

GRANDSTREAM UCM6202 Configuration Guide

This document describes the configuration settings for GRANDSTREAM and PC configuration software when using an external telephone system (IP-PBX).

Reference Manuals

- https://www.grandstream.com/hubfs/Product_Documentation/ucm62xx_usermanual.pdf
- https://www.grandstream.com/hubfs/Product_Documentation/ucm6xxx_sip_trunk_guide.pdf

UCM6202 (IP-PBX) Access Information

- IP Address: 192.168.14.251
- Username: admin
- Password: CcT95UkP

1. GRANDSTREAM Configuration

1) Grandstream Login Screen

- ① Open your browser and navigate to <https://192.168.14.251:8089> to display the login screen.

2) [PBX Settings] → [General Settings]

- ① Configure the following settings under [Extension Preference]:
 - Enable Strong Password → Set to OFF
 - Enable Random Password → Set to OFF

3) [Extension / Trunk] → [Extensions] (Terminal/endpoint settings for external lines)

- ① Click [+ Add] to add a new Extension.
- ② [Basic Settings] screen:
 - Extension: 1000
 - SIP/IAX Password: 1000
 - Voicemail Password: 1000
 - User Password: Secret123 (arbitrary label)
- ③ [Media] screen:
 - DTMF Mode: Info
 - Enable Direct Media: Yes (or No — either is acceptable)
 - Codec Preference (Selected): PCMU / PCMA / G.722 / G.729

4) [Extension / Trunk] → [VoIP Trunks] (Settings to forward external calls to CX)

- ① Add a SIP Trunk.
- ② [SIP Trunk] screen — Basic Settings:
 - Type: Register SIP Trunk
 - Provider Name: 03 (arbitrary label)
 - Host Name: 192.168.14.250 (CX-SM1000 IP address)
 - TEL URI: User = Phone
 - Need Registration: Enabled
 - Username: 03 (set to the SIP ID from the PC software [Network Settings / Call (SIP)])
 - Password: 4 (set to the SIP password from the PC software [Network Settings / Call (SIP)])
- ③ Open [Advanced Settings] from the VoIP Trunks list.
- ④ [Advanced Settings] screen:
 - Codec Preference (Selected): PCMU (only)
 - Passthrough PAI Header: Enabled
 - Enable T.38 UDPTL: Enabled

5) [Extension / Trunk] → [Outbound Routes] (Settings to dial from external line to CX)

- ① Add an Outbound Rule.
- ② [Outbound Rule] screen:
 - Calling Rule Name: 00 (arbitrary)
 - Pattern: _00 (calls starting with 00 will trigger this rule and connect to the SM)
 - Privilege Level: Internal
 - Trunk (Main Trunk): SIPTrunks – 03 (select the SIP Trunk registered in step 4)

6) [System Settings] → [Network Settings]

- ① Set the IP-PBX IP Address and Subnet Mask:
 - IP Address: 192.168.14.251 (GRANDSTREAM IP address)
 - Subnet Mask: 255.255.0.0

7) [Extension / Trunk] → [Inbound Routes]

- ① Add an Inbound Route.
- ② [Inbound Rule] screen:
 - Trunks: SIPTrunks – 03
 - Pattern: _X (matches any inbound call)
 - Default Destination: Extension → 1000 (forwards inbound SIP Trunk calls to Extension 1000)
- ③ Click [Apply Changes] (top-right of screen) to save all settings.

2. PC Configuration Software Settings

1) [Network Settings / Call (SIP)] Screen

Configure the SIP connection settings in the PC software to match the Grandstream trunk credentials:

- SIP ID: 03 (set to arbitrary)
- Username: 03
- Password: (as configured in the SIP Trunk)
※ Set carefully — these values must match the Grandstream VoIP Trunk Username/Password.

2) [Network Settings / Call Audio Distribution] Screen

- Compression format: G.711 (μ-law)
※ Match this setting with the Grandstream codec configuration.

3) [Intercom / External Phone System] Screen

- System setting: PBX (Default)
- Direct In Dial: Enabled
- Direct In Line: Enabled
- Direct In Line terminal: 02
- DTMF detection method: SIP INFO (Match setting with Grandstream)

Behavior Notes by Configuration:

- Direct In Dial ON: After dialing the Outbound Routes Pattern from an external line, the SM plays a second dial tone. The caller then dials any extension number to reach a specific terminal.
- Direct In Line ON: After dialing the Outbound Routes Pattern from an external line, the call is routed directly to the pre-configured Direct In Line terminal on CX.
- Direct In Dial + Direct In Line → Direct In Dial takes priority.
- Direct In Line only (no terminal set) → In FWVer1.0.1.118, only the external terminal enters the calling state after dialing (outbound from CX only).
- Neither Direct In Dial nor Direct In Line selected → In FWVer1.0.1.118, only the external terminal enters the calling state after dialing (outbound from CX only).

※ When dialing from a terminal to the external phone system, dial the outgoing prefix (e.g., 00) to trigger the Outbound Route and connect via SM.