



CR Toolbox Software

Product Manual

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1. CR Toolbox Overview and Installation

What is it? Where to get it? What does it do?

CR Toolbox is a universal application designed for compatible Contemporary Research products. CR Toolbox can be downloaded from the software tools section of contemporaryresearch.com. It is a Windows application, compatible with versions XP SP3 through Windows 10.

When launched, it will automatically search for connected Contemporary Research devices. CR Toolbox has the capability to locate all Contemporary Research devices and browse each onboard webpage. It can also be used to update firmware for individual, selected, or all devices. Currently, the supported products include QMOD HDTV Modulator-IPTV Encoders, QIP IPTV Encoders, ATSC-series HDTV Tuners, ICE-HE-DXL and IP-DXL Display Control Center, and QIP-D and QIP-DVX IPTV Decoder-Controllers,

Device Name	Version	Status	IP Address	MAC Address
<input type="checkbox"/> QMOD-HDMI2-0032	2.8.2		192.168.1.225	00-14-C8-07-00-32
<input type="checkbox"/> QIP-HDMI2-006C	2.7.9		192.168.1.227	00-14-C8-0C-00-6C

The current options specific to each product are as follows:

Locate

- All QMOD HDTV Modulator-IPTV Encoders
- All QIP IPTV Encoders
- All ATSC-series HDTV Tuners
- Legacy 232-ATSC+1, ATSC+SDI, 232-ATSC 4, and ATSC-SDI 4 HDTV tuners
- ICE-HE-DXL and IP-DXL Display Control Centers
- QIP-D and QIP-DVX IPTV Decoder-Controllers
- IP-SDI 4i IPTV Decoders
- ICC1-TC HDTV Tuner/Controllers
- Display Express Servers

(If a network is not available, the PC may be connected directly to each device through a USB or serial port.)

Browse

- All onboard web pages by double-clicking the device name in the list

Update

- QMOD HDTV Modulator/IPTV Encoders – Firmware may be downloaded and installed through the app
- QIP IPTV Encoders – Firmware may be downloaded and installed through the app
- ATSC 4K HDTV, ATSC-SDI 4i, and ATSC-mini Tuners – Firmware may be downloaded and installed through the app
- Other legacy ATSC-series HDTV Tuners – Firmware may be downloaded through the app (updating is manual at this time)
- ICE-HE-DXL and IP-DXL Display Control Centers – Firmware may be downloaded and installed through the app
- QIP-D and QIP-DVX IPTV Decoder/Controllers – Firmware may be downloaded and installed through the app
- ICC1-TC Tuner/Controllers - Firmware may be downloaded, Application and Bootloader may be updated through the app, Decoder firmware updated manually
- CR Toolbox – Update to latest version

The CR Toolbox window has three main sections.

The upper section displays the options for the communication settings.

The middle section includes tabs for each product category and display a list of devices as they are discovered during the launch of CR Toolbox. Information about each device will be displayed including Device Name, Firmware Versions, IP Address and MAC Address. In this section, any device's web page may be opened by double clicking on the device name in the device list.

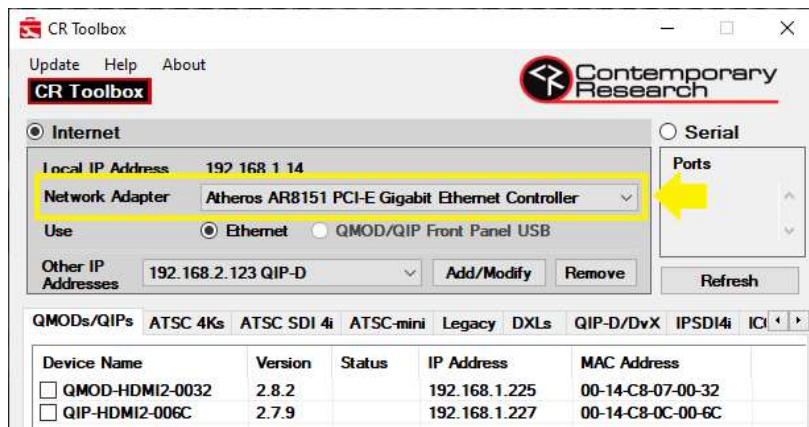
The lower section includes tabs for the available CR Toolbox tasks.

