

Avaya Integral Enterprise MG 1000 Media Gateway

Integral Enterprise MG 1000 Media Gateway is the heart of solutions for intelligent Communications. Applicable for medium and large Enterprise Companies, Integral Enterprise MG 1000 Media Gateway combines excellent quality, highest level of accessibility with mobility and flexibility. Due to the possibility of mixed configurations of interfaces like analogue, digital, IP and DECT the MG 1000 is the best solution for your intelligent enterprise communication.

Product details

MG 1000 Media Gateway is built in 19 Inch technology and fits easily in every IT environment. The compatibility to MG 100 Media Gateway which is designed for branch offices and small subsidiaries guarantees highest flexibility and functionality.

Using the MG 1000 Media Gateway even the TC systems of other manufacturers can be linked into the Avaya network using the internet protocol. This brings the entry into converged IP communications without high investment.



Main functions of MG1000

Optimum and flexible providing of conventional interfaces

Due to the combined IP- and TDM-architecture, even classic interfaces are available and can be used cost-effectively without any restrictions.

Functions for high availability

The modular system concept enables a very high availability of the MG 1000 Media Gateway already in its basic configuration. For additional secure operation the central components and processing units can be installed redundant.

Quality of Service (QoS)

Layer 2 and Layer 3 priority. Embedded RTCP inspection for the central QoS-monitoring. WAN inspection with configurable threshold values and alternative routing.

Enhanced Security

Hardened Linux operating system, AES128/SRTP, TLS-encryption, SSL, SNMP-v3-support

Features and benefits

Supporting the business continuity

Optimized support for all requirements from analogue, through ISDN and DECT up to VoIP. Easy integration into data network. Ideal solution for different requirement for your enterprise communications.

Innovative and compact system concept

With its 19" construction, the MG 1000 Media Gateway fits easily into each and any IT and Office environment. Due to the integrated security concept there are no additional costs for external components.

Open standards to protect your investment

MG1000 has been developed based on open standards, for example the Session Initiation Protocol (SIP) or the Media Server with its Linux operating system, based on standard PC-architecture.

Seamless integration into Avaya portfolio

Either common telephone sets or applications like Avaya easy Management (AeM) or OSPC (PC based operator set), MG1 000 can be combined with other Avaya communication solutions very easy. SIP-Protocol is in most cases the base for all these solutions.

Integration of mobility solutions

There are many features available for an easy mobility solution within a branch office, beginning with DECT and network wide roaming over GSM integration up to Softphone for teleworker.

Scalable platform with a high capacity provides safety of the investment

The flexible capability of MG 1000 makes the adjustment to the requirements of a branch offices very easy. The Media Gateway has eight slots for media modules to realize different user interfaces and network access. Two additional slots are available for central components and controlling functions. The components for power supply are separate plug-in modules and can be installed redundant for a higher availability of the system. The modular system concept makes it possible to expand the base system by using additional MG 1000 Media Gateways. This allows to build complex communication networks and stand alone systems with thousands of end user points. One MG 1000 central processing unit can address up to three additional MG 1000. These will be connected via a standard patch cable to the basic MG 1000 and can be placed in several floors in a building. The maximum distance

between the distributed MG 1000 and the basic unit can be up to 30 meters.

Twin Module Configuration – For bigger systems (more than 1000 Ports) or for installing on two different locations, two modules each consisting of up to 4 MG 1000 can be connected to a so called Twin-Configuration over optical fibers.

Multi-Module Configuration – For more than 2000 voice and data channels, an additional Inter Connection Server (ICS) is used to connect up to 16 modules to a unique system. Each of the 16 modules can consist of up to 4 MG 1000. The distance between the modules and the ICS can be up to 15 km (approx. 10 miles) and the connection will be made by fiber optics.

Expanded security for safety of confidential data

MG 1000 as well as other Avaya Media Gateways has embedded encryption functionality of media streams and signaling information over the IP network to avoid possible attacks. Management interfaces are realized by using of secure protocols like SSL which allows the administrator to configure and manage MG1000 securely. Due to the integrated security concept no additional costs and external components are necessary.

