



Firmware Revision Information

Product Code(s): *ACR1000A-CTL-24 (through –ULT)*

Product Name(s): *ServSwitch Agility iPath Manager*

Date Modified: *August, 26th 2016*

**!!ALWAYS PERFORM A BACKUP OF THE IPATH CONFIGURATION
BEFORE PERFORMING ANY UPGRADES!!**

Instructions for Upgrade:

1. Log into the iPath manager via the web interface and log into the system with the admin account
2. Navigate to **Dashboard >> Updates**
3. Locate “Upgrade iPath Software” and browse for the firmware file of your choice.
4. Click on the “Upload” button and your iPath manager will now be using the firmware you uploaded

Version 4.3.39243 (August 2016)=====

Note: This iPath firmware version must be used with Agility endpoints with firmware version 4.3 or later. When updating the iPath controller to 4.3, and proceeding to update the endpoints afterwards, the receivers will be automatically logged out and disconnected. When the upgrade of the endpoints have completed, each receiver will need to be logged in again. The endpoints will not retain their connection through the update.

Before you Upgrade

If upgrading from 4.0, be sure there are enough addresses in your IP address pool to allocate to all required ports.

Note: Teaming devices will require 2 IP addresses each. On the Primary iPath, browse to the Home>>>Servers and be sure “Require Authentication?” is set to NO. This prevents issues when upgrading any secondary iPath servers.

Upgrade Process:

1. Be sure all devices are connected and online that are part of the iPath system
2. Upload the 4.3 iPath firmware package to your Primary iPath server
3. Once the firmware is uploaded into its partition, the Secondary iPath will become an Acting Primary. You will need to redirect your browser back to the Primary IP Address (the primary will become available once the 4.3 image has been uploaded)
4. On browsing back to the Primary, you will see the “Reboot” button which will appear on the screen, click this to reboot the iPath into the 4.3 firmware image.
5. Login and upload the 4.3 firmware packages for your Agility Transmitters and Receivers
6. Upgrade Transmitters and Receivers Main and Backup firmware in the usual way.
7. Once the Primary iPath and endpoints are all running at 4.3, browse to the secondary iPath controller

8. Upload the 4.3 firmware package to the secondary iPath server and reboot on completion.

The upgrade should now be complete, check the “Servers” tab on the Primary iPath to confirm both the Primary / Backup are upgraded and synchronized.

New Feature (IGMPv3 Support):

There is a new option on the network settings page to select which version of IGMP to use. The default setting is force IGMPv2 which is the existing behaviour of the Agility endpoints. However there is now a new setting force IGMPv3. In order to use this with your network, it must be compatible with IGMPv3.

When IGMPv3 is enabled, there are six globally unique multicast groups; Video 0 on ETH1, Video 0 on ETH2, Video 1 on Eth1, Video 1 on ETH2, Audio on ETH1 and Audio on ETH2. Every RX unit is instructed to join these multicast groups and select the appropriate source address of the TX unit to connect to.

Using IGMPv3 reduces the number of multicast groups that are required, and thus reduces the amount of multicast routing that is required. The network load is reduced and security is improved. On a multisubnet system there is only the requirement to route six multicast groups.

New Feature (Channel ID Numbering):

The channel ID numbering has been made dynamic. Channel IDs are now created randomly when required and deleted after use. This means that iPath will never run out of channel IDs which could have been an issue pre 4.3 where the channel IDs were auto-incremented and never deleted.

New Feature (Serial Number Tracking):

iPath now records the Agility endpoints serial number in its database. This is exposed by using the API `get_devices` method.

New Feature (SNMP Changes):

The following changes have been added to the SNMP agent used in iPath;

- Traps - iPath should send a Trap when an Agility device goes down or comes up. The trap to indicate the reason, if it is known.
- MIB additions for Agility units:
 - The unit's serial number should be exposed.
- MIB additions for Agility network:
 - The number of active connections.
 - The number of receivers.
 - The number of transmitters.
- MIB additions for the iPath state:
 - CPU usage.
 - Memory usage.
 - Software version.

New Feature (SYSLOG Message Format):

SYSLOG messages now follow a standard format based upon RFC 5424 but is proprietary to Black Box.