2. Connecting to Devices

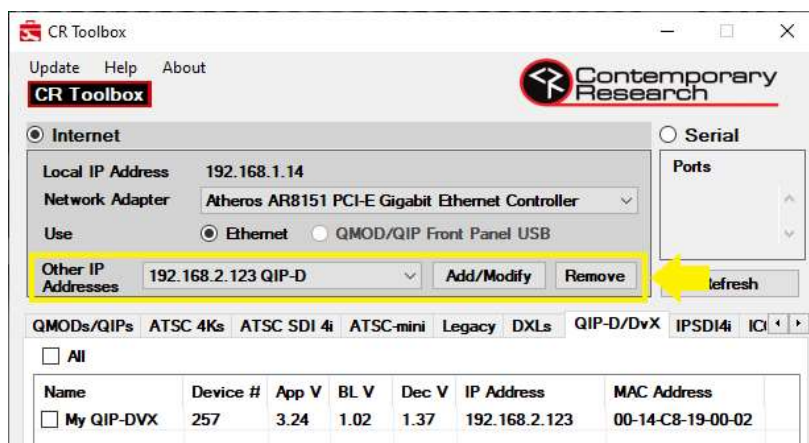
The upper section of the CR Toolbox window displays the options for connecting to the devices. All compatible devices may be connected via Ethernet. Options for communication with devices vary by product.

Ethernet Connection

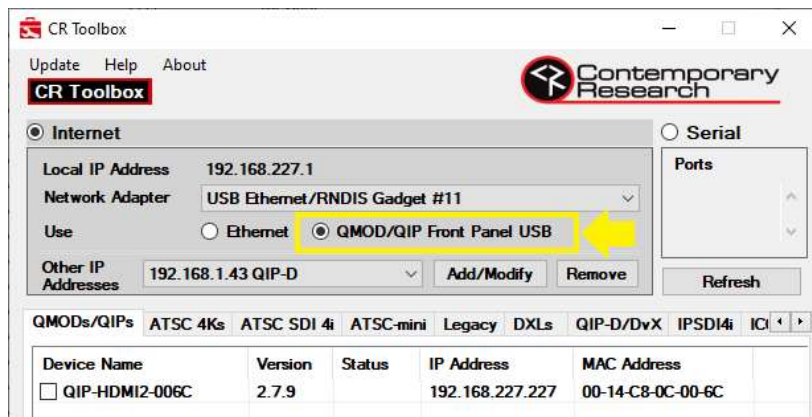
Devices may be connected via Ethernet. Devices may be on a local area network. QMOD encoder/modulators and QIP IPTV encoders may be connected individually using the front panel USB virtual network adaptor.



Local Area Network – Select the appropriate network adapter from the dropdown menu. The application will scan the adapter's local area network for all supported Contemporary Research devices.



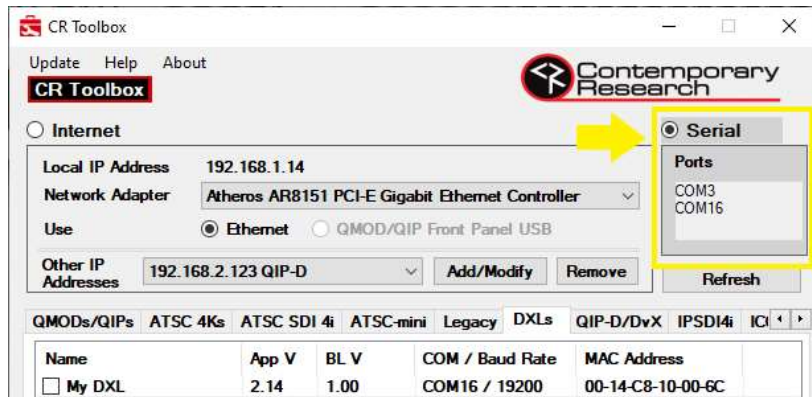
Other IP Addresses – For devices which are not on the network adapter's subnet, CR Toolbox will connect using manually entered IP addresses. Click on **Add/Modify** to add or change an address and click on **Remove** to delete it.



