Global Cache' Release Notes
Global Connect Firmware and Webpages

Release Date: April 3, 2023
Version: 05
Part number:
710-4001-05, Firmware GCIR3 module
710-4002-05, Firmware GC232 module
710-4003-05, Firmware GCRL3A module
710-4004-05, Firmware GCHMX3 module

Webpage version: 1.3

Firmware Changes

FEATURES:

· TCP port 4998 and 4999 now implement a FIFO connection management algorithm. When the final (8th for port 4998 or 4th for 4999) connection is opened the first connection opened on the port will be closed. This prevents "stale" connections from occupying all available connections on a given port.
· Serial: Increased buffer sizes improving serial throughput.

BUG FIXES:

· TCP: Sending a TCP 'RST' to a previously closed connection on port 4999 prior to opening a new connection could result in the new connection being reset.

KNOWN ISSUES:

· TCP:
  - When multiple TCP connections to a port are closed in rapid succession not all connections may terminate properly.
· Sensor Notify:
  - Rapid state changes can cause multiple back-to-back notifications with the same state.
  - In TCP API state change notify mode, if another port's mode is changed, a spurious "state,1:X,[state]" response is output.
  - In TCP API state change notify mode, if a sensor port's mode is changed to another mode, a "ERR SI001" error is output.
· Sensors:
  - After setting a port to Sensor mode, the indicator LED does not reflect the correct state until the first change of the input state.
  - The device will become unresponsive while the sensor input changes at a frequency of ~7 Hz or higher.
· IR:
  - In Receiver mode, received IR codes' port parameter is always 1 (and not the actual receiving port address).
  - Sending an IR code to a port in Receiver mode results in the port no longer receiving any IR.
· REST/HTTP API:
  - After a reset request, there is a 1-second delay before the unit physically resets, during which any received API commands may still be processed. Any config changes made during this period will not be saved.
  - Configuration lock using the "secure" field of "api/host/config" resource is not fully supported.
· DHCP:
  - When a device in DHCP client mode attempts to acquire a lease. If a DHCP server doesn't respond after two minutes, the device falls to a default static IP address based on module address. DHCP client mode will not be re-enabled unless an API request is sent with DHCP enabled, or the device is rebooted.
· HTTP:
  - If the device hostname is changed without setting any other configuration values a filesystem write is not triggered. This results in the value returning to its previous value after a power cycle.

Previous Release Notes

Release Date: May 30, 2023

Firmware version: 04.rc1
Part number:
710-4001-04.rc1, Firmware GCIR3 module

Webpage version no: 1.3

Firmware:

BUG FIXES:
· IR:
  - Fixed an issue where the unit could send one or two extra pulses in each pulse group. This mainly affected XMP IR codes.
  - Fixed an issue where the IR code offset was not being set correctly for codes with repeats.
  - Fixed an issue where repeated IR codes would be missing 4 pulses from the beginning of the repeated section of the code.
  - Fixed an issue where IR codes with a 5 digit ID value would return the ‘completeir’ response without a carriage return.
  - Fixed an issue with IR learning where codes with large "off gaps" (~80mS or larger) would not be learned in their entirety.

KNOWN ISSUES:
· Sensor notify:
  - Rapid state changes can cause multiple back-to-back notifications with the same state.
  - In TCP API state change notify mode, if another port’s mode is changed, a spurious “state,1:X,[state]” response is output.
  - In TCP API state change notify mode, if a sensor port’s mode is changed to another mode, a “ERR SI001” error is output.
· Sensors:
  - After setting a port to Sensor mode, the indicator LED does not reflect correct state until the first change of the input state.
  - The device will become unresponsive while the sensor input changes at a frequency of ~7 Hz or higher.
· IR:
  - In Receiver mode, received IR codes’ port parameter is always 1 (and not the actual receiving port address).
  - Sending an IR code to a port in Receiver mode results in the port no longer receiving any IR.
· REST/HTTP API:
  - After a reset request, there is a 1-second delay before the unit physically resets, during which any received API commands may still be processed. Any config changes made during this period will not be saved.
  - Configuration lock using the "secure" field of "api/host/config" resource is not fully supported.
· DHCP:
  - When a device in DHCP client mode attempts to acquire a lease. If a DHCP server doesn’t respond after two minutes, the device falls to a default static IP address based on module address. DHCP client mode will not be re-enabled unless an API request is sent with DHCP enabled, or the device is rebooted.

