

IP7-FX

TalkMaster Getting Started Guide

Introduction

The IP7-FX is a PoE powered (802.3af) IP Audio Module that can be configured as a TalkMaster client and/or as a SIP extension for use with a SIP based phone system. This Getting Started Guide shows the basic configuration for an IP7-FX for use with TalkMaster FOCUS. Refer to the **TalkMaster FOCUS Administrator Reference Manual** for additional configuration options and information.

The module can connect to an analog audio device such as a call station or speaker and provides the following features

- Ethernet 10/100 Network Connector
- Port 2 10/100 available to connect another device to the network
- Eight-watt amplifier
- Microphone or Line In
- Speaker or Line Out
- Two input signals (Call and Sensor)
- Normally Open or Normally Closed Dry Contact Relay (250 VAC / 30VDC @ 60W / 1500 VAC Isolation)
- PoE (802.3af), 12VDC or 24VDC
- User configurable Full or Half duplex operation
- Standard 35MM DIN Rail Mount or optional Surface Mount Plate (included)



Replacing an IP7-ST/STx, SS8/SE8, FD or SS20

If the IP7-FX is being used to replace an existing IP7-ST/STx, IP7-SS8/SE8, IP7-FD or an IP7-SS20, please note the following:

- The J3-7 (Case) connector on older models was an extra ground. If replacing an older model with an IP7-FX, any wire connected to J3-7 should be moved to J3-6.
- If replacing an IP7-ST/STx, make sure the internal **ST-MIC** switch (located on the DIN clip side) is set in the same position. The IP7-FX does not support the Aiphone IE/ IF series call station. An IP7-ST/STx must be used
- If the older IP7's J2-6 (SPKR 8Ω+) and J2-7 (SPKR 8Ω-) is connected to an amplifier or amplified speaker, use the IP7-FX's J2-3 (Line Out) and J2-4 (GND) instead
- If replacing an IP7-SE8 / IP7-MSR-BRD with an IP7-FX, the IP7-MSR-BRD can be eliminated by changing the IP7-FX's ST-MIC internal switch to the ST position
- Other than the exceptions noted above, the J1, J2, J3, and network can be moved over to the IP7-FX

New Installations

The IP7-FX can be mounted indoors or outdoors in a weather tight enclosure.

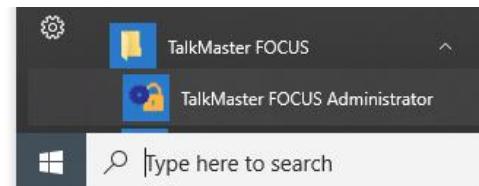
- If PoE (Power over Ethernet) is not available, connect the IP7-FX's Ethernet port to a network switch using a standard RJ-45 cable. Connect the IP7-FX to an external 12VDC (1.2 Amps) or 24VDC (2.5 Amps) power supply using either J1-1 (+) and J1-2 (-) terminals or a 2.5mm barrel connector (center tip positive)
- If PoE is available, connect the IP7-FX's Ethernet port to a PoE (802.3af) network switch or injector using a standard RJ-45 network cable. It will request 15.4 watts from the power source equipment.
- The **Link** LED will turn solid. The **Ready** LED will begin flashing 4x per second
- The IP7-FX can use either a mic level or line level microphone. Connect a mic level microphone to the J2-1 (Mic+) and J2-2 (Mic-) terminals. Optionally, connect a line level microphone using J3-4 (Line In), J3-6 (Ground) and J3-7 (Mic Power – 12V). Use 20-22 AWG twisted, shielded wire. The Microphone wire cannot be in the same jacket as the speaker wire. The internal **ST-MIC** switch (located on the DIN clip side) must be in the **MIC** position
- The IP7-FX can also use the speaker (connected to the J2-6 and J2-7 connectors) as a microphone (half duplex mode only). To enable this mode, slide the internal **ST-MIC** switch (located on the DIN clip side) to the **ST** position
- The IP7-FX can drive either an 8 Ohm speaker or an amplifier. Connect an 8 Ohm speaker to the J2-6 and J2-7 (polarity independent) terminals using 18 AWG. To connect to an amplifier or self-amplified speaker, connect the J2-3 (Line Out) to the amplifier's "+" terminal and J2-4 (ground) to its "-" terminal using 18 – 22 AWG. Follow any recommendations by the amplifier's manufacture for balanced vs unbalanced audio signals.
- The IP7-FX can initiate a TalkMaster call by grounding the J2-5 (Talk) connector. Connect a button or switch to J2-5 (Talk) and J2-4 (Ground) using 18 – 22 AWG wire. When J2-5 is grounded, the IP7-FX will call TalkMaster
- If the relay will be used to activate an electronic door strike, connect the J3-2 (COM) and either the J3-1 (NO) or J3-3 (NC) to the door strike. The relay can be activated during a call by entering a code on a telephone keypad that is stored in the IP7-FX configuration
- The IP7-FX can be DIN rail or surface mounted. To install on a standard 35mm DIN rail using the integrated DIN clip, tilt the top of the unit (J1, J2, J3 connectors facing up with Volume buttons facing forward) back towards the DIN Rail until the IP7 DIN clip catches the top of the rail. Press in at the bottom of the IP7 to snap into place). To surface mount, snap the included Mounting Plate in half, line the two pieces (beveled holes facing up) with the screw holes on the bottom of the IP7-FX case and secure it using the provided screws so that the mounting holes extend past the J1, J2 and J3 edge of the case
- Record the **ID#** from the label on back of the IP7-FX for use during software configuration.
- Optionally, the extra ID# label can be used for easy identification of this location
- Please refer to the **IP7-FX Reference Manual** available at <https://www.digitalacoustics.com/support/ip7-hardware-talkmaster-software-manuals/> for additional information on installation