USB Direct IP Connection for QMODs/QIPs – The front-panel USB port of the QMOD encoder/modulators and QIP encoders is a virtual network adaptor. An RNDIS Gadget device driver will be installed automatically by Windows the first time it is connected. Select **RNDIS Gadget** from the **Network Adapter** drop-down menu or click on the **QMOD/QIP Front Panel USB** radio button.

Serial Connection

Devices may be connected via an RS-232 serial connection.



Direct Serial Connection – Detected com ports will be displayed in the Ports field. CR Toolbox will scan all com ports for devices. A USB to Serial adaptor may be used to connect the PC to the rear panel RS-232 port of all tuners, ICE-HE-DXLs, IP-DXLs, QIP-Ds, and QIP-DVXs. The front-panel USB port of legacy tuners, ICE-HE-DXLs, IP-DXLs, QIP-Ds, and QIP-DVXs, and rear panel USB ports of ICE-HE-DXLs and IP-DXLs are virtual com ports. Baud Rate is automatically detected.

The **Refresh** button will initiate a new lookup of CR devices, using all four methods above. If a device is not showing up, click on **Refresh** to try the lookup again.

3. List of Devices

The middle section of the CR Toolbox window will display a list of discovered devices.

Devices are separated into categories based on product model. Each category has its own tab. Devices may be viewed by clicking on the tab for the device category. Information available in the device list will include the device name, firmware versions, and MAC address. For Ethernet connected devices, the IP address will be shown. For serial connected devices, the com port and baud rate will be shown. For iCC-Net controlled devices, the device number will be shown.

Open a Device's Web Page

The web page of any Ethernet connected device may be accessed from the device list by double-clicking on the device name. The web pages may be used to check status and make configuration changes. For ICE-HE-DXL and IP-DXL units, the Display Express Lite web page will be launched. For the Display Express Servers, the Display Express login page will be launched.

4. Tasks

The lower section of the CR Toolbox window will be used for performing tasks. Each product type will have a group of tabs available for each task. The tasks available vary by product.

5. QMODs/QIPs - QMOD HDTV Encoder/Modulators and QIP IPTV Encoders

QMOD and QIP devices may only be discovered by CR Toolbox via Ethernet or the QMOD/QIP front panel USB virtual Ethernet adaptor. The following tasks are available for the QMOD HDTV Encoder/Modulators and QIP IPTV Encoders.

