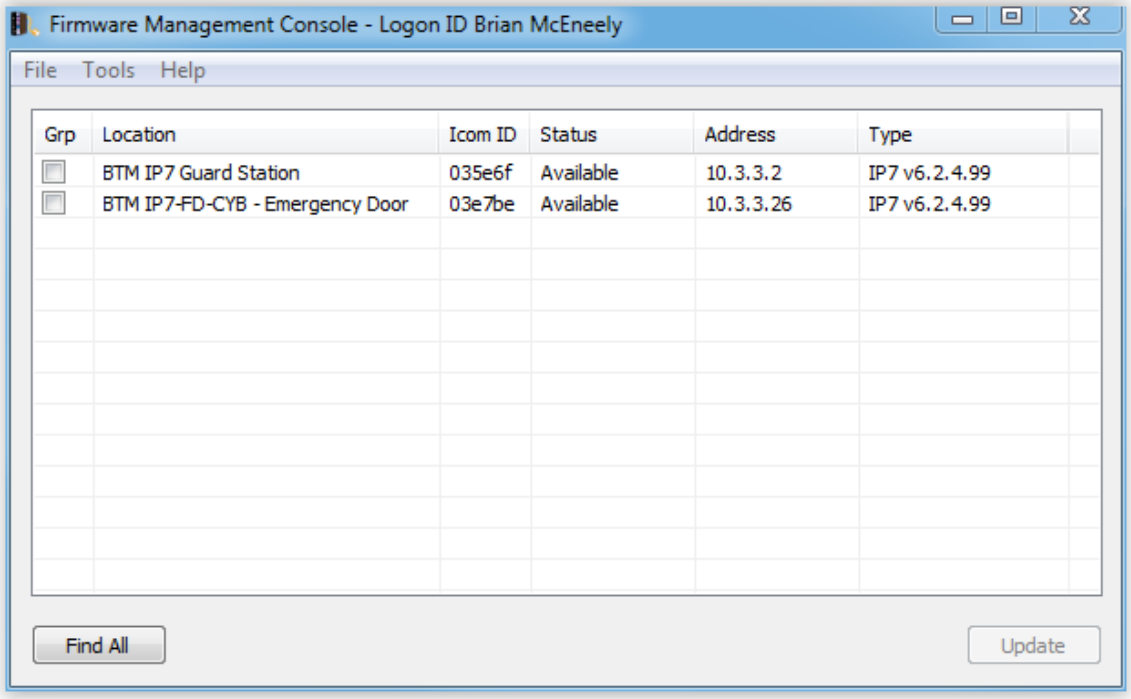
DIGITAL ACOUSTICS

# TalkMaster™ FOCUS

## Firmware Management Console

## Reference Manual



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# Getting Started

## Welcome

Welcome to the Firmware Management Console (FMC). FMC is designed to update firmware in IP7 IP Endpoints. Updated firmware adds new features to IP Endpoints or corrects reported issues.

## Release Notes

**V6.0 Release June 2018**

- Added menu option **Search --> Search IP Endpoint List** and keyboard equivalent ctrl+f
- Added **Update WiFi Firmware** option for new Wireless IP7 Endpoints (available Q3 2018)
- Improved the performance of the main list box when connecting hundreds of IP Endpoints

**V5.2.1 Release June 2016**

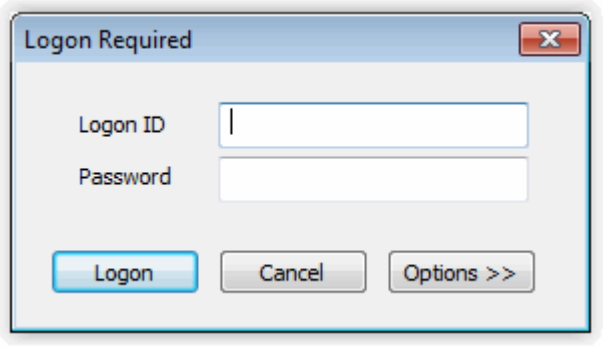
- Added the display of the Zone Controller firmware version on an IP7-MZC
- Added the ability to update the Zone Controller firmware on an IP7-MZC

**January 2012**

- Initial Release designed to updated firmware for multiple IP7 endpoints

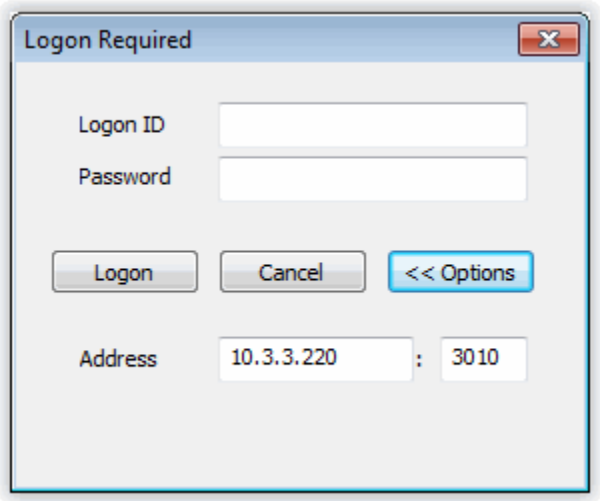
## Logon

The Logon Required dialog is displayed when the FC is started. Logon using the default **admin** Operator ID or an Operator that has been defined with the **Administrator Rights** option in the Admin Console .