New Feature (LDAP Support):

The Active directory interface has been updated to support LDAPS. Entering `{ldaps://<ipaddress>/}` into the domain controller field means the Active directory will now connect using certificates.

New Feature (150 channel changes a minute):

iPath will support 150 channel changes in a minute. Faster switching rates are possible but iPath support cannot be guaranteed.

New Feature (Large Architectures):

Support for up to 2,048 Agility endpoints has been confirmed

Changes since previous version:

Audio source IP address is now included in the IGMPv3 report
It is now no longer possible to access any unmerged html templates
HPZR30W monitor the EDIDs are now read correctly when changing from Dual Link to Single Link video resolutions
After upgrading a backup server that has now been promoted as the primary server the endpoints are no longer reported as being offline
A new API command Create_Temp_channel has been added to the API. This channel is automatically deleted after 2 hours. It is created without any permission so it can be used in the OSD or web-ui. All API users have access to this channel. If the temp channel has permissions assigned within the two hours it becomes a permanent channel and is not automatically deleted.
AD users were not being added to AD groups. When using the preview function of the AD page it was possible that users would not be added to the group. This now has been resolved so the preview function works in the same way as save and sync.
A new API method update_device has been added which can be called to update the description and location fields in a webui.
HP KUS1205 card reader is now fully supported

Known Issues:

If you have a lot of very large backup files stored on the iPath manager, it may not be possible to upload an upgrade file. Workaround for this is deleting unnecessary backup files then it is possible to upgrade
When using Multi-Subnet mode, it is not possible to re-add the original factory reset primary back into the cluster. Workaround is if you need to add a replacement Primary into a cluster, be sure that it is factory fresh
After upgrading a backup iPath manager with required authentication enabled, the backup is in an unconfigured and quiescent state. Details: If require authentication is enabled on the server's settings then a backup server will report itself as unconfigured and quiescent after upgrading. Recovery: Reset the backup iPath controller and re-add it to the cluster Workaround: Ensure that require authentication is set to no and there is no cluster password in use when upgrading the backup iPath.
iPath does not save a “\” in the NTP keys Details: It is not possible to use an NTP key containing the \ character. Recovery: None Workaround: Do not use the \ in the NTP key
Multicast IP Base Details: It is possible to set the multicast IP bases to 224.0.0.0, 225.0.0.0, 226.0.0.0, 224.128.0.0, or 237.0.0.0 which could potentially flood the network as these addresses are reserved for network protocols. Recovery: None Workaround: Don't set the multicast IP base to these addresses.
API implementation uses cookie based session authentication which allows API calls without a valid login token being provided.

Details: Execute an API call by browsing to an appropriate URL, e.g. <IPADDRESS>/api/?method=get_devices&v=3
This returns success even though it should fail.

Recovery: None

Workaround: None

Connecting the Belkin classic keyboard to the rear of the ACR1002A-R causes the receiver to reboot

The maximum number of AD users that can be a member of an AD group is 1499. If there are 1500 or more users in a group then the group is returned as empty.

3M Micro-touch screens are not supported

Iiyama Prolite T2236MSC-B2 touch screen is not supported.

Version 2.5.22555=====

Note: This iPath firmware version must be used with ACR1000A & ACR1002A firmware version 2.9 or later.

New Features:

- Backup and Restore functions have been improved
- OSD wrap around issue resolved

Version 2.4.21075

Note: This iPath firmware version must be used with ACR1000A & ACR1002A firmware version 2.8 or later.

New Features:

- Hot Key Switching: It is now possible to switch either channels or activate presets by hot key presses. This is done on a per user basis with 10 hotkeys permissible. This is a 3 button press operation with two being set by the iPath management system leaving the user to associate 0 to 9 keystrokes with channels or presets. A last channel toggle key is also included.
- The Agility Dual model has an embedded VNC server within allowing remote access via IP. This has been added to the list of supported devices.
- It is no longer possible to change the iPaths units IP address to something which is already assigned on the network

Version 2.3.19767

Note: This iPath firmware version must be used with ACR1000A & ACR1002A firmware version 2.7 or later.