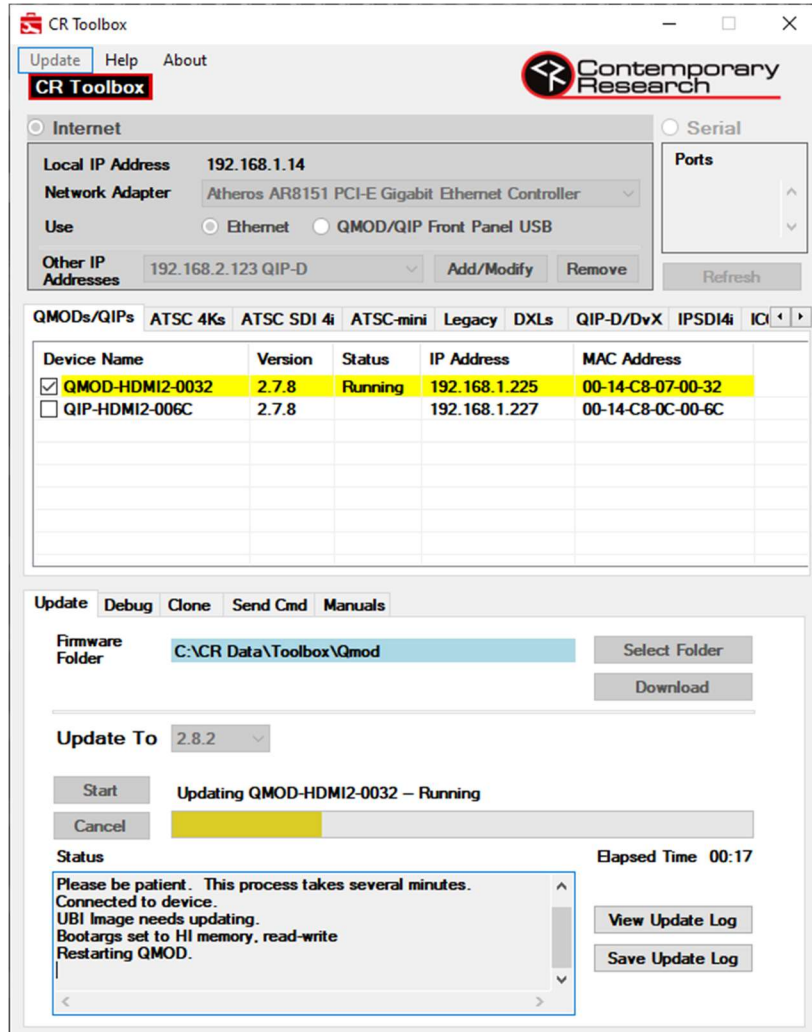
Update – Download and update the firmware

Debug – Create a debug package

Clone – Clone the configuration settings from one unit to another like unit

Send Command – Send serial commands to the unit using Telnet

Manuals – Manuals and other technical information can be downloaded and saved



QMODs/QIPs Update Tab

CR Toolbox can update single or multiple units by clicking on the check box to the left of any or all devices.

- When launched, CR Toolbox will check for firmware updates. If the **Download** button is red, then a newer version is available for download. Press **Download** to get the new version.
- If several versions of QMOD/QIP firmware are stored on your PC, the version to update to may be selected from the drop-down list.
- Click on the checkbox next to the unit or units to be updated. Select **Start** to begin the update process. The status bar shows the update progress. If multiple devices are selected, they will be updated in sequence.
- **Cancel** will stop the current update and any following updates.

QMODs/QIPs ATSC 4Ks ATSC SDI 4i ATSC-mini Legacy DXLs QIP-D/DvX IPSDI4i ICI

Device Name	Version	Status	IP Address	MAC Address
<input type="checkbox"/> QMOD-HDMI2-0032	2.8.2		192.168.1.225	00-14-C8-07-00-32
<input type="checkbox"/> QIP-HDMI2-006C	2.8.0		192.168.1.227	00-14-C8-0C-00-6C

Update Debug Clone Send Cmd Manuals

Debug Package Create package while problem is happening, or as soon as possible afterwards. A debug package directory will be created on your PC. Send .zip file in that directory to CR Customer Support.

Description of Problem

Device QMOD-HDMI2-0032

Package Folder

Open Folder

View Debug File

Create Package

Clear

QMODs/QIPs Debug Tab

The **Debug** tab is used to create a file that can be sent to Contemporary Research Support.

- Enter a problem description, including your contact information.
- Select the specific QMOD/QIP unit from the Device pull-down menu.
- Click on **Create Package** to save the debug information in a folder labeled “debug_<date>_<time>”. The location is noted in **Package Folder**. The files on your PC may be viewed by clicking **Open Folder** or **View Debug File**.