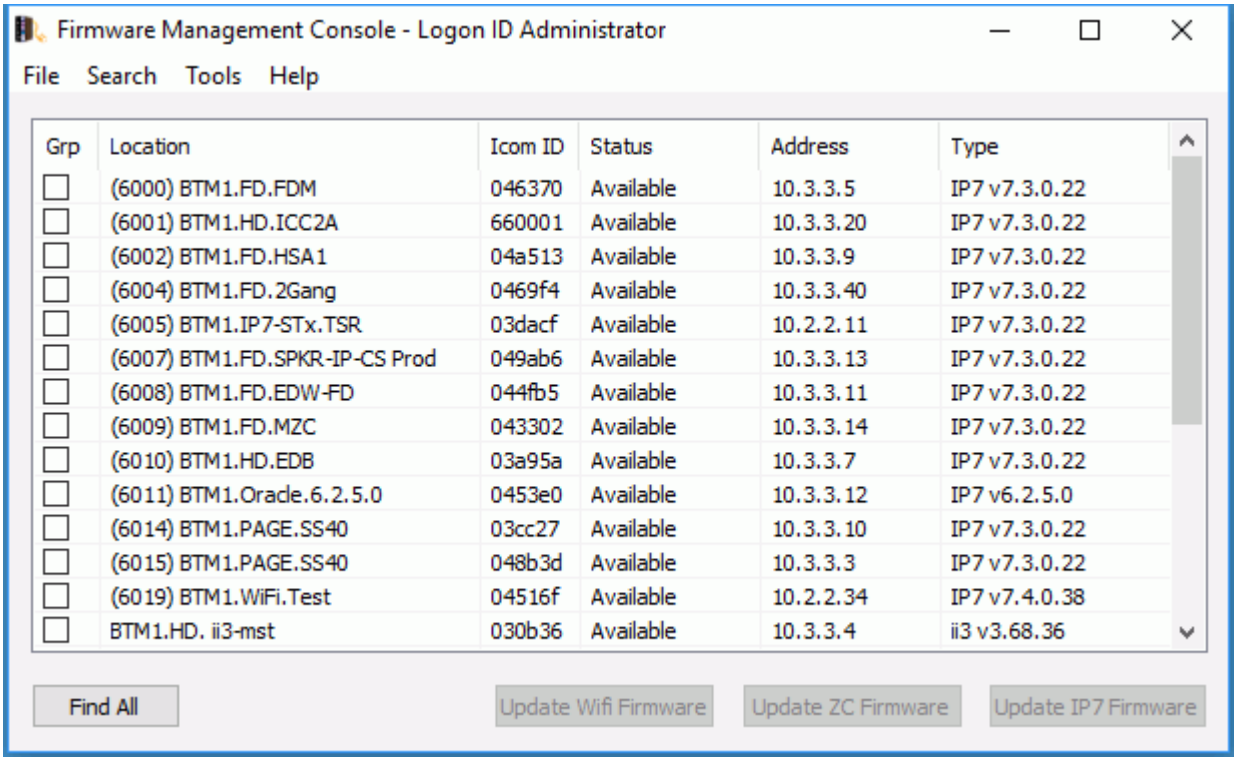

- **Logon ID** - Identifies the Operator defined to the TalkMaster Focus Server through the Admin Console. Please Note - the Operator must be defined in the Admin Console with the **Administrator Rights** option in order to use the FC. An Operator can only be logged on to a single console at a time
- **Password** - Enter the corresponding Operator's password. This field is case sensitive.
- **Login** - Click to process the login information

- **Cancel** - Click to cancel the logon operation
- **Options** - Click to toggle the display of the Address information
    - Address - enter the IP address and Port that Consoles use to connect to the TalkMaster Focus Server. The port must match the Console Port defined in the Setup --> Settings sub tab of the Admin Console. Once the TalkMaster Focus Server address has been entered, the Address will not be displayed




## Overview

The Firmware Console lists all IP Endpoints that are currently connected to the TalkMaster Focus Server. If additional IP Endpoints are on the network, but not connected to the TalkMaster Focus Server, they can be discovered on the network by pressing the Find All button. To update the firmware on one or more IP Endpoints, place a check in the **Grp** column and press the **Update IP7 Firmware, Update ZC Firmware**, or **Update WiFi Firmware** button.




- **Grp** - Check this box to include an IP Endpoint in the firmware update process
- **Location** - Displays the friendly name of the IP Endpoint
- **Icom ID** - Displays the ICOM ID of the IP Endpoint. The ICOM ID is the unique MAC address of the IP Endpoint. The ICOM ID is printed on the IP Endpoint and is used to identify it to the software
- **Status** - The status is used to determine if the IP Endpoint can be discovered by the TalkMaster Focus Server. For instance, if an IP Endpoint that is configured to connect to the TalkMaster Focus Server is offline, it will appear as Unavailable
- **Address** - Displays the IP Address of the IP Endpoint
- **Type** - Displays the current firmware version of the endpoint

**Find All** button - Press this button to discover any IP Endpoints that are not currently connected to the TalkMaster Focus Server

**Update WiFi Firmware** button - Press this button to update the wireless firmware on any IP Endpoints that have the **Grp** box checked. This action is described in the IP7 Firmware Update Process

**Update ZC Firmware** button - Press this button to update the Zone Controller firmware on any IP Endpoints that have the **Grp** box checked. This action is described in the ZC Firmware Update Process

**Update IP7 Firmware** button - Press this button to update the firmware on any IP Endpoints that have the **Grp** box checked. This action is described in the IP7 Firmware Update Process

# Updating Firmware

## IP7 Firmware Update Process

For IP Endpoints with Firmware version 6 or greater that are currently connected to the TalkMaster FOCUS Server, the Firmware is sent to the IP Endpoint via the existing TCP connection. These IP Endpoints can always be updated via the Firmware Console since its existing TCP connection is used.

