IPLOOK MGCF Product datasheet

IPLOOK Technologies

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IPLOOK Technologies / IPLOOK Technologies Co., Limited

Revision history

Version	Usage State	Modification Summary	Reviser	Reviewer	Revision date
1.1	Initiation Version		Edward	Li	2021-10

Today's operators are challenged by multiple network types, signaling, and protocols that are largely incompatible with each other. They are seeking intelligent platforms that can interwork and normalize these differences and facilitate the offering of high value services for their customers.

The C3™ Call Session Controller software, part of Hytera Communications' Call Session Controller line of innovative transformation products, is an intelligent multi-application call server and media server/media gateway control platform that enables a new level of reliability, flexibility, efficiency, and scalability for operators. The C3 is deployed globally in a wide variety of network implementations, following operators to cap-and-grow or replace their legacy infrastructure and provide scalable VoIP in greenfield applications.
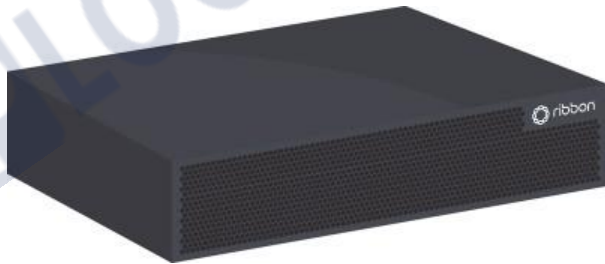
Wireless/Wireline Network Convergence

Armed with an extensive array of protocol and signaling interworking capabilities, the C3 is a versatile platform that provides service convergence and feature transparency across a wide range of wireless and wireline, TDM and IP, and core and access networks. Solutions supported by the C3 include IPX, Peering, MGCF, MRFC, Gateway MSC, Intra-Network Interconnect, and IP Transcoding and Media Adaptation.

Extensive Feature Sets

The C3 enables robust services for the most demanding service environments including comprehensive routing, translations, screening, database interface (e.g., LCR, toll free, prepaid), media gateway control, and protocol interworking. A commonlyused set of regulatory functions are also supported including Lawful Intercept, Number Portability, and emergency services.

Transcoding/Media Resource Processing

Working in conjunction with G9 Converged Gateway, the C3 is a media resource controller/IMS MRFC that enables direct IP to IP transcoding between networks. Its extensive wireless and wireline codec support and SIP interfaces enable the C3 to be a centralized transcoding control platform for all networks, physically separating or decoupling media resource control from the media processing elements. This centralization allows transcoding resources to be efficiently sized and scaled according to network needs.

Open Architecture/Standard Interfaces

The C3 provides open, standard access and trunking interfaces for signaling, management, and line equipment/CPE, including SIP, SIP-I, SIP-T, H.323, H.248, PRI, SIGTRAN, CAS/R2, SS7/C7, BICC, IS-41 and AIN/IN, as well as a wide variety of countryspecific variants. This allows it to be an efficient, standardsbased element that provides protocol normalization, signaling interworking, call control, and features. The C3 provides standard interfaces to IMS cores for media processing control as the Media Gateway Control Function (MGCF) and Media Resource Function Controller (MRFC).

C3 Call Session Controller

Integrated Features

The C3 integrates media gateway and media server control, service logic, billing, regulatory, signaling, service creation, and element management within a common, scalable software and hardware environment, reducing the need to deploy costly additional platforms. Its protocol-independent signaling and media control functions manage the interworking between IP to IP, IP to TDM, and TDM to TDM protocols, independent of incoming and outgoing facilities and signaling types. The C3 also provides a flexible service creation environment that can be used by operators for advanced service development. The platform uses open interfaces to support application servers and SCP systems via both AIN and SIP to enable other revenue-generating network services. An easy-to-use, integrated CDR and IPDR collector is provided by the C3, allowing call detail records to be generated in both standard and user-definable formats.

High Capacity, Scalability, and Geo-Redundancy

Network-proven worldwide, the C3 supports millions of Busy Hour Call Attempts (BHCA). The highly-scalable C3 operates in small to large configurations. Operators can grow capacity as needed by simply adding pairs of C3 nodes to a deployed system, provisioning call processing and signaling across the complete C3 system for cost-effective network deployments. The C3 can be deployed in geo-redundant configurations to ensure best-in-class reliability and service continuity.

Performance and Chassis Characteristics

- Intel based – 14 Core, 2.3 GHz processors
- Up to 1.5M BHCA per server pair
- Up to 24M BHCA per system
- Up to 16 server pairs per system
- 2U-Rack Mount Server (RMS)
- 48Vdc, 100-127/200-240 V 50/60 Hz
- Power Consumption - 155 watts per C3 server

Management: Hytera C3 EMS

- OSMINE Certified
- Full FCAPS functionality
- User-friendly GUI and CLI, SSHV2
- Multi-node management
- Northbound interface: SNMP, CLI, TCP/IP, Telnet, FTP
- Supports any configuration – TDM, ATM or IP (IPDR, SDR)
- Highly Scalable – support of up to 100 clients
- Client is platform-agnostic
- No standalone server platform required

Features

- Enhanced load distribution system that allows operators to expand capacity incrementally as the network grows
- Integrated media gateway controller/MGCF, media resource controller/MRFC, signaling gateway, application server, billing server and element management system
- Advanced transit and routing services enabling replacement or augmentation of legacy TDM Class 4 infrastructures
- International gateway and VoIP termination support
- Proven, carrier-grade reliability on a fully redundant architecture with no single point of failure
- Geographic redundancy
- Industry standard servers reduce inventory requirements and associated management and sparing costs
- Service development and management available via on-board service creation environment, INAP and AIN triggers and SIP
- Green Technology providing significant space, cooling and power cost reductions
- Trunking and signaling protocols include SIP, SIP-T, SIP-I, H.248, MEGACO, BICC, PRI, H.323, GR-317, GR-394, GR-444, CAS/R2, T.140
- Supports multiple SS7 protocols including ANSI, ITU, ETSI and multiple national C7 protocols, for ISUP and TCAP
- Extensive performance monitoring and network diagnostics
- Supports variable CDR for any-to-any billing format conversion as well as AMA-BAF