QMODs/QIPs ATSC 4Ks ATSC SDI 4i ATSC-mini Legacy DXLs QIP-D/DvX IPSDI4i ICI

Device Name	Version	Status	IP Address	MAC Address
<input type="checkbox"/> QMOD-HDMI2-0032	2.8.2		192.168.1.225	00-14-C8-07-00-32
<input type="checkbox"/> QIP-HDMI2-006C	2.8.0		192.168.1.227	00-14-C8-0C-00-6C

Update Debug Clone Send Cmd Manuals

Clone Data

Read Data From QMOD-HDMI2-0032 Create & Read

Use Existing Data Select File Read

Data Filename

Write Data To QMOD-HDMI2-0032 Write

☒ Leave Out IP Info

QMODs/QIPs Clone Data Tab

The **Clone** tab allows the user to copy settings from one QMOD/QIP to another. Contemporary Research’s Support Staff is available for assistance.

Cloning can be used to copy configuration data from one device to others of the SAME type (i.e., QMOD-HDMI2 to other QMOD-HDMI2s).

- Select a device from the **Read Data From** dropdown list from which to read cloned data.
- Select **Create & Read**. This creates a file on the selected device and transfers the file from the device to the PC.
- Select a device of the same type from the **Write Data To** drop-down menu.
- If it is not desired to clone the IP information to the destination units, check the **Leave Out IP Info** box. When checked, IP addresses, gateways, and ports will NOT be copied when sending the data file.

- Click on **Write** to write the file to the selected device.
- This process may be repeated for other devices of like type by selecting them from the **Write Data To** dropdown list and selecting **Write**.

If a clone file has already been created on a device, the **Read** button may be used instead of **Create & Read**. If a clone file already exists on the PC, **Select File** may be used to browse for the .clo file.

QMODs/QIPs ATSC 4Ks ATSC SDI 4i ATSC-mini Legacy DXLs QIP-D/DvX IPSDI4i ICI

Device Name	Version	Status	IP Address	MAC Address
<input type="checkbox"/> QMOD-HDMI2-0032	2.8.2		192.168.1.225	00-14-C8-07-00-32
<input checked="" type="checkbox"/> QIP-HDMI2-006C	2.8.0		192.168.1.227	00-14-C8-0C-00-6C

Update Debug Clone Send Cmd Manuals

Send Command

> <ENTER> to Send Clear

>id

Model QIP-HDMI2

QMOD 2.8.0

MES 5.2.5

App Lib 19.06.26

HW Lib 19.06.24

RGB EDID not found

HDMI EDID QMOD v10

QAM FPGA None

Aud FPGA 1.3 HDMI2

LCD LKm 4.3

Btm Brd J0

Enc Brd G0-5S

QMODs/QIPs Send Cmd Tab

RS-232 ASCII serial commands may be sent to a QMOD/QIP unit. The commands are sent via Telnet through the Ethernet connection to port 23.

Click the checkbox next to the device to receive the command. The beginning start character '>' is automatically included in the string. The responses will be displayed in the field on the right.

A list of the available commands will be returned if a '>?' or '>help' command is sent.

Pressing **Clear** will clear the history.

QMODs/QIPs ATSC 4Ks ATSC SDI 4i ATSC-mini Legacy DXLs QIP-D/DvX IPSDI4i ICI

Device Name	Version	Status	IP Address	MAC Address
<input type="checkbox"/> QMOD-HDMI2-0032	2.8.2		192.168.1.225	00-14-C8-07-00-32
<input type="checkbox"/> QIP-HDMI2-006C	2.8.0		192.168.1.227	00-14-C8-0C-00-6C

Update Debug Clone Send Cmd Manuals

Manuals

☐ QIP-Encoders-V240_PM.pdf
☐ QMOD Plus Release Notes_v2.8.0.pdf
☐ QMOD-HDMod-IPTV_PM_V240.pdf