TalkMaster Configuration

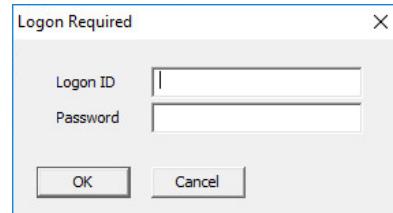
The IP7-FX must be configured using the **TalkMaster FOCUS Administrator** console. **TalkMaster™ FOCUS** is a suite of Windows® based application used to configure and manage Digital Acoustics IP7™ and ii3™ Intercoms and Paging endpoints. Applications included with the TalkMaster Server are the **Administrator Console** for configuration of the Server and IP Endpoints and the **Operator Console** for managing 2-way Intercom calls and 1-way Paging announcements.

If the **TalkMaster Administrator** console has already been installed and the defaults have been setup, skip to the **Configure Endpoint** step.

- Download and run the **TalkMaster FOCUS Installer** from <https://www.digitalacoustics.com/support/software-firmware-downloads/>
- Click the **Install TalkMaster Server/Admin Console** button
- Several modules will be installed. Continue accept the defaults till the installation is complete
- Click the **Install Operator Console** button and accept the defaults to complete the installation
- From the Windows **Start** menu, select **TalkMaster FOCUS → TalkMaster FOCUS Administrator**



- Logon with an Operator ID of **admin**. The default password is **admin**



Configure Defaults

- Click the **Setup → Defaults → Endpoint Defaults** tab and setup defaults to be used for configuring IP Endpoints. For instance, if the IP7's will all use DHCP, enable the **Assign Automatically with DHCP** and check the option or if the Endpoints will be connected to a different TalkMaster Server, enable the **Server IP Address** and enter that server's IP Address and Port



Configure Endpoint

- Select the **IP Endpoints** tab and press the **FIND ALL** button in the lower right-hand corner of the screen. Newly discovered IP Endpoints appear in the list box to the left
- Click on the IP Endpoint to be configured (match the “Icom ID” column to the Intercom’s previously recorded ID#)



Setup	Queues	IP Endpoints	Messages	Paging Groups	Operators	Audit
Auth	Location Name	Icom ID	IP Address	Queue		
		40A279	10.3.3.105	Unassigned		

Configuration tab

- If **Endpoint Defaults** have been setup, click the **Defaults** button to copy them in. Any of the following values that have been defaulted do not have to be modified
- Select **Client** from the dropdown to configure the device to connect to TalkMaster FOCUS.
- Enter a descriptive name into the **Location Name** field
- Check the **DHCP** option or uncheck it to enter a Static IP for the IP7-FX
- If the Endpoint will connect to this TalkMaster Server, check the **Authorized IP Endpoint** option
- Either select the **Server IP** from the dropdown or enter the IP Address of the TalkMaster Server
- Enter the default port of 3000

Select the Options 1 tab

- If the IP7-FX relay will be used to activate an electronic door strike, select Door Relay Output from the **Relay Mode** dropdown
- If a microphone was connected to the **Line In** connectors, select **Line In** from the **Microphone Input** dropdown box
- Select the **Use UDP/RTP** option to use the UDP/RTP protocol for sending and receiving audio instead of the TCP protocol
- Select this **Supports Full Duplex Audio** option to enable Full Duplex operation instead of Half Duplex operation
 - In a half-duplex phone call, one party has their microphone active while the other party has their speaker active. When a call is in session, the TalkMaster operator determines who talks and who listens. In half duplex mode, the IP7's volume will always be louder, and the microphone gain will always be higher since no echo has to be cancelled
 - In full duplex mode, both parties have their speaker and microphone active at the same time. In full duplex mode, the IP7's volume will always be softer, and the microphone gain will always be lower. This is due to the algorithms used by the IP7 for echo cancellation

Select the Options 2 tab

- Audio Profile** – Click the **Set** button next to **Audio Profile** and select the **None** if using full duplex. Otherwise select the **Half Duplex** audio profile
- Press the **Done** button

Save the Settings

- Click the **Save Settings** button. The endpoint will reboot with the changes and register with TalkMaster Server within 30 seconds. The IP7-FX's red READY LED will blink rapidly for 30 seconds and then turn solid. The IP7-FX is now connected to the TalkMaster Server

Refer the **TalkMaster Operator Console Reference Manual** available at <https://www.digitalacoustics.com/support-2/software-documentation/> for information on answering and making calls.