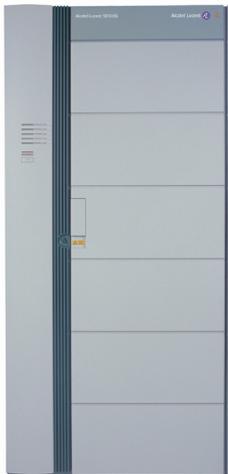


# Alcatel-Lucent 5070 SSG

## SIGNALING SERVER GLOBAL

The Alcatel-Lucent 5070 Signaling Server Global (SSG) is a powerful platform that combines traditional Signaling Transfer Point (STP) services with advanced Signaling Gateway (SG) functionality. It serves as a critical network element for wireless and wireline networks that are transitioning from TDM to IP/IP Multimedia Subsystem (IMS) architectures. This product provides advanced routing, signaling and call processing applications along with increased levels of connectivity, capacity, reliability and expandability, making it a true workhorse in evolving service-provider networks.



With the latest technology, proven reliability and a robust set of applications, the 5070 SSG allows service providers to expand their existing TDM signaling networks while taking advantage of next generation Voice over Internet Protocol (VoIP) features and capabilities. The 5070 SSG hosts advanced applications, via flexible routing, such as Local Number Portability (LNP), Mobile Number Portability (MNP), Application Location Register (ALR) routing, Transactions Capabilities Application Part (TCAP) Screening, Mobile Application Part (MAP) Screening, Equipment Identity Register, Massive Call Defense, Call Type Blocking and ANSI-ETSI/ITU Interworking.

### Features

- Highly flexible, scalable architecture supporting hundreds of links and several applications in a single frame
- Specialized signaling security applications to protect the service provider's network from the latest threats and attacks

- Support for high-speed SS7/IP, ATM over T1/E1, and unchannelized E1 links, and low-speed channelized T1/E1 and DS0-A links
- Duplex (active/ hot standby) link processor for channelized T1/E1
- Signaling Transport (SIGTRAN) adaptation protocols (M2PA, M3UA) supporting SS7 over IP
- Integrated intelligent routing applications such as LNP, MNP and ALR

### Benefits

- Support for TDM PSTN interfaces and bandwidth needs on a proven, highly reliable platform
- Support for next-generation signaling gateway functions for VoIP support and interworking into IMS networks
- Flexible and scalable integrated applications for optimizing network designs
- Proven field performance and 99.9999 percent availability

## Technical specifications

### Capacity

- Maximum of 6,144 links
  - Up to 6,144 Channelized T1/E1 links
  - Up to 256 Unchannelized E1 links
  - Up to 640 ATM/T1 links
  - Up to 256 ATM/E1 links
  - Up to 800 IP links
- Up to 800 SS7 over IP associations
- 500 million-entry database capacity for LNP, MNP and ALR
- 32 logical networks
- 32 own (alias) point codes per logical network
- 600 link sets
- 600 route sets
- 8,000 routes
- 500,000 global title translation definitions

### Signaling transfer point

- SS7 signaling per ANSI/ ITU-T and ETSI, SIGTRAN and Telcordia standards
- Gateway Screening
- Message Transfer Part (MTP) and Signaling Connection Control Part (SCCP) Origin Based Routing
- Global Title Translation
- NRC SNS recommendations
- Multiple originating point codes
- Point Code mapping
- ANSI/ITU-T interworking
- Integrated SS7 link monitoring with ILM+ interface

### SIGTRAN protocols

- SCTP: RFC 2960, 3309
- M2PA: RFC 4165
- M3UA: RFC 4666
- SUA: RFC 3868\*

### Signaling applications

- Number Portability
  - Local Number Portability
  - Mobile Number Portability
  - LNP with EDR number pooling (ANSI)
- TCAP Screening
- MAP Screening
- ALR routing
- Triggerless/Triggered Call Type Blocking
- Triggerless/Triggered Massive Call Defense
- Equipment ID Register (EIR)
- MTP/SCCP/SMS Accounting
- SS7 defense
- SIP to TCAP – LNP, CNAM, Toll-free (ANSI)
- SIP to TCAP – MNP\* (ETSI)

### Operations

- Web browser graphical interface
- Emergency access via dial-up, serial ports
- Online provisioning
- Split mode operation for software upgrades
- Integration into higher management systems
- Simple Network Management Protocol (SNMP) alarm interface
- Integrated link monitoring (ILM+)
- Logging channel (#2 SCCS)
- Telcordia Signaling Network Activation Manager interface
- Telcordia Network Performance Monitor interface
- Telcordia CMISE LSMS Number Portability interface
- Backup / Restore interface to network
- Electronic software delivery

### Network management

- Alcatel-Lucent 1300 CMC for management controls of all 5070 SSGs in the signaling network
- Service provisioning system (Alcatel-Lucent 1300 CMC-SPS) for provisioning of advanced routing services such as NP, ALR and CTB (ETSI)

### Interfaces

- High-speed SS7 links
  - ATM over T1 (1.536 Mb/s)
  - ATM over E1 (2.048 Mb/s)
  - Unchannelized E1 (2.048 Mb/s)
- Low-speed SS7 links
  - Channelized T1 (4 T1 per card, 56 and 64 kb/s)
  - Channelized E1 (4 E1 per card, 64 kb/s)
  - DS0-A (56 kb/s)
- SS7 over IP
  - 100Base-T Ethernet
- User interfaces:
  - Web browser GUI via 10/100Base-T Ethernet
  - Command line interface via RS-232 or RS-449 local or remote workstations

### Physical characteristics

- Link scalability from 1 to 64 per channelized T1/E1 card
- Multiple virtual SS7/IP links per termination
- Duplex (active/ hot standby) link processor for channelized T1/E1
- Up to 264 simplex or 132 duplex (redundant) T1/E1 cards in a single frame (ALF)
- Up to 1,896 simplex or 948 duplex T1/E1 cards in system
- Up to 66 HSL/IP cards in a single Admin Link Frame (ALF) frame
- Up to 474 HSL/IP cards in the system

### Physical specifications

- Frames
  - ALF
  - Up to 3 Link Expansion Frames (LEFs)
- Width: 28.2 in. (97 cm)
- Height: 82.9 in. (210.5 cm)
- Depth: 28.5 in. (72.4 cm)
- Weight (fully loaded)
  - ALF: 1,400 lbs (635 kg)
  - LEF: 1,300 lbs (590 kg)

### Operating environment

- Power requirements: –48 V DC
- Typical power consumption
  - ALF (fully loaded): 3.15 kW
  - LEF (fully loaded): 3.4 kW
- Operating temperature
  - Normal operation: 41°F to 104°F (5°C to 40°C)
  - Short-term operation: 23°F to 122°F (–5°C to +50°C)
- Relative humidity
  - Normal operation: 5% to 85%
  - Short-term operation: 5% to 90%

### Regulatory compliance

- NEBS certified
- CE Mark
- RoHS
- EMC: FCC Part 15, Subpart B, Class A
- Safety: CSA 22.2 950/UL1950, 3rd Edition (60950)

\* Future release

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