



RELEASE NOTES

AM-100/AM-101

1.7.0/2.8.0

Product or Content Description

Included Products:

- **AM-100 (8750)**
- **AM-101**

Notes and Recommendations

When using the web interface, please check the processor type of your device before loading the firmware. The processor type can be found on the system status page. Please note, version 1.0.2.1 does not report the processor type. Version 1.0.2.1 firmware was only released for the WM8440 processor type.

The processor type can also be determined from the part number. Please refer to the table below for the part number to processor type mapping.

| Device Administration | System Status |
|--------------------------|--------------------------------|
| System Status | Model |
| Device Setup | Name: Crestron AirMedia |
| Network Setup | Firmware Version: 1.0.2.5 |
| OSD Setup | Processor: WM8750 |
| Change Password | Network Status |
| Firmware Upgrade | IP Address: 192.168.0.179 |
| Remote View Setup | Subnet Mask: 255.255.255.0 |
| Reset to Default | Default Gateway: 192.168.0.1 |
| | MAC Address: 00:12:5F:0C:6A:3F |

Please extract the files in the firmware package first and then select the firmware file to load from the table below. Do not attempt to load the zip file to the AM-100 directly when using the web interface to perform a firmware upgrade.

| Part Number | Processor | Firmware File |
|-------------|-----------|---------------------------------------|
| 6506508 | WM8440 | No longer supporting firmware updates |
| 6507044 | WM8750 | AM-100_firmware_6507044_WM8750.img |
| 6508053 | WM8750A | AM-101_firmware_6508053_WM8750A.img |

- (WM8440 model AM-100 only): Due to an internal change to facilitate the support of HTTPS, the WM8440 settings will be reinitialized to default after an upgrade from version 1.0. Please save your settings using the “export system configuration” function on the firmware upgrade page. Version 1.1 (released May 2015) and greater are not affected. The WM8750 model AM-100 and AM-101 are not affected.
- AirMedia uses a four digit version number in the <Major>.<Minor>.<Fix>.<Build> format. The features in a release are captured in the <Major>.<Minor>.<Fix> number, in this case 1.2.1. The <Build> number is used

internally to track submissions for qualification. Because there are two different hardware platforms, this build number may differ. The feature set is identical between the two hardware platforms.

Current Version

AM-100 1.7.0 / AM-101 2.8.0

Date: 2019-05-07

| Files Included | Version | MD5 |
|---|----------|----------------------------------|
| <i>AM-100_firmware_1.7.0.11_6507044_WM8750</i> | 1.7.0.11 | 64E60A31449272EAF195910E19FCA277 |
| <i>AM-101_firmware_2.8.0.18_6508053_WM8750A</i> | 2.8.0.18 | 8A00D335D9E1A6D40DA76DD77507F689 |

Known Issues

- HTTPS uses a self-signed certificate. Many web browsers will show a warning when connecting to the administration and moderation pages. It is safe to disregard this error; the information is still encrypted.
- Using multiple interfaces (for example SIMPL programming and the web pages) at the same time may cause data to become out of sync. Please only use a single interface at a time.
- If the update web page is closed during a firmware update, attempting to reconnect to the device will fail. Please wait for the update to complete before attempting to reconnect to the device. The LED on the front of the device will turn green after the firmware update indicating that it is ready for connections.
- Device mirroring does not work within the YouTube® Application
- Random code does not update properly on OSD when 'Reset_Connections' is triggered through the SIMPL Windows interface
- When connecting to Crestron Fusion, the Fusion ID can be set to a non-allowable value. A user should only use IPID 02 when connecting to Crestron Fusion.
- A vulnerability still exists via return.cgi as part of CVE-2019-3930, however authentication is required to access so in the meanwhile a strong admin password is recommended.

Fixed Issues

- Fixed an issue where the SNMP Manager is not Saved/Updated with the value provided in Text Box. SNMP Traps are not being generated as a result.
- Fixed an issue where the Windows AirMedia sender application is stuck when a user changes screen positions multiple times on the AM-100/101 and presses Stop (requires use of new Windows application. See below)
- Fixed an issue where a "\$" character in Web UI Password which would result in not being able to login again and requiring restore.
- Fixed an issue where SNMP displays Model number opposed to Host Name
- Fixed an issue with AirMedia mouse cursor alignment issues (cursor seen on wireless presentation is in a different location than on the client device)
- Fixed an issue where the AM-100/101 Resetting to Factory Default Settings as result of security scans
- Fixed an issue where the AM-101 reboots after 10 to 15 connections and use of moderator mode
- Fixed an issue where when attempting to airplay a Mac computer (or other Apple device) to an AM-101, the image will freeze and the AM-101 would require a reboot to recover.