For IP Endpoints with Firmware version prior to version 6 or any IP Endpoint that is not currently connected to the TalkMaster Focus Server:

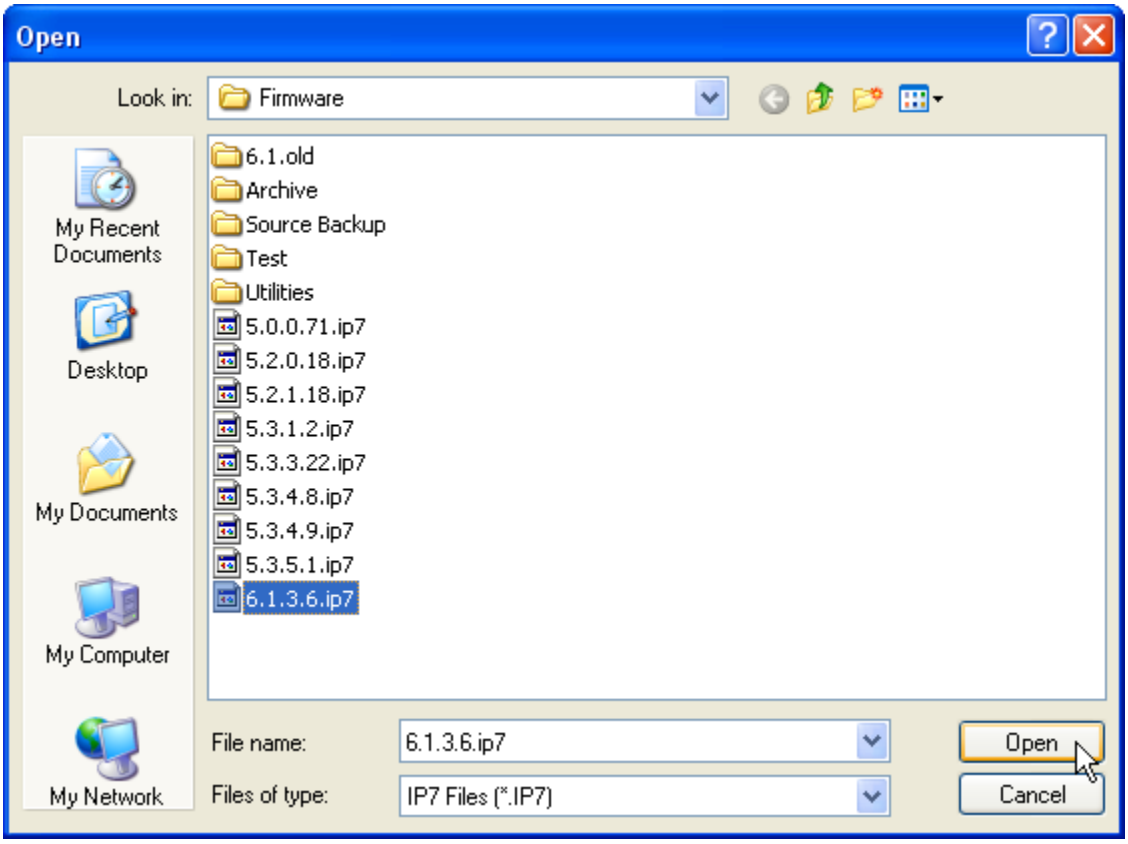
- A UDP command is sent from the TalkMaster Focus Server to the IP Endpoint
- The IP Endpoint begins listening for a new TCP connection from the TalkMaster Focus Server
- The TalkMaster Focus Server connects to the endpoint
- The Firmware is sent to the IP Endpoint
- If a NAT'd firewall is between the IP Endpoint and the TalkMaster Focus Server, the Firmware update will not work. The software must be installed on a PC behind the NAT'd firewall and the FC must be run from there to update the firmware

The Firmware Update is a multi step process:

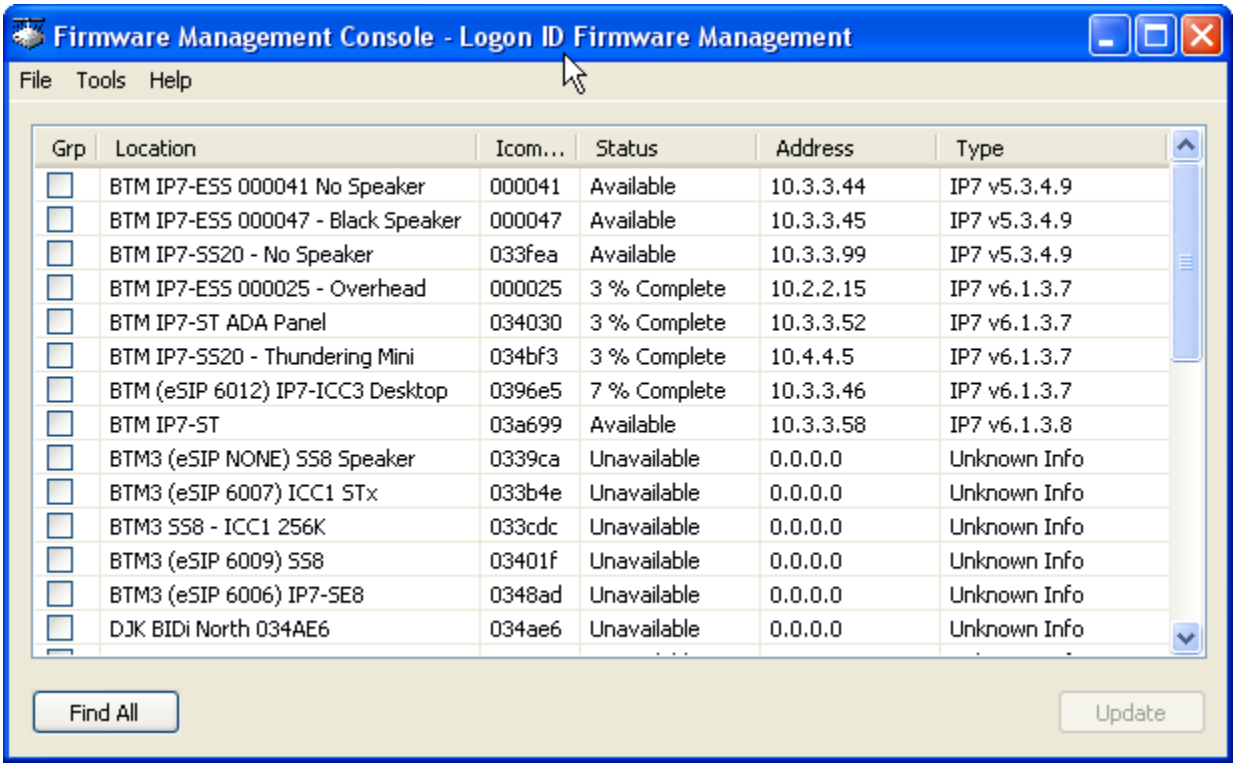
- The Firmware is downloaded to a memory chip on the IP Endpoint
- The firmware is verified to ensure the integrity of the download. If this step fails, the firmware update is aborted
- The IP Endpoint copies the firmware from the memory chip to the ROM on the microprocessor
- The IP Endpoint reboots using the new firmware

## Update button

The Update IP7 Firmware button is used to select the firmware to be sent to all IP Endpoints that have the Grp column checked.




Once the file is selected, the main screen is displayed and the firmware will be downloaded to the selected IP Endpoints.




| Grp | Location | Icom... | Status | Address | Type |
|---|---|---|---|---|---|
| ☐ | BTM IP7-ESS 000041 No Speaker | 000041 | Available | 10.3.3.44 | IP7 v5.3.4.9 |
| ☐ | BTM IP7-ESS 000047 - Black Speaker | 000047 | Available | 10.3.3.45 | IP7 v5.3.4.9 |
| ☐ | BTM IP7-SS20 - No Speaker | 033fea | Available | 10.3.3.99 | IP7 v5.3.4.9 |
| ☐ | BTM IP7-ESS 000025 - Overhead | 000025 | 3 % Complete | 10.2.2.15 | IP7 v6.1.3.7 |
| ☐ | BTM IP7-ST ADA Panel | 034030 | 3 % Complete | 10.3.3.52 | IP7 v6.1.3.7 |
| ☐ | BTM IP7-SS20 - Thundering Mini | 034bf3 | 3 % Complete | 10.4.4.5 | IP7 v6.1.3.7 |
| ☐ | BTM (eSIP 6012) IP7-ICC3 Desktop | 0396e5 | 7 % Complete | 10.3.3.46 | IP7 v6.1.3.7 |
| ☐ | BTM IP7-ST | 03a699 | Available | 10.3.3.58 | IP7 v6.1.3.8 |
| ☐ | BTM3 (eSIP NONE) SS8 Speaker | 0339ca | Unavailable | 0.0.0.0 | Unknown Info |
| ☐ | BTM3 (eSIP 6007) ICC1 STx | 033b4e | Unavailable | 0.0.0.0 | Unknown Info |
| ☐ | BTM3 SS8 - ICC1 256K | 033cdc | Unavailable | 0.0.0.0 | Unknown Info |
| ☐ | BTM3 (eSIP 6009) SS8 | 03401f | Unavailable | 0.0.0.0 | Unknown Info |
| ☐ | BTM3 (eSIP 6006) IP7-SE8 | 0348ad | Unavailable | 0.0.0.0 | Unknown Info |
| ☐ | DJK BIDi North 034AE6 | 034ae6 | Unavailable | 0.0.0.0 | Unknown Info |