Download

Manuals Folder C:\CR Data\Toolbox\Manuals Open Folder

QMODs/QIPs Manuals Tab

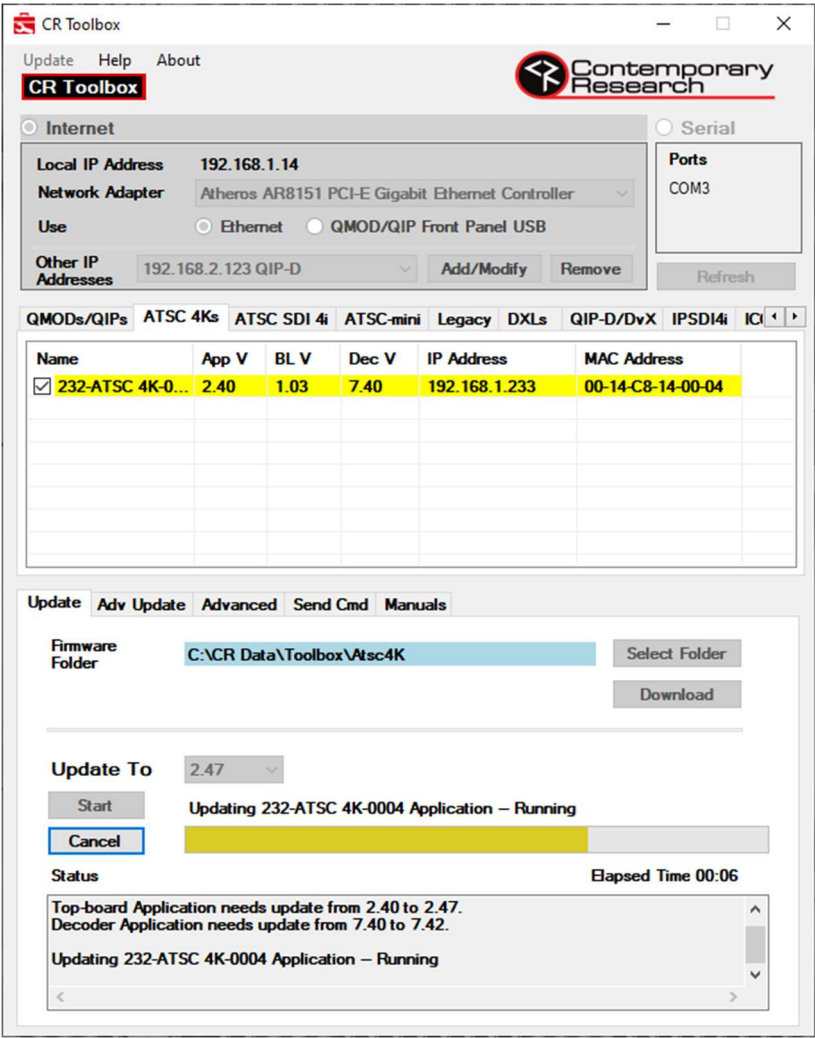
Product manuals and other technical information related to QMOD encoder/modulators and QIP encoders may be downloaded and saved. Click on the checkbox next to the desired documents and press the **Download** button. Click on **Open Folder** to open the Manuals folder in Windows File Explorer.

6. 232-ATSC 4K, ATSC-SDI 4i, and ATSC-mini - HDTV Tuners

232-ATSC 4K, ATSC-SDI 4i, and ATSC-mini HDTV Tuners may be discovered by CR Toolbox via the Ethernet port or the rear panel RS-232 serial port. A full firmware update requires an Ethernet connection. The Application and Bootloader firmware may be updated using the serial connection.

The following tasks are available for the 232-ATSC 4K, ATSC-SDI 4i, and ATSC-mini HDTV Tuners.

