



Quick Start Guide

MTG1000

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■ Ports

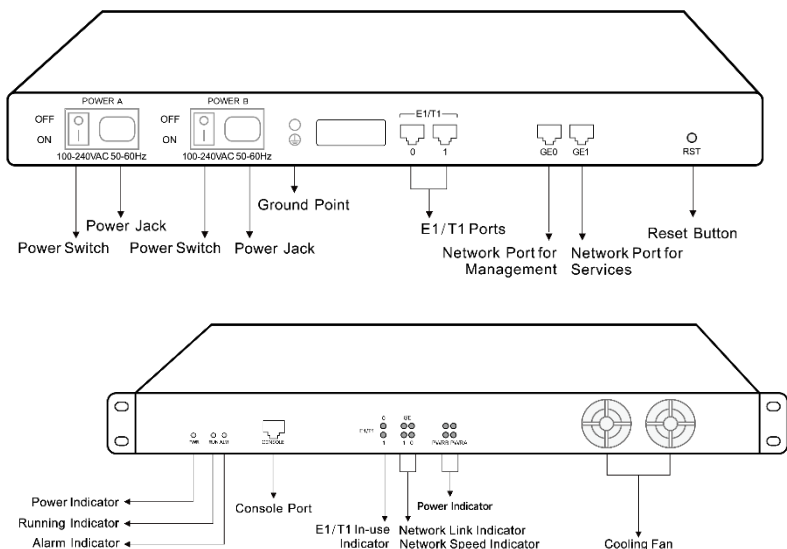
E1/T1 Ports:1/2E1/T1 Ports

■ Description of Indicators

Indicator	Definition	Status	Description
PWR	Power Indicator	On	The gateway is powered on
		Off	The gateway has no power input or power supply is abnormal
RUN	Running Indicator	Slow Flashing	The gateway is running properly
		Off	The gateway is initiated improperly
		Off	The gateway is running improperly
E1/T1	E1/T1 In-use Indicator	On	The E1/T1 port is connected properly
		Off	The E1/T1 port is faulty or not connected
		Flashing	The physical connection of E1/T1 is abnormal or there are error codes in the E1/T1 circuit
GE	Network Link Indicator	Green Flashing	The gateway is properly connected to the network
		Off	The gateway is not connected to the network or the network connection is in an improper way
	Network Speed	On	Work at 1,000Mbps

	Indicator	Off	Network speed lower than 1000Mbps
LINK	MCU Board Link Indicator	On	The DTU board is properly connected to the MCU board
		Off	The DTU board is not or improperly connected to the MCU board, or the DTU board is faulty

■ Indicators and Ports



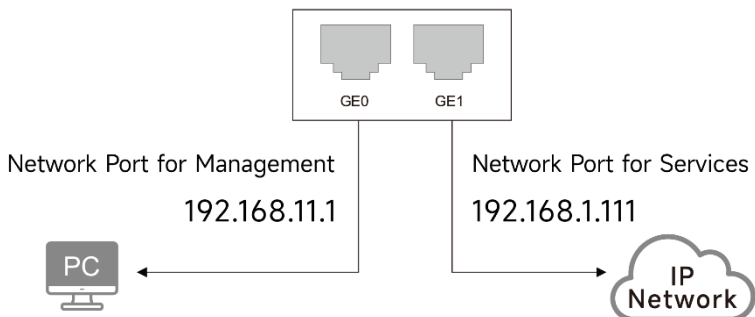
■ Installation Attentions

- (1) Cabinet requirement: ensure the cabinet accommodate MTG1000 is well-ventilated and strong enough to bear the device's weight. It's required that the width of the cabinet be 482.6mm (19 inches)
- (2) ESD protection: please wear an anti-static wrist strap when installing MTG1000
- (3) MTG1000 models accept AC voltage of 100-240V. It's recommended that users use UPS (uninterruptible power system).

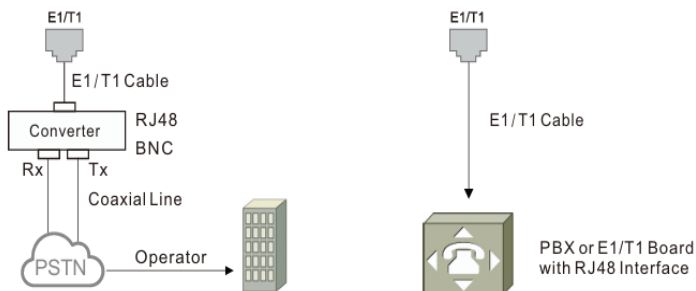
- (4) Device grounding: please ensure the gateway is properly grounded. To avoid interference with the power source, it's recommended that the earth resistance be less than 2Ω ;
- (5) Temperature and humidity: to avoid any accident that might cause malfunction, it's advised to install the gateway in an equipment room where temperature and humidity are appropriate; the equipment room should be clean and ventilated enough to facilitate heat dissipation;
- (6) Anti-jamming: to reduce interference, please keep MTG devices away from high-powered transmitters, radar transmitting stations, and large-current devices.

