needs of big businesses that may also have mixed hosted and CPE based sites
  - Full PSTN transparency allows a seamless migration of subscribers
- Cost Efficiency
  - Allows the reuse of DMS family peripherals and the use of SIP or H.248 MSANs
  - IP based interconnect options to reduce transmission costs (SIGTRAN, SIP-T, SIP-I, among others)
  - High Subscriber density for a better cost per subscriber
  - Comprehensive OAM feature set for an optimized management and reduced OPEX
- Revenue Generation and Customer Satisfaction
  - Multimedia applications and revenue generating features allow Service Providers to expand their market
  - Open APIs let Service Providers expose their network to 3rd party services in a profitable and controlled way.
  - 99.999% reliability and high availability ensure a trouble free operation and satisfied customers
- Future Proof
- Evolution to IMS for a protected investment

## FEATURES

- Redundant provisioning of all components for quick fault recovery
- Five nines (99.999 percent) availability
- Best-in-class fault handling software
- Redundant disk storage that protects billing, system images and other vital data
- Fewer network elements, reducing maintenance tasks and avoiding single points of failure.

## CAPACITY

- From 2M to 5M Busy Hour Call Attempts (BHCA) depending on configuration
- Up to 500,000 lines plus 80,000 trunks (End Office Configuration)
- Up to 250,00 trunks (Tandem Configuration)

## STANDARDS-BASED PROTOCOL SUPPORT

- H.248, H.323, MGCP, TGCP, NCS, SIP, SIP-T, SIP-I
- PCMM policy and IMS MGCF interfaces
- ENUM and LDAP
- ParlayX and WSRP
- SS7, PRI, BRI, V5.2



## MANAGEMENT (OAM & P)

- Point-and-click GUIs, and web-based provisioning, using industry-leading hardware, with mission critical applications running on fault tolerant hardware.
- Proactive fault handling by mitigating faults rather than taking more severe actions (e.g. blade failover to standby), flight recorder black box capabilities, event or instruction triggered tracing among other capabilities.

This suite of element management solutions provides full fault, configuration, accounting, performance and security (FCAPS) functionality, and more.

## TURNKEY APPLICATIONS SUPPORT

The IP-based C20 family is access agnostic, supporting traditional copper access, integrated access, xDSL, cable media optical, and wireless broadband applications, as well as packet trunking solutions. The C20 family supports:

**Cable and xDSL services.** The product family interfaces to existing Multimedia Terminal Adapters (MTAs) and Cable Modem Termination Systems (CMTSs) via PacketCable standards. Support includes PacketCable Multimedia standards and MSANs via H.248 and/or SIP interfaces for DSL.

**Hosted business and residential lines.** The family enables convergence of voice and data services over a single IP WAN link via xDSL, Cable, WiFi, WiMax and LTE and other access options. Carriers can offer advanced web-based services via ParlayZ and Web Services Remote Portlet interfaces.

**Enterprise connectivity and trunking.** Delivering a comprehensive feature set on a packetized network, the C20 family enables carriers to offer inter-office trunking services with an evolution to SIP PBX trunk connectivity.

**Wireless broadband service providers.** The compact, feature-rich C20 family protects current infrastructure investments while allowing broadband service providers to add revenue-generating voice services.

## PLATFORM OPTIONS

The C20 family offers three platform options:

- **CS 2000x** – The C2000x builds on the XA Core hardware platform evolution from the original DMS-100, enabling carriers to re-use existing DMS-100 components.
- **CS 2000c** – The CS 2000c is built on commercially available CompactPCI™ standards technology and runs on an open operating system.
- **C20** – The C20 is built on next generation, standards-based COTS AdvancedTCA™ technology and runs on an open high-availability Versatile Service Engine. The C20 enables service providers to easily scale IP voice and multimedia service from market introduction to a large-scale offering, while supporting a growing subscriber base. The C20 features a small footprint and lower power consumption. Carriers can deploy this platform to manage the cost of engineering, operations and real estate without compromising full-featured functionality.

## 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 Plano, Texas, GENBAND operates Centers of Excellence globally and serves customers and partners in more than 80 countries.

