VoIP Media Trunk Gateway/E1 to SIP VoIP Gateway

Model number: NC-MG900, NC-MG916 and NC-MG1000



NC-MG900 (1U height) (8E1 ports)



NC-MG916 (2U height) (16E1 ports)



NC-MG1000 (3.5U height) (52E1 ports)

Overview:

What is a VoIP Gateway?

A VoIP gateway allows you to convert between a traditional telephony connection and a modern VoIP connection using SIP.

VoIP Media Trunk Gateway/E1 to SIP VoIP Gateway is digital VoIP gateway converts signaling/voice media between digital TDM connections and VoIP connections, which brings the cost savings of VoIP to your legacy PBX with the powerful combination of Niceuc VoIP Media Gateway. The gateway acts as a bridge connecting the legacy system through a PRI interface to SIP trunks through your existing internet connection. Niceuc Gateways instantly upgrade a legacy phone system, allowing it to use a SIP trunk out to an ITSP; and connects SIP Trunking to reduce long-term telephony costs by replacing traditional phone lines.

Niceuc VoIP media gateway is a cost effective and standards-compliant VoIP Media Trunk Gateway from E1/T1 to Ethernet, which is generally called TG (Trunking Gateway) or SG (Signaling Gateway) or VoIP Voice Gateway, designed for enterprise users and ITSP (Internet Telephony Service Provider) environments.

Three models NC-MG900 / NC-MG916 / NC-MG1000 locate on the interface of PSTN / TDM and IP network, providing signaling transformation between SS7, ISDN PRI, R2/CAS, Q.SIG, V5.2, DPNSS signaling and SIP Protocol, as well as perform the conversion between PSTN / TDM and VoIP SIP.

With modular design, it's easily expandable from 1 to 52 E1/T1 ports.

Application:

- IPCC(IP Call center);
- IP dispatcher;
- Unify communication;
- E1 Trunking port for operators, traditional switch, IP soft switch and for software of IPCC;

Signaling and Protocol:

- Signaling support:

–SS7 (ITU-T Q.700 series), 24 bits/14 bits PC, ISUP/TUP;
–ISDN-PRI (ITU-T Q.931, Q.921);
–V5.2 (ITU-T G.964, G.965)
-R2/CAS
–Q.SIG
–DPNSS

- VoIP protocol support:

-SIP
RFC3326 (Reason header in SIP messages)
RFC3372 (SIGTRAN and SIP-T)
RFC2327 (sdp)
RFC3398 (ISUP-SIP Mapping)
RFC3261 (sip)
RFC5806 (Diversion Indication in SIP)
RFC2833 (DTMF)
RFC3362 (t.38)
RFC 3261(SIP 2.0)
RFC3204 (MIME media types for ISUP and QSIG Objects)
RFC3578 (Mapping of ISUP overlap to SIP)

• Codec:G.711 U-Law and A-Law, G.711 Appendix 1, G.723.1 and G.723.1 Annex A, G.729 Annex A and Annex B, G.726，GSM，ARM, ILBC;

• Echo Cancellation: G.168 128 ms Network Echo Canceller;
• FAX: T30, T38 and pass through;
• Generic Voice Activity Detection (VAD);
• Generic Comfort Noise Generation (CNG);
• Calling control: Called/Calling party number translation; second stage dialing, Auto dialing with DTMF, Ring Back tone, DTMF, Caller ID, and Flexible input/output Gain Control.
• Network Protocol: IP, NAT, ICMP, ARP, HTTP, BOOTP, FTP, TFTP, DHCP, PPPOE, SNMP, Diff-Serv

Capacity:

1U device NC-MG900 has two slots for E1 card, 2U device NC-MG916 has four slots for E1 card, and 3.5U device NC-MG1000 has thirteen slots for E1 card;
All three models use the exactly same E1 card.

Specification of per E1 card:
–One independent IP address;
–1 to 4 E1 / T1 ports;
–2 Ethernet ports (10/100/1000M Base-T) and 1 console ports (RS232);
–128 G.711 Channels;
–64 G.723, G.726, G.729 Channels;
–32 T.38 Fax Channels, 64 Conference Bridge;
-500 SIP Subscribers (it can also work as IP PBX at same time)

Physical Specification:

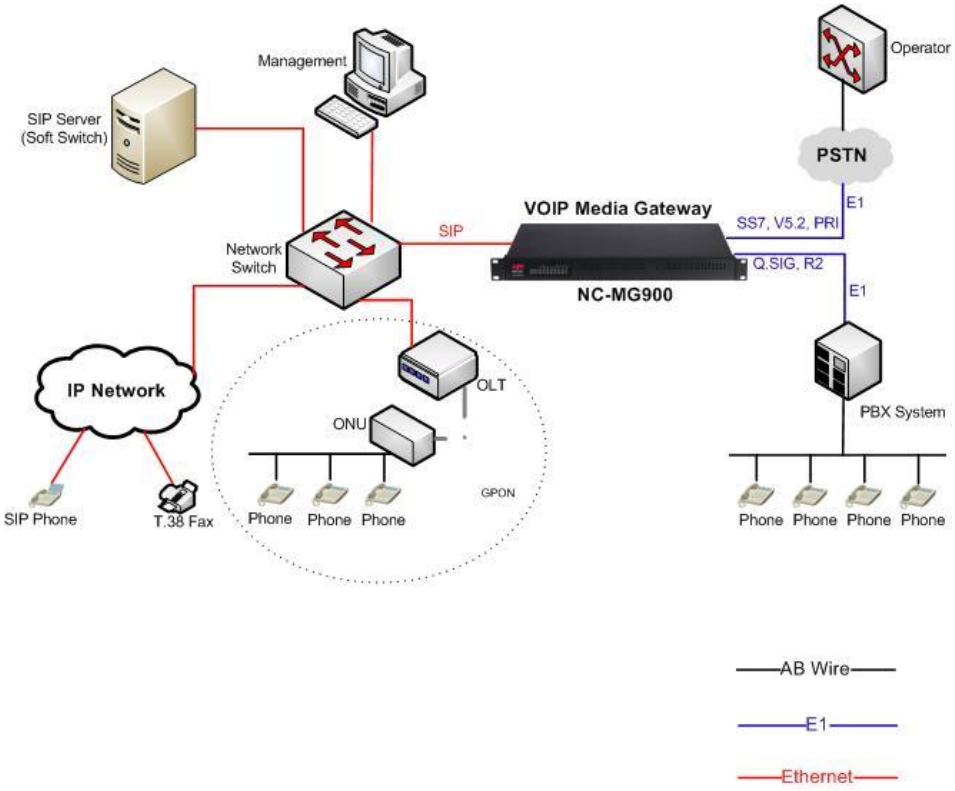
Item	NC-MG900	NC-MG916	NC-MG1000
Slot of PSU	Built-in	Built-in	2
Slot for E1 / T1 card	2	4	13
Qty of E1 / T1 Port	1 to 8	1 to 16	1 to 52
VoIP Channel	32 to 256	32 to 512	32 to 1664
SIP Subscribers [Optional]	0 to 1000	0 to 2000	0 to 240000
SIP Compatibility	CISCO、Siemens、AVAYA、Huawei、ZTE, etc		
Input Voltage	DC -48V or AC 110-240V		DC -48V or AC 110-240V (Redundancy)
Power	30W	80W	150W
Dimension	480mm*286mm*44mm (1U)	488mm*260mm*88mm (2U)	488mm*290mm*160mm (3.5U)
Weight	5KG	5.5KG	8KG
Working Environment	0℃～50℃, Less 80%		
Package Carton Size	560mm*460mm*160mm	600mm*360mm*200mm	600mm*380mm*270mm

NC-MG900 Serial:

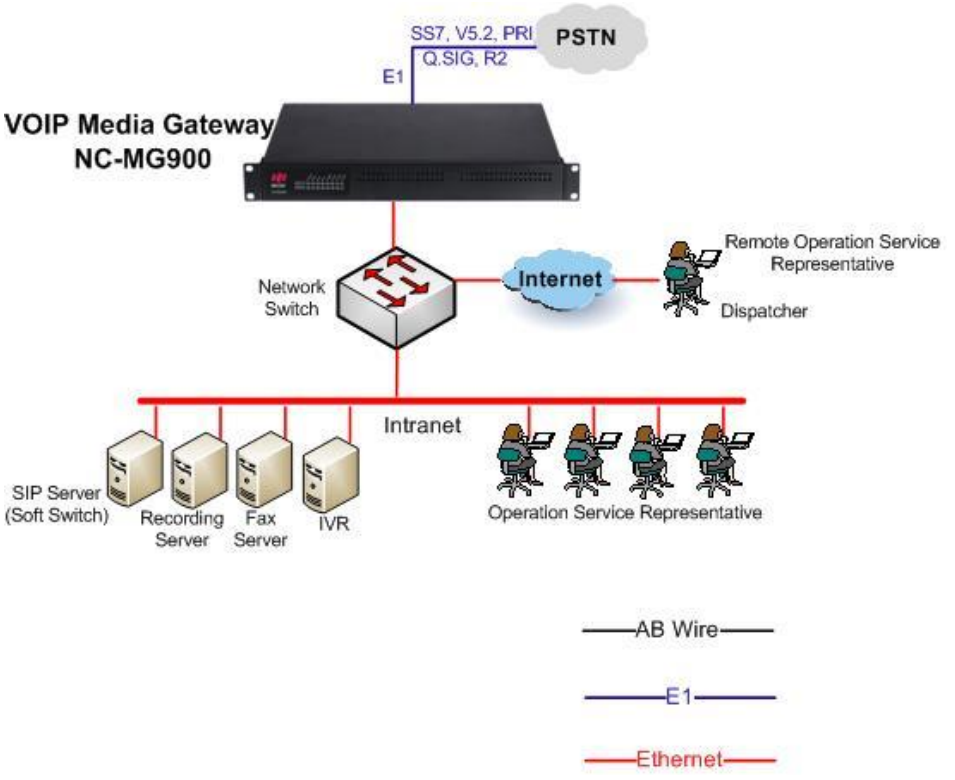
	NC-MG900-101	NC-MG900-102	NC-MG900-104	NC-MG900-204	NC-MG900-208
Qty of E1 / T1 card	1	1	1	2	2
Qty of E1 / T1 Port	1	2	4	4	8