- Update** – Download and update all firmware
- Adv Update** – Update the Application or Bootloader firmware individually
- Advanced** – Select the baud rates that will be checked when searching for tuners connected via serial ports
- Send Command** – Send serial commands to a unit
- Manuals** – Manuals and other technical information may be downloaded and saved



232-ATSC 4K, ATSC-SDI 4i, and ATSC-mini Update Tab

The firmware update procedure is identical for the 232-ATSC 4K, ATSC-SDI 4i, and ATSC-mini HDTV tuners. This process updates the Application firmware, Bootloader firmware and Decoder firmware. Any existing firmware versions that are up to date will be skipped.

When launched, CR Toolbox will check for firmware updates. If the **Download** button is red, a new firmware version is available for download

- **Select Folder** to specify where on the PC to copy the downloaded firmware files. It is recommended to use the default location.
- Click on the **Download** button.
- To update, select the firmware package version to update to from the **Update To** drop-down menu. Reverting a tuner to previous firmware is allowed, if desired.
- Click on the checkbox next to the unit or units to be updated.
- Click **Start** to initiate the update process. The status bar shows the update progress. If multiple devices are selected, they will be updated in sequence.
- **Cancel** will stop the current update and any following updates.

QMODs/QIPs ATSC 4Ks ATSC SDI 4i ATSC-mini Legacy DXLs QIP-D/DvX IPSDI4i IC

Name	App V	BL V	Dec V	IP Address	MAC Address
<input checked="" type="checkbox"/> ATSC-SDI 4i-00...	2.41d	1.03	4.08	192.168.1.231	00-14-C8-17-00-03

Update Adv Update Advanced Send Cmd Manuals

Firmware Folder C:\CR Data\Toolbox\AtscSDI4i

Update ☒ Application 2.47 ☐ Bootloader 1.03

Start Updating ATSC-SDI 4i-0003 Application – Running

Cancel

Elapsed Time 00:06

232-ATSC 4K, ATSC-SDI 4i, and ATSC-mini Adv Update Tab

The Application firmware or Bootloader firmware may be updated individually via Ethernet or RS-232. The Application and Bootloader firmware are included in the firmware package that may be downloaded in the **Update** tab.

- Click on the checkbox next to the unit or units to be updated.
- Click on the checkbox next to **Application** and/or **Bootloader** and select the desired firmware version from the drop-down menu.
- Click the **Start** button to initiate the firmware update. The status bar shows the update progress. If multiple devices are selected, they will be updated in sequence.
- **Cancel** will stop the current update and any following updates.

QMODs/QIPs ATSC 4Ks ATSC SDI 4i ATSC-mini Legacy DXLs QIP-D/DvX IPSDI4i IC

Name	App V	BL V	Dec V	IP Address	MAC Address
<input type="checkbox"/> ATSC-SDI 4i-00...	2.47	1.03	4.08	192.168.1.231	00-14-C8-17-00-03

Update Adv Update Advanced Send Cmd Manuals

Use These Baud Rates for Serial COM Connection

☐ 300 ☐ 600 ☐ 1200 ☐ 2400 ☐ 4800 ☒ 9600

☒ 19200 ☒ 38400 ☒ 115200 ☒ 230400 ☐ 256000 ☐ 460800

Click Refresh to update serial device list.

232-ATSC 4K, ATSC-SDI 4i, and ATSC-mini Advanced Tab

When serial communication is selected, CR Toolbox will search for devices using the baud rates selected in this tab. The selections in this tab are global for all serial devices and all serial ports.

QMODs/QIPs ATSC 4Ks ATSC SDI 4i ATSC-mini Legacy DXLs QIP-D/DvX IPSDI4i IC

Name	App V	BL V	Dec V	IP Address	MAC Address
<input checked="" type="checkbox"/> 232-ATSC 4K-0...	2.47	1.03	7.42	192.168.1.233	00-14-C8-14-00-04

Update Adv Update Advanced Send Cmd Manuals

Send Command

> <ENTER> to Send

>NP

<1NP=The People's Court

232-ATSC 4K, ATSC-SDI 4i, and ATSC-mini Send Cmd Tab

RS-232 ASCII serial commands may be sent to a tuner. The commands are sent via Telnet to port 23 for an Ethernet connected device. For a serial connected device, the commands are sent using the com port of the selected device.