- Firmware now includes latest Windows and Mac OS AirMedia applications (Windows 3.5.1.127, Mac OS 3.1.12)
- Resolved Security Vulnerability
 - Unauthenticated Remote OS Command Injection via file_transfer.cgi and Unauthenticated Remote Stack Buffer Overflow via file_transfer.cgi (CVE-2019-3929, CVE-2019-3930)
 - Cross-Site Scripting (CVE-2017-16710)
 - Remote Code Execution Vulnerabilities (CVE-2017-16709)
 - Remote Command Execution (Web) - (CVE-2017-16709)
 - Other Cross-Site Scripting issues – (CVE-2017-16709)
 - Stored Cross-Site Scripting (CVE-2017-16710)
 - PIN sent insecurely over connection and Insecure Transport of PIN
 - Hardcoded FTP Credentials
 - Information leakage issue using login.cgi hidden variables
 - A segmentation fault vulnerability (related to lighttpd web server)

Previous Versions

AM-100 1.6.0 / AM-101 2.7.0

Date: 2018-06-15

| Files Included | Version | MD5 |
|--|---------|----------------------------------|
| <i>AM-100_firmware_1.6.0.2_6507044_WM8750</i> | 1.6.0.2 | CD2AC30E646B23DCE15CC696F22A312E |
| <i>AM-101_firmware_2.7.0.1_6508053_WM8750A</i> | 2.7.0.1 | 914591F69E964EB625F397BB4BB84CDB |

Known Issues

- HTTPS uses a self-signed certificate. Many web browsers will show a warning when connecting to the administration and moderation pages. It is safe to disregard this error; the information is still encrypted.
- Using multiple interfaces (for example SIMPL programming and the web pages) at the same time may cause data to become out of sync. Please only use a single interface at a time.
- If the update web page is closed during a firmware update, attempting to reconnect to the device will fail. Please wait for the update to complete before attempting to reconnect to the device. The LED on the front of the device will turn green after the firmware update indicating that it is ready for connections.
- Device mirroring does not work within the YouTube® Application
- Random code does not update properly on OSD when 'Reset_Connections' is triggered through the SIMPL Windows interface

Fixed Issues

- Multiple Vulnerabilities such as Cross-Site Scripting (CVE-2017-16710), Remote Code Execution (CVE-2017-16709) and others have been addressed in this release of firmware. Crestron recommends updating firmware to prevent these vulnerabilities from being exploited. For more information, see Online Help 5471.

| Files Included | Version | MD5 |
|---|----------|----------------------------------|
| <i>AM-100_firmware_1.5.0.4_6506508_WM8440.img</i> | 1.5.0.4 | F73A77AF09C1CD17CA568BA3D237C392 |
| <i>AM-100_firmware_1.5.0.3_6507044_WM8750.img</i> | 1.5.0.3 | 30D1407A9D96C80F0A4254EAE470C1A0 |
| <i>AM-101_firmware_2.6.0.12_6508053_WM8750A.img</i> | 2.6.0.12 | 90D3E8A1030F3A51DF059C9A8A392425 |

Known Issues

- HTTPS uses a self-signed certificate. Many web browsers will show a warning when connecting to the administration and moderation pages. It is safe to disregard this error; the information is still encrypted.
- Using multiple interfaces (for example SIMPL programming and the web pages) at the same time may cause data to become out of sync. Please only use a single interface at a time.
- If the update web page is closed during a firmware update, attempting to reconnect to the device will fail. Please wait for the update to complete before attempting to reconnect to the device. The LED on the front of the device will turn green after the firmware update indicating that it is ready for connections.
- Device mirroring does not work within the YouTube® Application
- Random code does not update properly on OSD when 'Reset_Connections' is triggered through the SIMPL Windows interface

Fixed Issues

- Improved compatibility with device mirroring on the AM-101
- When connecting to the AM-101 via device mirroring, the Number_of_connected_users_fb will not reflect the number of users connected to the device.
- SNMP incorrectly reports the Model Number instead of the Host Name
- Higher latency and breakup of image when displaying content at a resolution 1600x1200
- Updated the downloadable Windows application
- Mouse cursor may be misaligned when presenting content from a Windows PC with certain aspect ratios.