Additions:

- Support for a new compression algorithm (AFZ) on Agility Dual ACR1002A-T. A new lossless compression scheme is supported in this release of iPath firmware for the Agility Dual ACR1002A-T. There are no user interactions as the choice of compression scheme is automatic depending on the type of data and type of Agility unit that is being interfaced.
- Added user login with no passwords. It is now possible to login with username but no password.
- Added user logout automatically. A setting is now available to automatically logout users after a set amount of inactivity.
- Added channel changes via API. The API has been extended to allow channel changes. See API documentation.
- Added new USB setting. Two new USB features have been added. The ability to attach combined USB devices which include isochronous endpoints. While isochronous USB is still not supported, we have added the ability to ignore isochronous endpoints. Some USB devices like iPhones and Bloomberg keyboards have multiple USB devices reported. If only one of these devices was isochronous (e.g. supports audio) the entire

device was rejected by the system. Now we have added the ability to ignore isochronous endpoints so while the audio part of the device will still not work, the other functions will. An iPhone can now be used as a memory device.

- Added new USB HID devices only setting. Excludes all other devices when enabled (e.g. flash drives)
- Added new hot plug detect settings. Hot plug detect signal can now be extended to 1 second
- Added static IP for second Ethernet port on iPath controller

Improvements:

- Improved OSD when using low resolutions. The OSD is still 800x600, however when displayed on a monitor which supports less than this, scroll bars appear so it is possible to navigate to all parts of the OSD.
- Improvement on Settings page. The settings page had become too long and now has been split up into 5 manageable tabs.
- Improvement on Selection of presets from the OSD menu. It was previously possible to close the OSD if the preset did not include the receiver that was being used.

Known Issues:

- It is still possible to change iPath IP address to an address that is in use on the network already.
- There is a 45 character limit in the name fields.

Version 2.2.17725

- Baseline release with cosmetic fixes

Version 2.1.17568

- Will allow the ACR1002A units with firmware 2.3 or higher to be supported. Magic eye will only run on ACR1002A units that have firmware version 2.3 installed
- Added support for ACR1002A Magic Eye which reduces network bandwidth on graphics cards that dither DVI video output. This is enabled by default.
- Added new global settings for microphone audio input level, network medium and fibre protocols
- Added Video compatibility check so the receiver can display the video connected. If not in range, an error is displayed in the OSD
- Added user interface improvements such as green/yellow buttons to channels. This is disabled by default
- Added additional dual-link EDID information (2048Xwxyz)
- Added license software for upgrades
- Improved factory reset of iPath
- Improved restore of backups
- Improved active directory support
- Improved IP address validation
- Improved dual-link EDID info, no longer sends to non dual-link units
- KNOWN ISSUES: ETH 2 port on iPath cannot be configured with static IP address, this requires DHCP. Static IP addressing scheduled for next release of firmware

Version 2.0.16037

- First release to support ACR1000A and ACR1002A on the same network/system
- Only works with ACR1000A and ACR1002A units that have firmware version 2.1 or higher
- Added support for Agility dual-head/dual-link models
- Added ability to upload/upgrade backup firmware on devices
- Added feature to clone users, channels, groups and presets

- Added filters for connection logs
- Added batch delete on all screens in the iPath manager web interface
- Improved OSD; combined channels/presets, better filtering and favourites)
- Admin can now create audio or video or USB only channels

Version 1.8.16067

- This firmware is for Factory release only
- This version prevented the corruption of the database by the addition of an ACR1002A unit

Version 1.6.13935

Note: This version of iPath firmware is best used with Agility single-head units (ACR1000A) running version 1.14.14363. If your Agility units are currently running on a different version of firmware, they can be upgraded to this version of firmware using the iPath manager.

- Added the USB speed and hub size options in the transmitter configuration web page

Version 1.5.13643

- Added keyboard country code settings for the receiver configuration web page

Version 1.4.13328

- Hot plug detect timings made available on transmitter configuration web page
- Dummy boot keyboard made available on transmitter configuration web page
- Ability to disable OSD alerts
- OSD remembers the last user page per user session

Version 1.3.12564

- Added API integration support (basic)

Version 1.2.12444

- Original shipping release