■ Installation Instructions

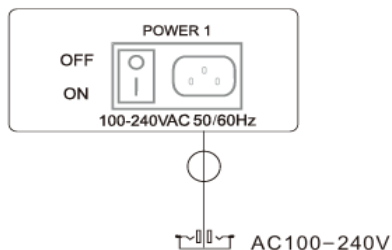
● Connect Gateway with Ethernet



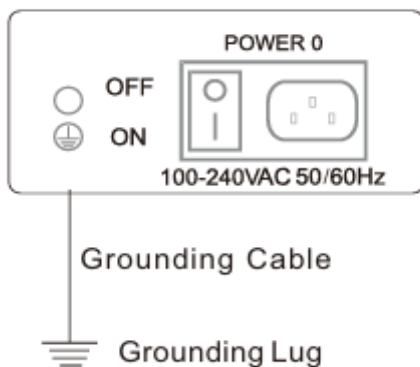
● Connect E1/T1 Port with PSTN/PBX



● **Connect Gateway with Power Input**



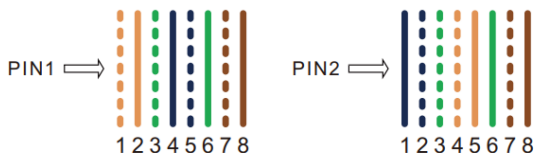
● **Connect Gateway with Grounding Lug**



■ Wire Sequence of RJ48(E1/T1) Cable

The E1/T1 ports of MTG trunk gateway are connected with RJ48 cables.

An RJ48 cable has two PINs, and the wire sequence of each PIN is shown as follows:



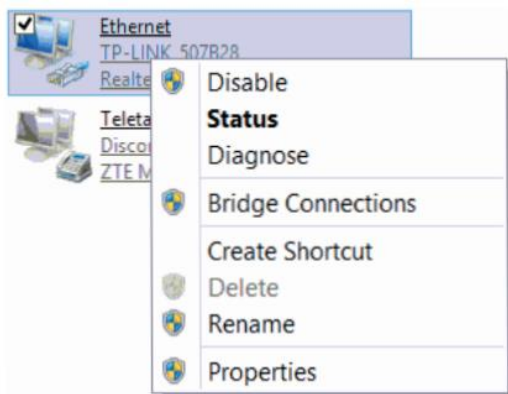
PIN1: orange & white, orange, green & white, blue, blue & white, green, brown & white, brown.

PIN2: blue, blue & white, green & white, orange & white, orange, green, brown & white, brown.

■ Modify PC's IP Address

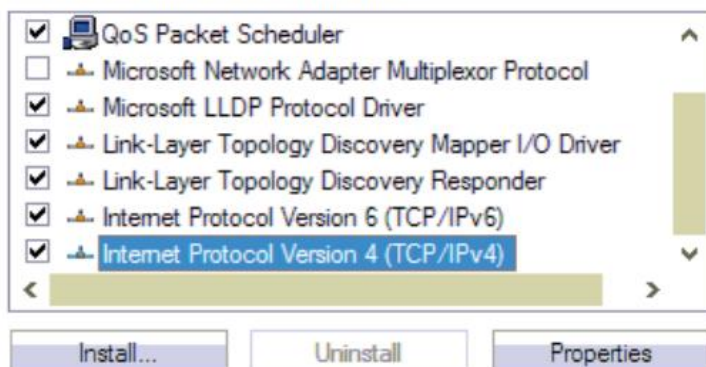
To log in the Web Management System of the gateway, you need to modify the IP address of PC first to make it at the same network segment with the gateway.

(1) On the PC, click '**Network (or Ethernet) → Properties**'.

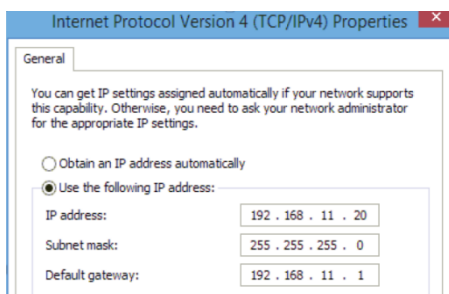


- (2) Double-click **'Internet Protocol Version 4 (TCP/IPv4)'**.