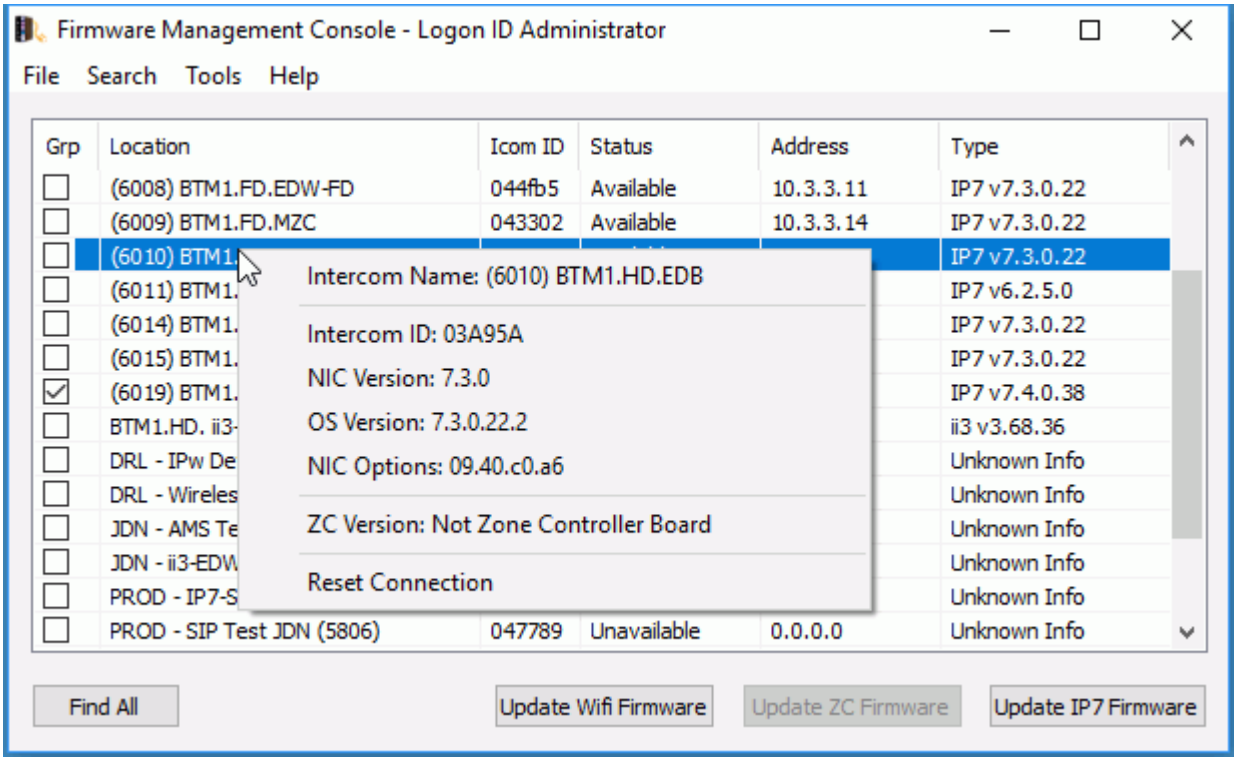
The Status column will show the percent completion of the firmware download. After the download completes, the Firmware update takes about 45 seconds on the IP Endpoints. Do not disconnect the power from the IP Endpoint during this time or it may become unusable. The endpoint will not be available to any other Consoles till the Firmware Update completes.

Firmware versions prior to 5.3.4.9 have some issues, which occur randomly, making it difficult to update the firmware on some IP7s.

## ZC Firmware Update Process

For IP-MZC (Multi Zone Controller) Endpoints that are currently connected to the TalkMaster FOCUS Server, the Zone Controller Firmware is sent to the IP Endpoint via the existing TCP connection. These IP Endpoints can always be updated via the Firmware Console since its existing TCP connection is used.

To check the existing ZC Version, right click on the endpoint:

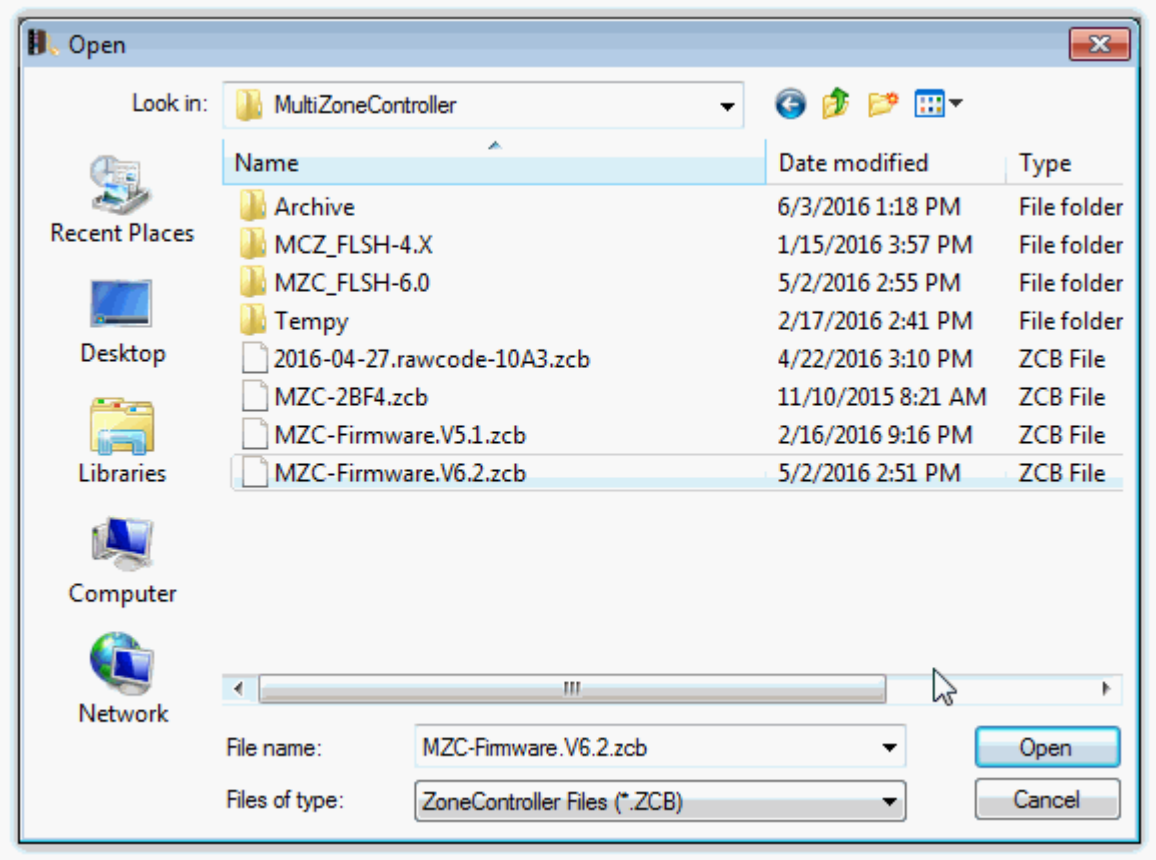



The Zone Controller has two areas for storing Firmware. The Main area stores the code that was originally flashed at the factory. The second area is the Update area that stores updated Zone Controller Code. When the Update ZC Firmware button is pressed, the IP7 accepts the ZC Firmware and writes to the ZC's Update Area. The Zone Controller always starts up in the Main Area and branches to the Update area if it is present.

If the IP7-MZC is not currently connected to the TalkMaster FOCUS Server, the Zone Controller firmware cannot be updated.

## Update ZC Firmware

The **IP7-MZC - Multi Zone Controller** may require a firmware update to enable new features or to correct reported issues. The **Update ZC Firmware** button is used to select the firmware to be sent to all IP Endpoints that have the **Grp** column checked.



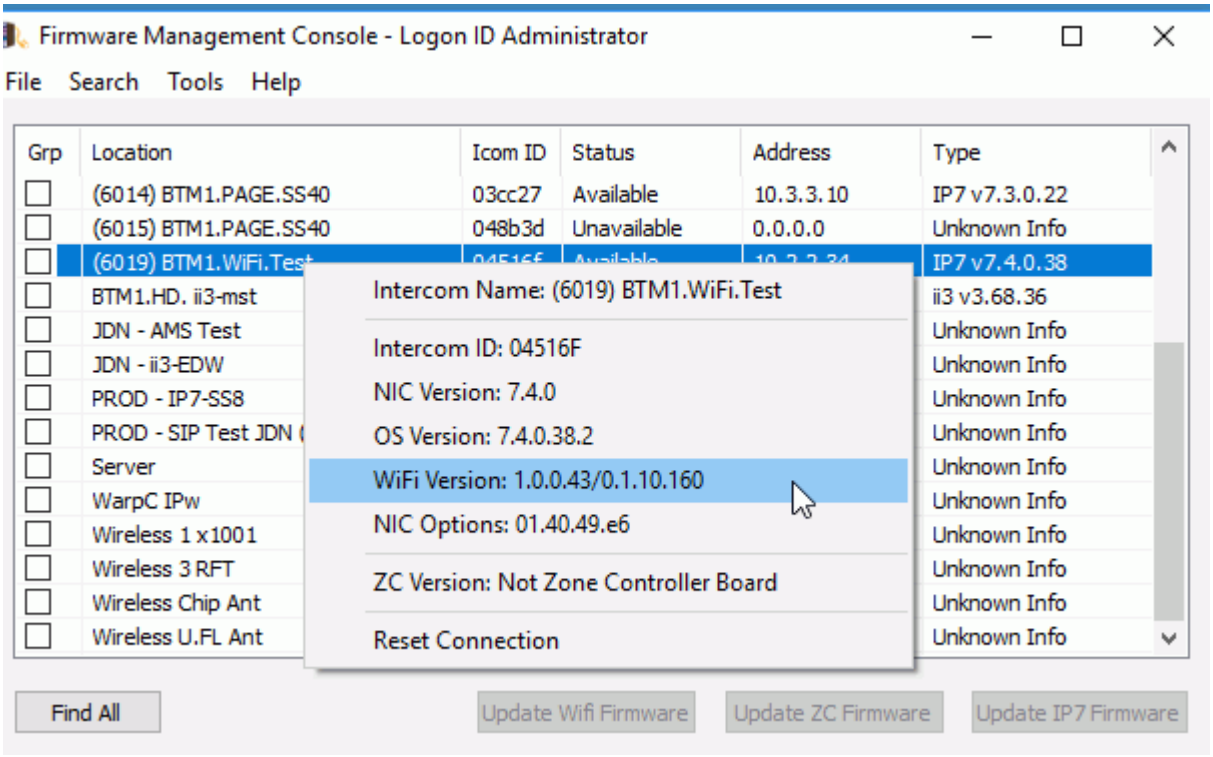

After selecting the firmware file, the update will be downloaded and the IP7 will reboot. Press the **FIND ALL** button again and then right click on the IP Endpoint to verify the ZC Firmware Version.