AM-100 1.5.0 / AM-101 2.5.0

| Files Included | Version | MD5 |
|---|----------|----------------------------------|
| <i>AM-100_firmware_1.5.0.4_6506508_WM8440.img</i> | 1.5.0.4 | F73A77AF09C1CD17CA568BA3D237C392 |
| <i>AM-100_firmware_1.5.0.3_6507044_WM8750.img</i> | 1.5.0.3 | 30D1407A9D96C80F0A4254EAE470C1A0 |
| <i>AM-101_firmware_2.5.0.12_6508053_WM8750A.img</i> | 2.5.0.12 | FE5025B2D526676E5193E5EF743A9406 |

Known Issues

- HTTPS uses a self-signed certificate. Many web browsers will show a warning when connecting to the administration and moderation pages. It is safe to disregard this error; the information is still encrypted.
- Using multiple interfaces (for example SIMPL programming and the web pages) at the same time may cause data to become out of sync. Please only use a single interface at a time.

- If the update web page is closed during a firmware update, attempting to reconnect to the device will fail. Please wait for the update to complete before attempting to reconnect to the device. The LED on the front of the device will turn green after the firmware update indicating that it is ready for connections.
- When connecting to the AM-101 via device mirroring, the Number_of_connected_users_fb will not reflect the number of users connected to the device.
- Device mirroring does not work within the YouTube® Application
- Random code does not update properly on OSD when 'Reset_Connections' is triggered through the SIMPL Windows interface

Fixed Issues

- Improved compatibility with device mirroring on the AM-101
- Updated the downloadable Windows and Mac Sender applications

AM-100 1.4.1 / AM-101 2.4.2

| Files Included | Version | MD5 |
|--|----------|----------------------------------|
| <i>AM-100_firmware_1.4.0.14_6506508_WM8440.img</i> | 1.4.0.14 | B6C66E9DDC8DA239E92CEBC602D86BE4 |
| <i>AM-100_firmware_1.4.1.1_6507044_WM8750.img</i> | 1.4.1.1 | BC9540B332C0562E79B8D57DCED3DC23 |
| <i>AM-101_firmware_2.4.2.1_6508053_WM8750A.img</i> | 2.4.2.1 | 4CCF720680DC0FC963C9A16F5607818C |

Note: This firmware only affects WM8750 and WM8750A processors. There is no change for WM8440 based systems.

Known Issues

- HTTPS uses a self-signed certificate. Many web browsers will show a warning when connecting to the administration and moderation pages. It is safe to disregard this error; the information is still encrypted.
- Using multiple interfaces (for example SIMPL programming and the web pages) at the same time may cause data to become out of sync. Please only use a single interface at a time.
- If the update web page is closed during a firmware update, attempting to reconnect to the device will fail. Please wait for the update to complete before attempting to reconnect to the device. The LED on the front of the device will turn green after the firmware update indicating that it is ready for connections.
- When connecting to the AM-101 via device mirroring, the Number_of_connected_users_fb will not reflect the number of users connected to the device.
- Device mirroring does not work within the YouTube® Application
- Random code does not update properly on OSD when 'Reset_Connections' is triggered through the SIMPL Windows interface

Fixed Issues

- Improved compatibility with device mirroring on the AM-101
- Fixed an issue which causes the device to output a black image after an extended period of time

- Fixed an issue which causes artifacts to appear on the edge of a screen when projecting with an output resolution greater than 1920x1080p
- Improved HDMI output stability when connected to DigitalMedia Switchers

AM-100 1.4.0 / AM-101 2.4.1

| Files Included | Version | MD5 |
|---|----------|----------------------------------|
| <i>AM-100_firmware_1.4.0.14_6506508_WM8440.img</i> | 1.4.0.14 | B6C66E9DDC8DA239E92CEBC602D86BE4 |
| <i>AM-100_firmware_1.4.0.14_6507044_WM8750.img</i> | 1.4.0.14 | 22792128B7B33D19A009371235B495B8 |
| <i>AM-101_firmware_2.4.2.19_6508053_WM8750A.img</i> | 2.4.1.19 | F28926528BE1FA5124F4D3A80FAB5A1F |

Known Issues

- HTTPS uses a self-signed certificate. Many web browsers will show a warning when connecting to the administration and moderation pages. It is safe to disregard this error; the information is still encrypted.
- Using multiple interfaces (for example SIMPL programming and the web pages) at the same time may cause data to become out of sync. Please only use a single interface at a time.
- If the update web page is closed during a firmware update, attempting to reconnect to the device will fail. Please wait for the update to complete before attempting to reconnect to the device. The LED on the front of the device will turn green after the firmware update indicating that it is ready for connections.
- When connecting to the AM-101 via device mirroring, the `Number_of_connected_users_fb` will not reflect the number of users connected to the device.
- Device mirroring does not work within the YouTube® Application