Release Date: December 23, 2019

Firmware version: 03
Part number:
710-4001-03, Firmware GCIR3 module

Webpage version no: 1.3
Part number:
710-4001-03, GCIR3 module
710-4002-02, GC232 module
710-4003-02, GCRL3A module

710-4004-02, GCHMX3 module

Firmware:

BUG FIXES:
· IR:
  - IR output to port 1 and 2 is no longer mirrored on port 3.
  - IR output to an unconfigured port for IR out returns an error. Previously, if IR receive was active and an IR code was sent, the port would stop responding to requests until the device was reset or the port was reconfigured to another type.
  - Sensor input on port 3 is now working.

KNOWN ISSUES:
· Sensor notify:
  - Rapid state changes can cause multiple back-to-back notifications with the same state.
  - In TCP API state change notify mode, if another port's mode is changed, a spurious "state,1:X,[state]" response is output.
  - In TCP API state change notify mode, if a sensor port's mode is changed to another mode, a "ERR SI001" error is output.
· Sensors:
  - After setting a port to Sensor mode, the indicator LED does not reflect correct state until the first change of the input state.
  - The device will become unresponsive while the sensor input changes at a frequency of ~7 Hz or higher.
· IR:
  - In Receiver mode, received IR codes' port parameter is always 1 (and not the actual receiving port address).
  - Sending an IR code to a port in Receiver mode results in the port no longer receiving any IR.
· REST/HTTP API:
  - After a reset request, there is a 1-second delay before the unit physically resets, during which any received API commands may still be processed. Any config changes made during this period will not be saved.
  - Configuration lock using the "secure" field of "api/host/config" resource is not fully supported.
· DHCP:
  - When a device in DHCP client mode attempts to acquire a lease. If a DHCP server doesn't respond after two minutes, the device falls returns to a default static IP address based on module address. DHCP client mode will not be re-enabled unless an API request is sent with DHCP enabled, or the device is rebooted.

Webpages:
Changes from Global Connect Configuration Webpages Version 1.0

· IR - Added IR Receiver option.
· IR - Updated settings text on IR Settings page.
· Fixed issue where incorrect reset messages were being displayed.
· Updated version file for IR.
· Fixed issue with page reloading, causing back button to function incorrectly.

Release Date: December 23, 2019
Firmware version: 02
Webpage version no: 1.0
Part numbers:
710-4000-02, Firmware Bootloader
710-4001-02, Firmware GCIR3 module
710-4002-02, Firmware GC232 module
710-4003-02, Firmware GCRL3A module
710-4004-02, Firmware GCHMX3 module

Firmware:
NEW FEATURES & ENHANCEMENTS:
· HDMI CEC transmit and receive is now supported in the TCP API and HTTP API.
· IR Receive is now supported in the TCP API and HTTP API, which allows receiving IR codes in Global Caché format. See Global Connect TCP API for more information. Global Connect HTTP API not yet updated.
· A debounce setting has been added to sensor inputs to allow adjustable glitch rejection.

BUG FIXES:
· Network:
  - Resolved an issue where modules could occasionally hold the bus busy after transmitting, preventing other modules from communicating on the network.
· DHCP:
  - Fixed an issue where IP config values could not be set in DHCP Client fall back (timeout) state.
· Beacon:
  - The Status network beacon now updates immediately and does not incorrectly report an error for 60 seconds.
  - The Config-Ver field is now cleared after the filesystem is formatted.
· TCP API
  - Fixed a bug resulting in an exception upon closing a connection with an active "getstate,...,notify" command.
· REST/HTTP API:
  - Fixed an issue where GET requests with content returned no response and remained open, requiring the client to manually disconnect/close the connection.
  - GET request to resources not supporting GET method now return the correct Allow header.
  - Fixed an issue where a CORS preflight OPTIONS request fails due to the Access-Control-Allow-Origin header not being returned.
  - GET to resources under /api/host/modules/1/switch now return a proper Etag header.
  - Content-Type header is now included in all responses to GET requests.
  - IR andsSerial module resource structure is now harmonized with other modules (previous resources are deprecated and not visible, but still supported for now).
  - Fixed an issue where certain PUT requests to /api/host/LEDs/<port> would hang and not return a response.
  - Content-Type header is now properly included in responses to API requests to the /api/host/storage/files resource.
  - Fixed an issue with incorrect IP config settings being reported after DHCP fall-back (DHCP client timeout).
· IR:
  - Fixed an issue causing sensor notify timer mode to malfunction.
  - Sensor input port LEDs now change state according to sensor input state.
  - Sensor input LED states are now consistent with previous products.
  - Sensor notify beacon now indicates the correct module and port values.
· Serial:
  - TCP port 4999 - Fixed an issue where hardware flow was enabled and a connection was closed with CTS deasserted that resulted in several bytes of the most recently received serial data being received when a new connection was opened.
  - Fixed an issue where POST to api/host/modules/1/serial/1/data?timeout=<delay> would return immediately despite serial data not being received.
· HDMI
  - TCP API command "setstate,1:0,1" now disables the selected input port while disabling the output port.
· Filesystem
  - Resolved an issue wherein filesystem format and file upload requests could hang with no response.