This connection uses the following items:



- (3) Select **'Use the following IP address'**, and then enter an available IP address '192.168.11.XXX' which is at the same network segment with '192.168.11.1'.



■ Log in Web Management System

Open a web browser and enter the IP address of GE0 which is connected to the PC (default IP is <https://192.168.11.1>).

Then, input username and password in the displayed login GUI. The default username and password are admin/admin@123#

■ Modify IP Address of Network Port for Services

After logging in to the trunk gateway, the user needs to modify the IP address of the network port for services. If there's a public static IP address, please configure the IP address of the network port into this static IP address. If the SIP server is connected to a private network, the network port for services should be in the same network segment as the SIP server. After that, please restart the gateway for the configurations to take effect.

■ Configure PRI/SS7 Trunk

● Configure PRI Trunk

On the PRI Config -> PRI Trunk interface, add a PRI trunk. The 'Channel ID' of the PRI trunk should be the same as that of the peer switch.

As for the 'Switch Side' parameter, if the peer switch is configured as 'User Side', the PRI trunk should be configured as 'Network Side'; If the peer switch is configured as 'Network Side', the PRI trunk should be configured as 'User Side'.

PRI Trunk Add

Trunk No.	0
Trunk Name	
Channel ID	
D-Channel	Enable
E1/T1 Port No.	0
Protocol	ISDN
Switch Side	User Side
Alerting Indication	ALERTING
Advanced Settings	☐ Enable

OK

Reset

Cancel

● Configure SS7 Trunk

(1) On the SS7 Config -> SS7 Trunk interface, add an SS7 trunk.

Please consult the local service provider about the information on Protocol Type (TUP/ISUP), OPC, and DPC.

SS7 Trunk Add

Select Trunk No.	0
Trunk Name	
Protocol	ITU
Protocol Type	ISUP
SPC Format	Hex
OPC	
DPC	
Support APC	Disable
Network Indicator	National Network
Sending SLTM	Enable
Link Set No.	None
Enable Trunk	Yes

(2) On the SS7 Config -> SS7 MTP Link interface, add an SS7 signaling link for the trunk.

Please Consult local service provider about 'E1/T1 Port No.' , 'Channel No.' of the SS7 signaling link, as well as 'Caller Type' .

SS7 MTP Link Add

No.	0
Trunk No.	
Link No.	0
Signaling Link Code	
E1/T1 Port No.	0
Channel No.	16
Caller Type	Not Configured
Callee Type	Not Configured
OrgCallee Type	Not Configured
Numbering Plan	ISDN
Calling Presentation	Allowed
Screening indicator	User Provided
Called Stop sending	Disable
Calling Stop sending	Disable
Transmission Medium Requirement	Speech
Link Mode	Default
Binding Slave TG	None
Enable MTP Link	Yes

NOTES: Each SS7 trunk could add maximum 8 items with different 'Link No.'.

(3) On the SS7 Config -> SS7 CIC interface, add an SS7 circuit for the SS7 trunk. Generally, an E1 port contains 32 channels, while a T1 port has 24 channels. Please consult local service providers about the 'Start CIC No.' .

SS7 Circuit Add	
Trunk No.	
Start E1/T1 port No.	0
End E1/T1 port No.	0
Start Channel	0
Start CIC No.	
Count	32

OK Reset Cancel

NOTES: 1. When option 'ITU' or 'ITU-CHINA' has been selected in 'Protocol' of sub-menu SS7 Trunk, the 'Start CIC No.' must be less than 4096.
 2. When option 'ANSI' has been selected in 'Protocol' of sub-menu SS7 Trunk, the 'Start CIC No.' must be less than 16384.
 3. When batch add, "Start Channel" is automatically set to 0, "Count" is automatically set to 32, "Start CIC No." corresponds to the timeslot 0 of Start port No..
 4. Reference value of Start CIC No.:
 0,32,64,96,128,160,192,224,256,288,320,352,384,416,448,480,512,544,576,608,640,672,704,736,768,800,...

■ Configure E1/T1 Frame Mode

On the PSTN Group Config -> E1/T1 Parameter interface, modify the frame mode of the E1/T1 port to make it the same as that of the peer device.