**Please Note** that to update the ZC Firmware, the IP7-MZC must be connected to the same TalkMaster FOCUS Server that the Firmware Management Console is connected to.

## WiFI Firmware Update Process

For IP7s that support wireless network connections that are currently connected to the TalkMaster FOCUS Server, the WiFi Firmware is sent to the IP Endpoint via the existing TCP connection. These IP Endpoints can always be updated via the Firmware Console since its existing TCP connection is used.

To check the existing WiFi Version, right click on the endpoint:

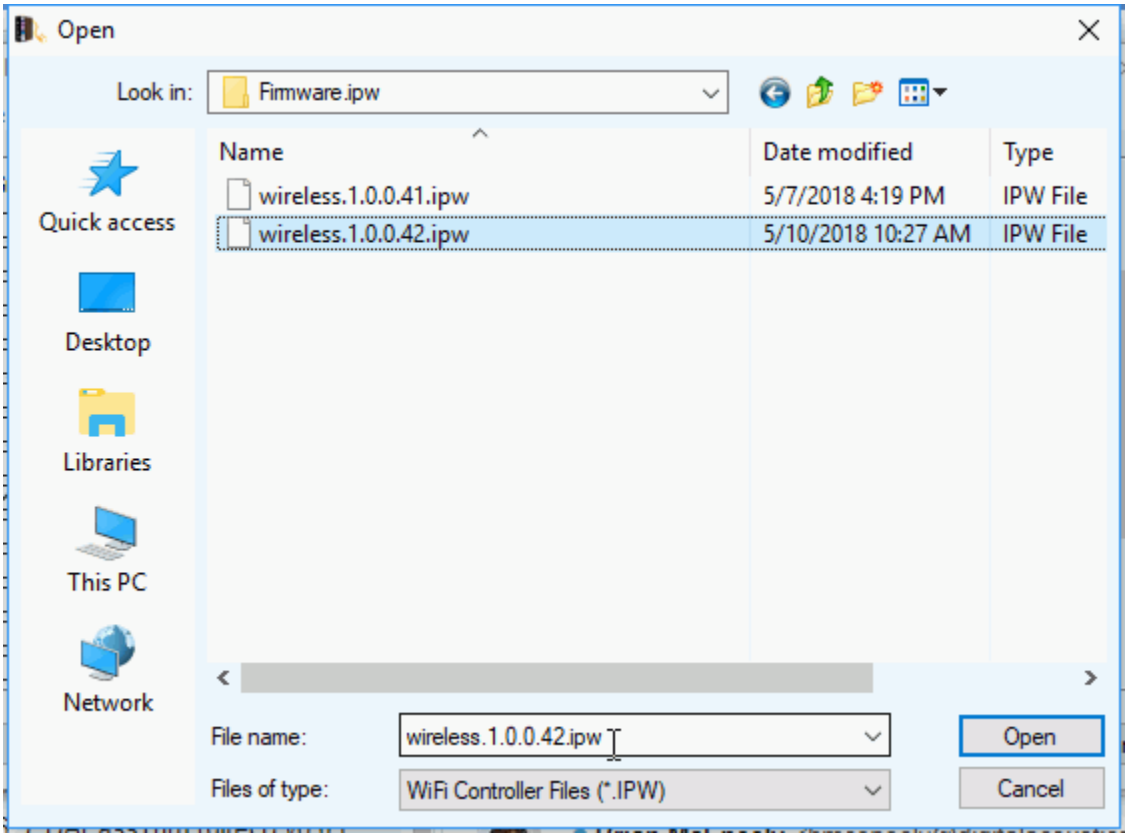



There are two types of WiFi updates. Application updates are the most common and less than a minute to complete. Image updates are much less frequently and take about 3 minutes to complete.

If the wireless IP7 is not currently connected to the TalkMaster FOCUS Server, the WiFi firmware cannot be updated.

## Update WiFi Firmware

Wireless IP7s may require a firmware update to enable new features or to correct reported issues. The **Update WiFi Firmware** button is used to select the firmware to be sent to all IP Endpoints that have the **Grp** column checked.




After selecting the firmware file, the update will be downloaded and the IP7 will reboot. Press the **FIND ALL** button again and then right click on the IP Endpoint to verify the ZC Firmware Version.

**Please Note** that to update the ZC Firmware, the IP7-MZC must be connected to the same TalkMaster FOCUS Server that the Firmware Management Console is connected to.