KNOWN ISSUES:
· REST/HTTP API:
  - After a reset request, there is a one second delay before the unit physically resets, during which API commands may still be processed. Any config changes made during this period will not be saved.
  - Configuration lock using the secure field of api/host/config resource is not fully supported.
· IR:
  - After setting sensor mode, the port’s LED does not update until the input state changes.
  - IR output to port 1 or 2 is mirrored on port 3.
· DHCP:
  - When a device in DHCP client mode attempts to acquire a lease, if no DHCP server responds after 2 minutes, the device returns to a default static IP address based on module address. To re-enable DHCP client mode, an API request can be sent with DHCP enabled or the device can be rebooted.

Webpages:

Changes from Global Connect Configuration Webpages Version 0.6
* Advanced page added for Reboot and reset options
* Additional network reset handling
* Ending timer early on reset when detecting unit rebooted successfully

* Modifications to HDMI config layout and functionality
* Internet Explorer specific compatibility issues

Release Date: 2018 November 16
Firmware version: 01
Webpage version no: 0.5
Effective part numbers:
710-4000-02, Firmware Bootloader
710-4001-01, Firmware GCIR3 module
710-4002-01, Firmware GC232 module
710-4003-01, Firmware GCRL3A module
710-4004-01, Firmware GCHMX3 module

Firmware:
ADDED:
- GCIR3: IR Learn is now supported via integrated "IR IN" front panel receiver.
- GCIR3: Sensor Input mode is now available on all 3.5mm ports.
- GCHMX3: CEC message transmit is enabled. (Receive/listen will be available in a future release)
- GCIR3, GCRL3A, GCHMX3: The TCP API 'getstate' command now supports a "TCP Change Notification" mode which sends asynchronous response(s) to connected TCP client(s) for any state change of the requested port.
- GCHMX3: TCP API 'setstate' command now supports disabling switch output(s).
- All Modules: A "Line" field is added to the network beacon to indicate Product Line.

FIXED:
- GCHMX3: At initial boot, LED's for any selected ports now indicate the correct state.
- The "Host:Config-Ver" error in the "Status" network beacon is now properly cleared after filesystem is formatted.

KNOWN ISSUES:
- At bootup, the "Status" network beacon field may incorrectly report an error for 60 seconds until it is updated.
- GCIR3: In Sensor Input mode, port LED's do not change state according to Sensor Input state.
- REST/HTTP API: After a reset request, there is a 1-second delay before the unit physically resets, during which API commands may still be processed. Any config changes made during this period will not be saved.
- REST/HTTP API: 'GET' requests with non-empty content body return no response, and remain open, requiring the client to manually disconnect/close the connection.
- REST/HTTP API: 'GET' request to resources that do not support the 'GET' method return header "Allow": GET.
- REST/HTTP API: CORS pre-flight OPTIONS request fails due to the "Access-Control-Allow-Origin" header not being returned.
- REST/HTTP API: Configuration lock using the "secure" field of "api/host/config" resource is not fully supported.
- GC232: Serial I/O on TCP port 4999 - If hardware flow control is enabled, and the connection is closed while CTS is deasserted, several bytes of the most recently received serial data will be received when a new connection is opened.