Fixed Issues

- Improved compatibility with device mirroring on the AM-101
- Fixed an issue which caused the output to remain disabled although the user was attempting to connect to the unit with device mirroring on the AM-101
- Fixed an issue when launching the AirMedia application with macOS Sierra
- Changed algorithm to generate a new code each time a user stops presenting with device mirroring when the security code is set to random

AM-100 1.4.0 / AM-101 2.4.0

| Files Included | Version | MD5 |
|---|----------|----------------------------------|
| <i>AM-100_firmware_1.4.0.13_6506508_WM8440.img</i> | 1.4.0.13 | 233D2248918478EA9E77656A6F37C7FF |
| <i>AM-100_firmware_1.4.0.13_6507044_WM8750.img</i> | 1.4.0.13 | 1B517D30201308EF9A640FC3E1CF1B7C |
| <i>AM-101_firmware_2.4.0.14_6508053_WM8750A.img</i> | 2.4.0.14 | EFAF20C7D9664F9057336C08B5C62C37 |

New Features

- Updated AirMedia default background.

Known Issues

- HTTPS uses a self-signed certificate. Many web browsers will show a warning when connecting to the administration and moderation pages. It is safe to disregard this error; the information is still encrypted.
- Using multiple interfaces (for example SIMPL programming and the web pages) at the same time may cause data to become out of sync. Please only use a single interface at a time.
- The WM8440 firmware update can take up to 30 minutes. DO NOT remove power during the update process.
- If the update web page is closed during a firmware update, attempting to reconnect to the device will fail. Please wait for the update to complete before attempting to reconnect to the device. The LED on the front of the device will turn green after the firmware update indicating that it is ready for connections.
- Due to a change in the video subsystem, when updating a WM8440 based device from version 1.0 to a newer version, the following will happen:
 1. Output resolution will be changed to 1024x768.
 2. Custom OSDs will be set back to the default image.
 - Please reset these using the device's web pages.
 - This does not occur when going from 1.1 to 1.2.
- When connecting to the AM-101 via device mirroring, the Number_of_connected_users_fb will not reflect the number of users connected to the device.
- Device mirroring does not work within the YouTube® Application

Fixed Issues

- Fixed issue which caused AM-100_8750 Ethernet Link to oscillate when connected to certain unmanaged Ethernet switches
- AirMedia outputs black screen after powering the device for an extended period of time
- Fixed clickjacking vulnerability in the web application
- Fixed command injection vulnerability which existed in rftest.cgi (CVE-2016-5640)
- Fixed path traversal vulnerability which existed in login.cgi (CVE-2016-2639)

AM-101 1.3.0

| Files Included | Version | MD5 |
|---|----------|----------------------------------|
| <i>AM-101_firmware_1.3.0.11_6508053_WM8750A.img</i> | 1.3.0.11 | 51C313E6B0DE57D3E60D63F14C404C93 |

New Features

- AM-101 supports Device Mirroring. This is enabled by default. Settings can be found on the Device Setup page.

Known Issues

- HTTPS uses a self-signed certificate. Many web browsers will show a warning when connecting to the administration and moderation pages. It is safe to disregard this error; the information is still encrypted.
- Using multiple interfaces (for example SIMPL programming and the web pages) at the same time may cause data to become out of sync. Please only use a single interface at a time.
- The WM8440 firmware update can take up to 30 minutes. DO NOT remove power during the update process.

- If the update web page is closed during a firmware update, attempting to reconnect to the device will fail. Please wait for the update to complete before attempting to reconnect to the device. The LED on the front of the device will turn green after the firmware update indicating that it is ready for connections.
- When connecting to the AM-101 via device mirroring, the Number_of_connected_users_fb will not reflect the number of users connected to the device.
- Device mirroring does not work within the YouTube® Application

AM-100 1.2.1

| Files Included | Version | MD5 |
|--|----------|----------------------------------|
| <i>AM-100_firmware_1.2.1.10_6506508_WM8440.img</i> | 1.2.1.10 | 42e836c74de9166dd65e81ecca7c1435 |
| <i>AM-100_firmware_1.2.1.10_6507044_WM8750.img</i> | 1.2.1.10 | b18872f6dad603f80b3e07e452c8c2ae |

New Features

- Directly control device from Crestron Fusion®.
- Secure remote view with the AM-100's login code.
- Set an automatic video timeout. When no users are connected, the AM-100 will turn off its video output after a user settable timeout.
- Set a dynamic OSD image. Image can be retrieved via web and FTP server. Controllable via web interface, control system or Crestron Fusion.
- Fine grained control of connection information shown on the OSD, including the ability to show domain suffix, only the IP address or no information at all. Controllable via web interface, control system or Crestron Fusion.