Application Topology:

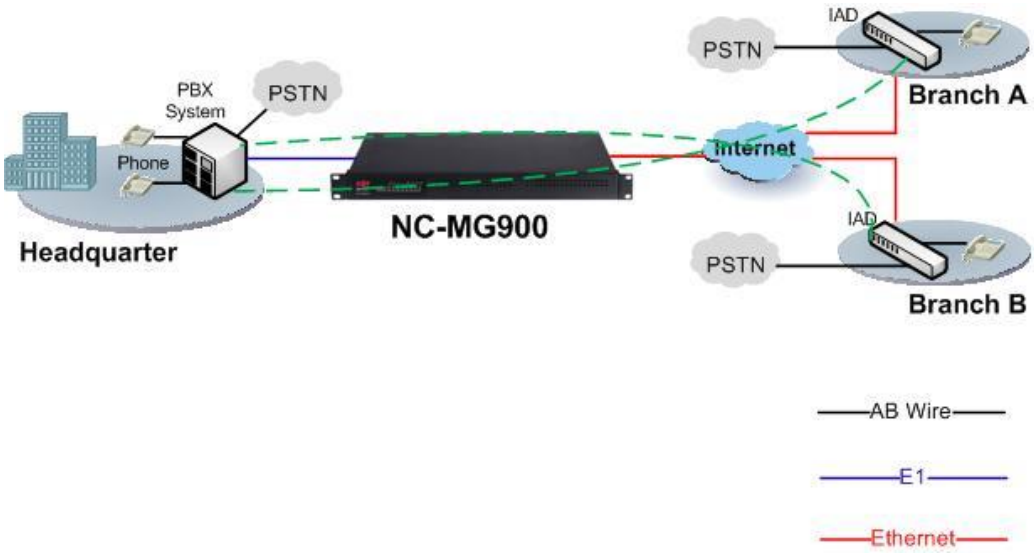
I. Basic VoIP Application (from PSTN to SIP, or from TDM to VoIP)



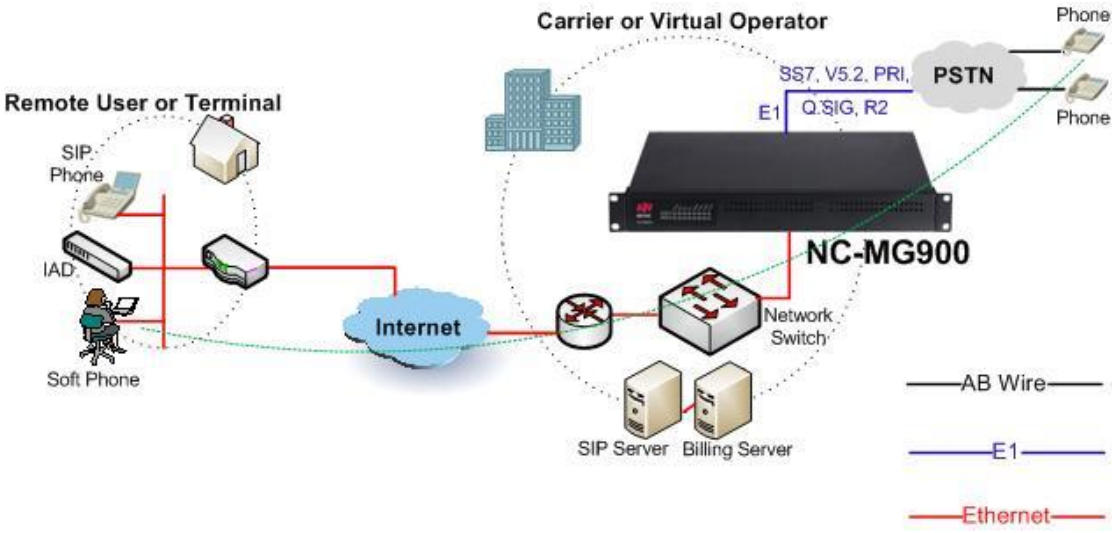
II. IPCC (IP Call Center)



III. Building network for enterprise



IV. ITSP to PSTN (Internet Services Provider to PSTN)



An Example: V5.2 to SIP in operator TATA in India