Hardware:
- GCHMX3: HDCP 2.2 authentication may intermittently fail at UHD 4K 60fps with a Roku Premiere. This was also observed on other manufacturers' switches.
- GCIR3 IR learn: The first pulse value may be off by several pulses. In practice this is not expected to affect functionality for most remotes.

Webpages:
- Show version and max addresses on main page
- Added manifest and version validation files
- Added support for IR Sensors configuration

BETA Release Date: 2018 March 15

Firmware version: 00b01
Webpage version no: 0.2
Effective part nos:
710-4000-02, Firmware Bootloader
710-4001-00b01, Firmware GCIR3 module
710-4002-00b01, Firmware GC232 module
710-4003-00b01, Firmware GCRL3A module
710-4004-00b01, Firmware GCHMX3 module

Firmware:
ADDED:
- Devices check for existence and correct version of configuration Webpages. If found missing, or version is invalid, the error "Error:Config-Ver" is reported in the discovery beacon Status field.
- Configuration Webpages version is reported in a new discovery beacon field named Config-Ver.

FIXED:
- All LEDs on GCIR3 and GCRL3A modules flash during a button reset.
- GCHMX3 module properly applies default state after reset.
- GCIR3 default IR port configuration changed to 2E1B (was 3E).
- GCRL3A configuration Webpages load properly.
- Resolved an issue with GCIR3 module where a PUT to /api/host/modules/1/IR resources would cause resources under /api/host/modules/1/ to disappear.

BUGS:
- At initial boot, GCHMX3 module LEDs for any selected ports will be off until the port selection is toggled.
- Serial I/O (port 4999): For a connection with hardware flow control enabled, if data is sent and the connection is closed, the next connection will receive several bytes from the previous closed connection.
- Config-Ver beacon field is not cleared after file system is formatted.

BETA NOTES:
- GCIR3: IR learn is not yet supported.
- GCIR3: Sensor input is not yet supported.
- CHMX3: CEC is not yet supported.
- HTTP API: Configuration lock using secure field of api/host/config resource is not yet supported.
- TCP API: Response carriage returns are sometimes sent in a separate packet (legal but not preferred).
- HTTP and TCP API: Some error response values and text descriptions are not finalized.
- NOTE: Due to a bug-fix, the file system will be reformatted on first boot after updating firmware. If updating with iHelp, this requires that the update be run twice to ensure the module's web file are present.

Hardware:
- GCHMX3: HDCP 2.2 authentication may intermittently fail at UHD 4K 60fps with a Roku Premiere. This was also observed on other manufacturers' switches.

Webpages:
Bugs:
- GCHMX3: Displayed HDMI Input/Output port state may not reflect current state of the switch (for example, if the switch has been controlled by another request or manually via physical buttons)

BETA Release Date: 2018 January 26
Firmware version: 00b00
Webpage version no: 0.1
Effective part nos:
710-4000-02, Firmware Bootloader
710-4001-00b00, Firmware GCIR3 module
710-4002-00b00, Firmware GC232 module
710-4003-00b00, Firmware GCRL3A module
710-4004-00b00, Firmware GCHMX3 module

Firmware:
- GCIR3: IR learn not yet supported.
- GCIR3: Sensor input not yet supported

- GCIR3: Default configuration is 3 Emitter (will be changed to 2 Emitter, 1 Blaster).
- GCHMX3: CEC not yet supported.
- GCHMX3: Input 3 is active after factory default until a new state is set.
- HTTP API: Configuration lock using "secure" field of "api/host/config" resource is not yet supported.
- TCP API: Response carriage returns are sometimes sent in a separate packet (legal but not preferred).
- Serial I/O (port 4999): If a connection is open, and if hardware flow control is enabled and the connection is then closed, last received data from closed connection is sent to a new connection.
- HTTP and TCP API: Some error response values and text descriptions are not finalized.
- Beacon: "Error:Webpages" status is reported due to the manifest not being present with Webpage files. This error can be ignored until next update is available.

Hardware:
- GCHMX3: HDCP 2.2 authentication may intermittently fail at UHD 4K 60fps with a Roku Premiere. This was also observed on other manufacturers' switches.

Webpages:
- GCHMX3: Displayed HDMI Input/Output port state may not reflect current state of the switch (for example, if the switch has been controlled by another request or manually via physical buttons)

Support and Documentation:

For assistance, contact our support team at support@globalcache.com or call us at +1 541-899-4800.