



## C20 on ATCA



Service providers are facing unprecedented challenges in their voice businesses. Over-the-top (OTT) providers are beginning to skim-off customers with freemium VoIP offers. Business customers are pursuing Unified Communications services, increasingly via the cloud and OTTs. At the same time, “voice” has stepped aside for messaging, texting, email, and social networking – making complex, multi-component voice architectures seem contrary to what service providers need to compete.

Ribbon Communications’ C20 Call Session Controller leads the global market in transforming networks, and it is the core services and switching infrastructure platform for tens of millions of users around the world across fixed, mobile, and cable operators. The C20 simplifies complex architectures like IMS by efficiently delivering voice and multimedia services that enable new services, revenue growth, and customer retention while providing customer-at-a-time migration.

### Overview

The C20 is the product of more than a decade of focused development and investment in intelligent design and services innovation. Residing on Ribbon ATCA, the C20 replaces legacy TDM infrastructures with ease, substantially reducing power consumption and footprint by 90% or more. Due to its widespread use in service provider networks large and small, it has network-proven capabilities to facilitate back office integration and transformation.

Because the C20 is so flexible and versatile, it provides essential switching and subscriber services for many of Ribbon’s network transformation solutions like IMS, SIP Trunking, IPX, Peering, and Intra-Network Interconnect. The C20 also provides inherent connectivity to the Ribbon Application Server, enabling SIP and IMS-centric services like multimedia Unified Communications. In order to support such a broad set of solutions, it has intelligent capabilities to handle both legacy and IP voice and multimedia services across many geographies and international standards. It also has widely-proven interoperability with the largest number of end user devices, access platforms, and core elements.

The C20 is at the core of many service providers’ plans for network transformation. It is the key call session control element providing switching, media gateway control, signaling and protocol interworking, emergency services, lawful intercept, media server, customer data store, billing, and end user voice and multimedia services support.



For service providers that plan on eventually deploying an IMS solution, the C20 and MGCF facilitates migration to IMS by providing comprehensive AGCF support. This ability to serve in both Next Generation Networks and IMS architectures is efficient and powerful, enabling investment protection and services continuity, and allowing operators to migrate customers at their own pace.

## Benefits

### Market Flexibility

- Utilized worldwide as a call session controller across cable, fixed, and mobile operators
- Widespread applicability and services integration across TDM and IP networks
- Extensive set of subscriber services for business and residential markets
- Network-proven, global interoperability with a wide array of devices, access equipment, and core elements
- Smooth, customer-at-a-time or en masse migration from legacy networks

### Solutions Support

- Supports both Next Generation Networks and IMS
- Concurrently supports and integrates legacy services – POTS, Centrex, Regulatory, Lawful Intercept, PBX
- Network Transformation and switch replacement including Class 5 and Class 4, IP Tandem, Tandem, Long Distance, and IP Trunking
- Interconnect services including SIP Trunking, IPX, Peering, and Intra-Network Interconnect
- Access services including Hosted VoIP, Hosted PBX, IP Centrex, and Unified Communications

### Cost Efficiency

- Can sustain legacy networks and customer groups for extended years, enabling gradual migration to end state architecture as CapEx allows
- Very low power and real estate footprint vs. comparable TDM alternatives
- Many integrated functions and services to reduce operational complexity and cost
- Highly-scalable density and capacity for optimal cost per subscriber
- Multiple IP interconnect options to reduce transmission costs (SIGTRAN, SIP-T, SIP-I)
- Ribbon C20 OA&M platform for optimized, simplified management

### Revenue Generation

- Provides a host with the new VoIP and multimedia applications and features of Ribbon Application Server; enhances the user experience and engenders loyalty and “customer stickiness”
- Integration of legacy services and networks with IMS evolution to ensure revenue continuity and mitigate customer attrition

### Seamless Migration to IMS

- Seamless migration path from Next Generation Network to IMS architecture
- In IMS, provides AGCF, MGCF, and TAS network elements

## Capacity

- Up to 5M Busy Hour Call Attempts (BHCAs) depending on configuration
- Up to 1.25 million lines plus 160,000 trunks (end office configuration)
- Up to 400,000 trunks (tandem configuration)

## Standards-Based Protocol Support

- SIP, SIP-I, SIP-T, MGCP, TGCP, H.248, H.323, NCS
- ISUP, LNP, CALEA, GETS, E911, TR-08, GR-303, V5.2, PRI, DPNSS, QSIG, BRI
- PCMM policy and IMS MGCF and AGCF interfaces
- ENUM and LDAP
- REST, ParlayX, WSRP
- SS7, PRI, BRI, V5.2

## Ribbon C20 Management

The integrated management solution provides full fault, configuration, accounting, performance and security (FCAPS) functionality for the C20.

Ribbon C20 EMS is compatible with multiple legacy OSS systems. This enables smooth transformations that leverage current back office investments and minimize retraining costs.

- Enables the smooth integration of functions into an operator's existing OSS / NMS
- One system for operations, administration, maintenance (OAM) and element management applications
- Back office compatibility with many existing OSS platforms to ease integration and training
- Graphical User Interface (GUI) with a common desktop look and feel, best-in-class fault rollup, and single sign-on
- One user experience across Ribbon network elements
- One northbound interface for solution management of multiple Ribbon products

### Carrier Grade Reliability and Fault Tolerance

The C20 is network-proven as a fully redundant Call Session Controller designed with five nines (99.999%) availability, best-in-class fault handling, and layers of redundancy throughout. It is also fully geo-resilient and can be seen as a single logical entity by the network while being split physically across two sites up to 3000 km apart. In such a configuration, it is designed to sustain multiple faults, temporary site failure, or complete site destruction without losing capacity or billing data, and without dropping ongoing calls.

### Platform

The C20 is available on Ribbon MA-RMS and ATCA, the industry's leading IP Unified Services platforms supporting multi-purpose IP solutions. C20 on ATCA is based on robust, flexible hardware, leveraging a robust fault-resistant middleware, and incorporating the industry-leading C20 OAM to simplify operations. The C20 on ATCA platform enables service providers to easily scale IP voice and multimedia services from a small market introduction to a large-scale offering, while supporting a growing end user base.

**Contact Us**



We are here to help. Let us know if you are interested in a quote or if you have any questions.