

Alcatel-Lucent 7540 WMG Wireless Media Gateway

The Alcatel-Lucent 7540 Wireless Media Gateway (WMG) forms an integral part of Alcatel-Lucent's Mobile NGN solution, delivering a dramatically simplified architecture and seamless evolution to an IP Multimedia Subsystem (IMS). A high density, multi-service media gateway with voice and data bearer interfaces (TDM, IP, ATM), the 7540 WMG is capable of performing any-to-any switching including native TDM-TDM, native Packet-Packet, and TDM-Packet.

Features

- Purpose-built, high capacity, multi-fabric media gateway for mobile service providers
- Innovative gateway technology with integrated media server.
- Support for multiple interfaces (ATM/TDM/IP)
- Extensive set of GSM/UMTS UMA and IMS features, codecs, and interfaces -- including IPBCP, DTMF, Conferencing, Tones, Announcements, TFO and TrFO, and Voice Quality Enhancements (VQE)
- Integrated system management with Alcatel-Lucent's Mobile NGN 5060 Wireless Call Server

Benefits

- Modular, distributed architecture for reduced CAPEX, shortened time to market, and efficient rollouts
- Integrated features for fewer network elements and simplified network management
- Seamless migration from 2G to 3G and IMS
- Media optimization and transcoder-free capabilities to ensure the highest voice quality
- Ease of integration into existing networks



Technical Specifications

Protocol Support

Wireless Networks

- TDM
- ATM
- IP

Capacity (two 7540s/rack)

- from 60 E1 to 1560 E1
- from 60 T1 to 1560 T1
- from 6 DS3 to 144 DS3
- from 4 OC3 to 48 OC3
- from 4 STM-1 to 48 STM-1
- IP: 8:8 Gigabit Ethernet
- ATM: 64 + 64 OC3c/STM1c

Network Attachment Compliance

- ITU-T G.703
- ITU-T G.707
- ITU-T G.813
- ITU-T G.823
- ITU-T G.825
- ITU-T G.957

Voice Codecs

GSM

- G.711
- GSM EFR
- GSM HR
- GSM FR
- AMR_FR
- AMR_HR

UMTS/UMA

- Iu AMR2: 12.2 kbps (multi-rates in future release)
- Nb AMR : single rate
- AMR2 WB : (future release)
- Dynamic Adaptive Multi-rate (future release)

3GPP Packet Backbone

- AMR2
- EFR
- G.711 : (5ms - Nb Framing)

VoIP Packet Backbone

- G.711: (20ms)
- G.729 : (future release)

PSTN

- G.711

IMS

- G.711 with 2833 encapsulation

Physical Chassis Dimensions

- Height: 26.25 in. (66.7 cm)
- Width: 22.4 in. (56.9 cm)
- Depth: 29.0 in. (73.4 cm)

Power

- Input Voltage: -40 to -60 VDC
- Input Current: 65A, dual feeds
- Power Consumption: 3,000 Watts

Environmental Conditions

Category	Comment
Operating temperature	5 C to 40 C (41 F to 104 F)
Electromagnetic compatibility (EMC)	<ul style="list-style-type: none">• EN 300 386: Telecommunication Network Equipment, EMC requirements• EC 61000-4: Testing and measurement techniques• IEC 61000-4-2: Electrostatic discharge• IEC 61000-4-3: Radiated, radio-frequency, electromagnetic field• IEC 61000-4-4: Electrical fast transient/burst• IEC 61000-4-5: Surge immunity• IEC 61000 4-6: Immunity to conducted disturbances, induced by radio-frequency fields
Safety	<ul style="list-style-type: none">• Can/CSA-C22.2 No. 60950
Power and grounding requirements	<ul style="list-style-type: none">• Telcordia GR-1089-CORE, Section 9 Bonding and Grounding• SBC Standard TP76200MP, May 2001 - Grounding and DC Power Test Report Section 5, 7 and 8.04 and 8.05
Climatic and mechanical	<ul style="list-style-type: none">• Telcordia GR-63-CORE, Section 4.1.1 Transportation and Storage Environmental Criteria• Telcordia GR-63-CORE, Sections 4.1.2 Operating Temperature and Humidity and 4.1.3 Altitude
Fire resistance	Telcordia GR-63-CORE, Section 4.2
Seismic	Telcordia GR-63-CORE, Section 4.4
Acoustics	Telcordia GR-63-CORE, Section 4.6

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