

IP Phone Troubleshooting Guide

- 1. This document outlines troubleshooting steps for issues with AltiGen's IP phones (IP600, IP705, IP710, IP720). Please read this entire document carefully; if technical assistance is still required, please contact AltiGen's Technical Support Operations and provide details on what steps you've taken to try to isolate the issue.

First, check the seven items below to rule out the most common issues.

Is the IP Phone firmware current? Verify all firewalls and other network hardware are configured to allow traffic to/from the phone/MAXCS server on the appropriate ports. A port list can be found here. Note that you will need to check the network hardware in front of the MAXCS system and network hardware in front of the phone(s). Make sure to check the Windows firewall or any other software firewalls. Also make sure that any devices with SIP application layer gateway (ALG) functionality have that functionality disabled. You can ping the IP phone from the MAXCS server. Generally, this should always work on the LAN, but may fail across the WAN. Make sure the server has at least one unused station license, and check to confirm the number of SIP extension channels is sufficient. In MaxAdmin, double-click on the SIPSP board in board view and click on Board Configuration. Confirm the "Enable IP Extension" checkbox is checked under MAXCS Admin -> Extension Configuration. Confirm AltiGen IP Phone Service is running on the MAXCS Admin Server. Confirm the extension voicemail password and password on the phone match. If in doubt, change the password on the server, and dial #27 at the phone to log it back in. Invalid passwords include all the same number (1111), sequential numbers (1234), the system default password (MaxAdmin -> System -> System Configuration -> Number Plan). In addition, the password cannot include the extension number (for instance: x101 could not have a password of 2101).

Symptom:

You see "SIP Reg Fail" or "Register Fail" on the IP Phone LCD

Resolution / Troubleshooting steps:

This message indicates the phone failed to register with the MAXCS server. Check the following items:

If checking the initial items above does not resolve the issue, run the MAXCS Admin & Extension Security Checker tool and unlock the extension if necessary (on the MAXCS server, go to Start -> Programs -> MAX Communications Server -> Utilities folder. Once running, right-click on any extension displaying a padlock icon to unlock it).

Symptom:

On a new install the IP phone(s) have never been successfully registered and do not connect to MAXCS.

Resolution / Troubleshooting steps:

This indicates there is either a programming error or a basic network functionality failure. Check the following configuration items on the IP Phone and the Server:

The AW Server address is correct in the phone's configuration. This should be the IP address of your MAXCS server. Confirm the phone's IP address, network mask, and default gateway addresses are correct.

Check the network connection. Are the LAN port LEDs active on the phone? If another analog phone or IP phone is already logged on to the same extension number, rebooting the IP phone will not register the phone successfully. The user must press #27 to log on to MAXCS. To verify your cabling and other local LAN hardware is good and properly configured, connect a crossover cable to the LAN port and connect the phone directly to the server. Assuming the phone works properly, "work your way back" through the other hardware on the network until the phone fails.

Symptom:

Poor voice quality - static, choppiness, garbled words

Resolution / Troubleshooting steps:

This issue can be caused by several factors. Check the following items, and narrow down the scope of the problem. Does it only happen on remote phones, or on local phones as well? Note the minimum requirement for a VoIP deployment on a LAN is a 100Mbit switched network with Cat5 cabling.

Run the Altigen Triton Board Test utility and/or the CT Bus Test to verify hardware status. Monitor the Current Resource Statistics window in MaxAdmin. Look for packet loss or excessive jitter. If required, adjust the jitter buffer to accommodate for any network latency. Change from headset to handset during a problem call, does the quality improve? If the problem is limited to the headset, try a different headset and amplifier (if applicable). Verify you are not exceeding your available network bandwidth. This is usually only an issue with phones on the WAN. If this is an extension on the LAN verify you are using the G.711 codec as this setting provides better voice quality. Try a test call with the "connect voice stream to server" enabled, then try a test call with "connect voice stream to server" disabled is checked in MCS Admin -> Extension configuration. If not, check it and retest. Work with the client's network administrator to see if QoS is enabled on the LAN or WAN. Make sure it's configured properly. Confirm you're using the latest version of MAXCS. Create a loopback entry (127.0.0.1) in your IP dialing in Enterprise Manager, and dial back into your server.[Expand] Use Wireshark to check for excess broadcast traffic on the network. [Needs link] If just one phone is having problems, swap out the phone with a known good model and see if there's any change. To verify your cabling and other local LAN hardware is good and properly configured, connect a crossover cable to the LAN port on the phone and plug in directly to the server, Assuming the phone works properly, "work your way back" through the other hardware on the network until the phone fails.

Symptom:

DHCP renew error on the IP Phone LCD.

Resolution / Troubleshooting steps:

This indicates the phone has failed to obtain a new DHCP address at boot or at the DHCP half-life value. Older versions of IP Phone firmware (Below 2x64) did not support DHCP Relay.

Verify the DHCP Server is up and running, and is properly assigning DHCP addresses to other devices. Try using a different DHCP Server if available. Altigen tests against servers running Microsoft's DHCP server application. If using a DHCP relay configuration, try bypassing the relay and pulling an address directly from the DHCP server to see if this resolves the issue. Use Wireshark to capture data to assist in troubleshooting.