Technical Data

Maximum extensions (Multi-Module)

- 15.000 VoIP users
- 30.000 ISDN users
- 30.000 analogue users
- 5.000 DECT-Handsets

Network Interfaces

- T₂ (DSS1), T₀ (DSS1)

User interfaces

- S₀, Upn, Uk0. analogue, VoIP
- Protocols: different protocols flexible configurable

Tie lines

- T₀, T₂, VoIP
- Protocols: QSIG, QSIG+, TNET, 1TR6, DSS1

VoIP

- Media: RTP, RTCP, T.38, RFC2833
- Codecs: G.711, G.729a
- QoS: Layer 2, Layer 3 (TOS)
- Signaling: H.323/H.450.1-H.450.4, SIP (RFC3261), QSIG+ Tunneling
- Encryption: Signaling and Media with AES-128, SRTP and TLS, depending on endpoint.

Media module slots

- 8 Slots for media modules each up to 32 interfaces
- 2 Slots for central components controlling functions (e.g. Media-Server)
- 2 Slots for power supply

Media modules

- DT22: T1/E1-Media module with 1 interface
- DUPN: Media module with 32 interfaces for Upn- User (2B+D)
- DUP03: Media module with 16 Interfaces for Upn- User (2B+D)
- DS02 Media module with 16 Interfaces for S₀-User (2B+D)
- DECT22: Media module for connection of 8 DECT Radio Base Stations
- ASC21: Media module for connection of 32 analogue users
- ATA: Media module with 8 Interfaces for analogue trunk or tie lines
- IPMR: Media module with up to 750 VoIP channels for users or 192 IP trunks

Additional media modules with different interfaces are available for special applications.

Dimension/Weight

- Dimension (HxWxL): 400 mm (9 HU)x485 mmx418 mm
- Weight empty: 16.6 kg
- Weight fully configured incl. one power supply PSL: 22.9 kg

Power supply

- Mains Voltage: 230V AC ± 10%, 50 Hz - 6% + 26%
- Maximum power consumption: 325 VA
- Circuit fuses: 16A, type C, slow acting

Environment data

- Operation: - 5°C up to + 45°C (DIN ETS 300 019 Kl.3.2), relatively humidity 5 up to 95 %
- Transport: - 25°C up to + 70°C (DIN ETS 300 019 Kl.2.2)
- Air condition: not necessary
- Noise level (noise level 1 m distance acc. to EN ISO 3744): <39 dB(A)

Phone compatibility

- Avaya-IP-Phones of Series T3 and Avaya one-X™ Desk phone Edition (96xx)
- Avaya one-X™ Desktop Edition (SIP-Softphone)
- Avaya digital Phones of Series T1 and T3, Operator set OS33
- Avaya DECT Phones D3, FC1 mobile
- Analogue Phones from Avaya or other vendors

Requirements

For MG 1000 Media Gateway the Software-release Avaya Integral Enterprise Edition (IEE) Version 4 or higher is necessary. System management will be done by Avaya easy Management (AeM).

Further information

Further information how Avaya Integral Enterprise MG 1000 Media Gateway can support your business processes is available from your Avaya salesman, from the authorized Business Partner, or visit us under www.avaya.com

Reliability – Single-Module-Configuration

	MTBF (Year)	Availability (%)	Downtime p. a.
Standard configuration	34	99,9993	3,5 min
With redundant power supply	59	99,9996	2 min
Redundant power supply and redundant central functions	47	99,9998	< 1 min

Reliability – Twin-/Multi-Module-Konfigurariön*

	MTBF (Year)	Availability (%)	Downtime p. a.
Standard configuration	2 548 151	99,9999	< 1 s
With redundant power supply	7 724 300	99,9999	< 1 s
Redundant power supply and redundant central functions	47 176 407	99,9999	< 1 s

* Total system failure is considered. Total failure means that none of the functions in the entire system can be used. This corresponds with a failure of all subscribers. In all of the values stated herein, the power supply devices were also taken into consideration. However, the failure of power supply devices is less frequent than the failure of mains voltage due to the power plant. If UPS (uninterruptable power supply) is not used, this will lead to a total system failure in both cases. This must be taken in mind during the use of the values.

Traffic handling capacity

	Dynamic	Static
Single Module	20000 BHCA	Non blocking (1 Erlang/B-Channel)
Twin Module	40000 BHCA	Non blocking (1 Erlang/B-Channel)
Multi Module	60000 – 750000 BHCA upon configuration	0,88 Erlang with only digital interfaces and 50% module internal and 50% module external traffic

About Avaya

Avaya is a global leader in enterprise communications systems. The company provides unified communications, contact centers, and related services directly and through its channel partners to leading businesses and organizations around the world. Enterprises of all sizes depend on Avaya for state-of-the-art communications that improve efficiency, collaboration, customer service and competitiveness. For more information please visit www.avaya.com.



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