## Find All button

The **FIND ALL** button is used to discover IP Endpoints that are not currently connected to the TalkMaster Focus Server. When the Find All button is pressed, the TalkMaster Focus Server does the following:

- A UDP Multicast packet is sent to the registered multicast address of 224.0.23.59
- A UDP Broadcast packet is sent to IP Address 255.255.255.255

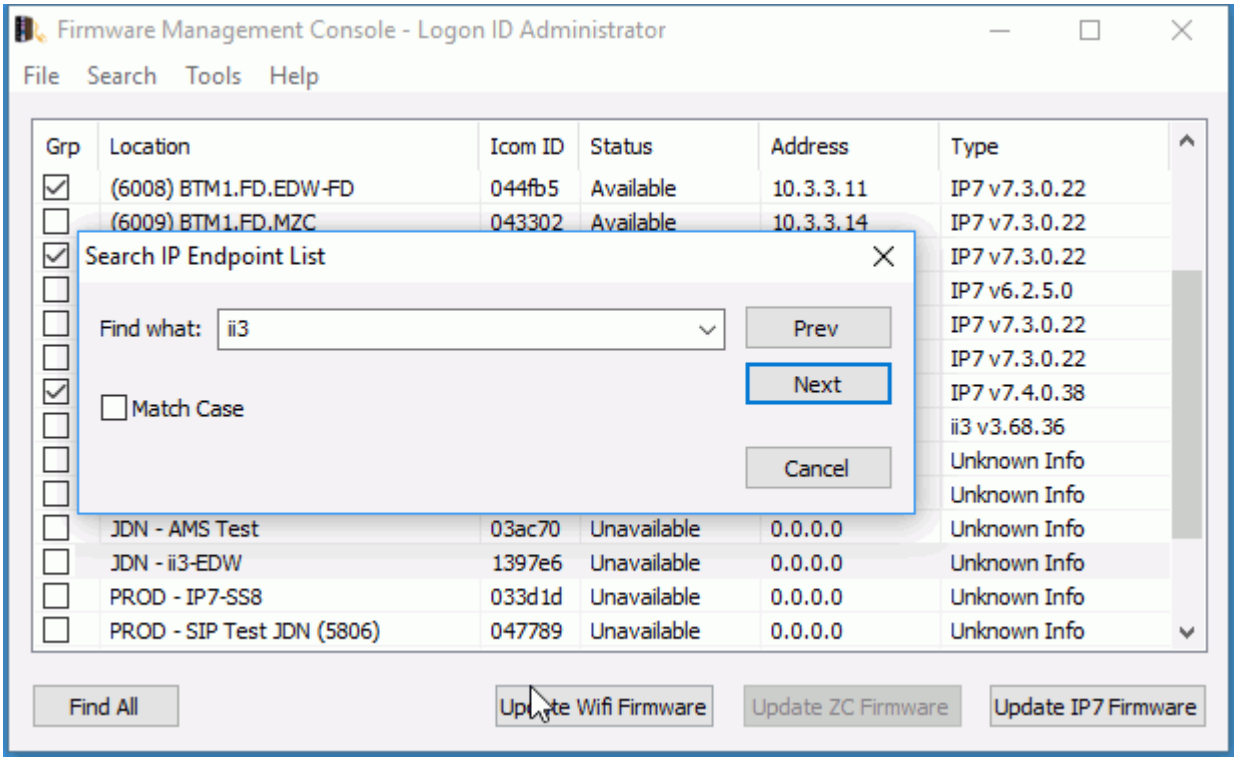
If an IP Endpoints receives the discovery packet, it responds as follows:

- If the discovery packet has been received and the endpoint is currently "connected" to the TalkMaster Focus Server, a response is returned to the IP Address of the sender
- If the discovery packet has been received and the endpoint is not currently "connected" to the TalkMaster Focus Server, a response is returned to the IP Address of the sender and to the Broadcast IP Address 255.255.255.255

If an IP Endpoint is in a different subnet than the TalkMaster Focus Sever and does not have a valid IP Address for that subnet, it will not be discovered. Reset the endpoint to Factory Defaults and place it in the same subnet as the TalkMaster Focus Server

## Searching the IP Endpoint List

To search for a specific IP Endpoint, select menu option **Search --> Search IP Endpoint List** or press the ctrl+f keys. The following dialog will be open:




Enter any part of a **Location Name**, **ICOM ID** or **IP Address** and then click the **Prev** or **Next** button.

Checking the **Match Case** option will limit the search to characters that have the same case as entered into the **Find what**: option

# Menu Options

## File Menu Options

The File menu has the following option:

- **Exit** - exits the Firmware Console session

## Search Menu Options

The Search menu has the following option:

- **Search IP Endpoint List** - opens the Search IP Endpoint List dialog to search IP Endpoints by any part of the **Location Name**, **ICOM ID** or **IP Address**
    - This will search for a match within the IP Endpoint's Location Name, IP Address and ICOM ID (even if the field is not displayed in the list box)
    - The search will automatically wrap when it reaches the end of the list
    - Enter the string to search for and click either the FIND PREV or FIND NEXT button
    - The dialog can stay open and be repositioned while other options are used
    - A history of the previous ten searches made can be selected from the **Find what:** drop down arrow

## Tools Menu Options

The Tools menu has the following option:

- **Record program events to file** - Checking this option records tracking information about the operation of the Firmware Console. It should used if instructed by Technical Support
- **Open Support Folder** - This option opens the folder where the tracking information is stored

## Help Menu Options

The Help Menu has the following options:

- **About** - displays the current software version

# Support Information

## Contacting Technical Support

For Information on contacting Technical Support, please visit our web site at:

www.digitalacoustics.com

## About Us

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