E1/T1 Parameter Modify	
Start E1/T1	Port 0
End E1/T1	Port 0
Work Mode	E1
PCM Mode	A LAW
Frame Format	DF
Line Code	HDB3
Line Built Out	Short Haul(-10 DB)

■ Configure SIP Trunk

On the SIP Config -> SIP Trunk interface, the user needs to fill in the IP address of the peer device (remote address) and remote port. Other parameters can be retained as default settings

SIP Trunk Add	
Trunk No.	0
BI	GE1
IP	IPv4
Trunk Name	
Remote Address	
Protocol Type	UDP
Remote Port(UDP)	5060
Remote Port(TCP/TLS)	5060
Outbound Proxy	
Outbound Proxy Protocol Type	UDP
Outbound Proxy Port(UDP)	5060
Outbound Proxy Port(TCP/TLS)	5060
From Header	Local Domain
PPID	Disable
Local Domain	Disable
Support SIP-T	Disable
Get Callee from	Request-line
Get Caller from	User Name
Register to Remote	No
Incoming SIP Authentication Type	IP Address
Rport	Disable
Dynamic Nat	Disable
Static Nat	Disable
Outgoing Calls Restriction	No
Incoming Calls Restriction	No
Incoming Time Restriction	Disable
Heartbeat Bound	Disable
Detect Trunk Status	No
Heartbeat Username	heartbeat
Enable SIP Trunk	Yes
Early Alerting	Disable
No Prack for Incoming Call	Disable
User to User(callee/caller)	Disable
Request Add Port	Disable
OPTIONS Only Detects 200OK	Disable
Passthrough Sip Error Code	Disable
Heartbeat Bound PSTN Group	Disable
From Display Name	Enable

OK Reset Cancel

NOTE: The "Remote Address", "Remote Port"(UDP/TCL/TLS) cannot be the same in different SIP trunks.

■ Configure Inbound & Outbound Routes

(1) Configure Inbound Route

On the Call Routing -> PSTN->IP Routing interface, add an inbound route. Select a source trunk and a destination trunk that have been created. If ' ' is filled in for Caller Prefix and Callee Prefix, it means any number can be the caller number and callee number of this inbound route.

Route PSTN->IP Add

Index	510
Description	incoming call
Source Type	Trunk
PSTN Trunk	2 <REPBX>
Callee Prefix	.
Caller Prefix	.
Destination Type	Trunk
Trunk Type	SIP
IP Trunk No.	2 <IPPBX>
Number Filter Profile ID	255 <None>

(2) Configure Outbound Route

On the Call Routing -> IP>PSTN Routing interface, add an outbound route. Select a source trunk and a destination trunk that have been created. If '.' is filled in for Caller Prefix and Callee Prefix, it means any number can be the caller number and callee number of this outbound route.

IP->PSTN Routing Add

Index	510
Description	outgoing call
Source Type	Trunk
Trunk Type	SIP
IP Trunk No.	2 <IPPBX>
Callee Prefix	.
Caller Prefix	.
Destination Type	Trunk
PSTN Trunk	2 <REPBX>
Filter Profile ID	255 <None>

More Details

This document only provides instructions for quick installation and basic configuration, For detailed configuration and parameter explanation, please refer to the user manual or ask for online technical support.

■ Troubleshooting

● What if the E1/T1 indicator is still dull after the corresponding E1/T1 port has been connected to an E1/T1 cable?

- (1) In case the E1/T1 port is directly connected to a peer device with a standard RJ48C E1/T1 cable, please check whether the peer device is equipped with a standard RJ48C interface first, and then check whether the wire sequence of E1/T1 cable is correct or not.
- (2) In case the E1/T1 port is connected to a switch with E1/T1 cable and coaxial line, please check whether the connector of the BNC transit box works well or not, and then check whether the RX end and TX end are connected properly.
- (3) Exchange the E1/T1 cable with another one that works normally, to confirm whether the E1/T1 port malfunctions.

● What if E1/T1 indicator flashes after the corresponding E1/T1 port has been connected to an E1/T1 cable?

- (1) Log into the web management system to modify the frame mode of the E1/T1 port. If the E1/T1 indicator still flashes, it means there are error codes in the physical link.
- (2) Please contact the service provider to check this problem.

● Forget the IP address of the trunk gateway.

Connect the trunk gateway' s console port to a PC via an RS232 serial cable. After the command interface is displayed, input 'show int' under the 'ROS#' mode to query the current IP address of the gateway.

● Forget username and password.

Connect the trunk gateway' s console port to a PC via an RS232 serial cable, and then ask for online technical support.