Known Issues

- HTTPS uses a self-signed certificate. Many web browsers will show a warning when connecting to the administration and moderation pages. It is safe to disregard this error; the information is still encrypted.
- Using multiple interfaces (for example SIMPL programming and the web pages) at the same time may cause data to become out of sync. Please only use a single interface at a time.
- The WM8440 firmware update can take up to 30 minutes. DO NOT remove power during the update process.
- If the update web page is closed during a firmware update, attempting to reconnect to the device will fail. Please wait for the update to complete before attempting to reconnect to the device. The LED on the front of the device will turn green after the firmware update indicating that it is ready for connections.
- Due to a change in the video subsystem, when updating a WM8440 based device from version 1.0 to a newer version, the following will happen:
 3. Output resolution will be changed to 1024x768.
 4. Custom OSDs will be set back to the default image.
 - Please reset these using the device's web pages.
 - This does not occur when going from 1.1 to 1.2.

Fixed Issues

- AM-100 will now use the display's preferred resolution by default when using the HDMI output. Resolution can still be manually set. Due to hardware limitations, the VGA output does not have this feature.
- OSD shows additional information if network failures occur.
- Device no longer redirects to its IP address when connecting to the web interface. It will maintain the URL entered by the user.
- Added ability for user to control how long the OSD connection information is displayed after a user connects.
- Added ability to disable showing the OSD connection information when the AirMedia application is opened.
- Fixed compatibility issue with NEC NP-P451W where the NEC device was sending poorly formatted CIP packets causing it to appear offline when using Crestron Connected.
- Changed mute behavior to not mute communication devices when starting.
- Changed certificate to use a cryptographically strong hashing algorithm (SHA-256).
- Fixed vulnerability to HTTPS stripping attacks.

AM-100 1.1.1

| Files Included | Version | MD5 |
|--|----------|----------------------------------|
| <i>AM-100_firmware_1.1.1.11_6506508_WM8440.img</i> | 1.1.1.11 | f6d5c5366a82965f5f2eec1ed8140bdb |
| <i>AM-100_firmware_1.1.1.11_6507044_WM8750.img</i> | 1.1.1.11 | 6a26c91ff93349231e911780ac269ec4 |

Fixed Issues

- Fixed heart bleed vulnerability introduced with the addition of HTTPS in version 1.1.0.
- Removed development tools exposed on WM8440 platform.
 - Note, this issue was resolved for the WM8750 in firmware 1.1.0

AM-100 1.1.0

| Files Included | Version | MD5 |
|--|----------|----------------------------------|
| <i>AM-100_firmware_1.1.1.15_6506508_WM8440.img</i> | 1.1.0.15 | 79060012cdc3e682237ba7f35812ff77 |
| <i>AM-100_firmware_1.1.0.14_6507044_WM8750.img</i> | 1.1.0.14 | 8d00cb7b40dd819cb5d3dfb9d5b1c488 |

New Features

- Layout Control: A single moderator can control the layout of the presenter(s) on the screen using the web interface, SIMPL programming or SNMP.
- HTTPS for device configuration.
- SNMP for management and configuration.
- Selective disabling of services such as SNMP and web administration.
 - Can be done via the web interface, SIMPL programming or SNMP.

Fixed Issues

- Improved compatibility with Crestron Connected™ devices.

- Expanded SIMPL symbol including the ability to programmatically set resolution, reboot device, control device layout and turn services on and off.
- Removed development tools.
- Fixed anonymous access to return_test.cgi.
- Fixed issue where AM-100 would act as a DHCP server.
- Fixed issue where multiple downloads using Safari would cause the application to fail to connect to AirMedia.
- Added ability to hide the login code from the OSD (must use SIMPL programming or SNMP to get value.)
- Removed global accelerator keys (hotkeys) from Windows application.

Note: AM-100_firmware_1.1.0_package_01 was released to add updated release notes.

AM-100 1.1.0.12 (limited release)

Fixed Issues

- See above

Known issues

- Return_test.cgi is anonymously accessible.
- Crestron connected displays may have issues maintaining a connection to AirMedia.

Licensing and Copyright Information

Certain Crestron products contain open source software. For specific information, please visit www.crestron.com/opensource