A complete list of protocols for each product is available in the product manual for each model tuner.

A list of the available commands will be returned if a '>help' command is sent.

Click the checkbox next to the device to receive the command. The beginning start character '>' is automatically included in the string. The responses will be displayed in the field on the right.

Pressing **Clear** will clear the history.

QMODs/QIPs ATSC 4Ks ATSC SDI 4i ATSC-mini Legacy DXLs QIP-D/DvX IPSDI4i IC

Name	App V	BL V	Dec V	IP Address	MAC Address
<input type="checkbox"/> 232-ATSC 4K-0...	2.47	1.03	7.42	192.168.1.233	00-14-C8-14-00-04

Update Adv Update Advanced Send Cmd Manuals

☐ 232-ATSC 4K Release Notes 2.47_HD7.42.pdf
☐ 232-ATSC 4K_Product Manual_FINAL.pdf
☐ Tuner Web Page Password Guide_012022.pdf

Manuals Folder C:\CR Data\Toolbox\Manuals

232-ATSC 4K, ATSC-SDI 4i, and ATSC-mini HDTV Tuners Manuals Tab

Product manuals and other technical information related to tuners may be downloaded and saved. Click on the checkbox next to the desired documents and press the **Download** button. Click on **Open Folder** to open the Manuals folder in Windows File Explorer.

7. Legacy HDTV Tuners

232-ATSC 4, ATSC-SDI 4, 232-ATSC+1, and ATSC+SDI HDTV tuners may be discovered by CR Toolbox via the Ethernet port or the rear panel RS-232 serial port. Firmware updates are not directly supported by CR Toolbox. The firmware update pack with instructions may be downloaded.

The following tasks are available for the 232-ATSC 4, ATSC-SDI 4, 232-ATSC+1, and ATSC+SDI HDTV Tuners.

FW Pack – Download firmware update pack.

Advanced – Select the baud rates that will be checked when searching for tuners connected via serial ports.

Send Command – Send RS-232 serial commands to a unit.

Manuals – Manuals and other technical information may be downloaded and saved.

CR Toolbox

UpdateHelpAbout

CR Toolbox

Contemporary Research

Internet

Local IP Address192.168.1.14

Network AdapterAtheros AR8151 PCI-E Gigabit Ethernet Controller

Use

Ethernet

QMOD/QIP Front Panel USB

Other IP Addresses192.168.2.123 QIP-D

Add/ModifyRemove

Serial

PortsCOM3

Refresh

QMODs/QIPsATSC 4KsATSC SDI 4iATSC-miniLegacyDXLsQIP-D/DvXIPSDI4iIC

Model	Name	Version	IP Address	MAC Address
<input checked="" type="checkbox"/> ATSC 4	My Tuner	2.28 / 6.42	192.168.1.234	00-14-C8-09-02-17

FW PackAdvancedSend CmdManuals

Download Firmware Pack

Copy to FolderC:\CR Data\Toolbox\Legacy

Select Folder

☒ 232-ATSC+12.28 / 5.15

☐ 232-ATSC 42.28 / 6.44

☐ ATSC+SDI2.28 / 2.22

☐ ATSC-SDI 42.28 / 3.41

Download

Update S37 Firmware

Refer to instructions in the firmware download or manuals folder.

Open Folder

Update HD Firmware

Refer to instructions in the firmware download or manuals folder.

Legacy FW Pack Tab

The Firmware Update Pack for the supported legacy tuners may be downloaded. Click the button next to the desired product and press the **Download** button to initiate the download. A sub-folder will be created for each firmware update pack.

CR Toolbox does not support updating the firmware directly for the legacy tuners. Each firmware update pack will include the firmware files, necessary software if needed, and detailed instructions. A full firmware update will include updating the S37 Application firmware and the HD Decoder/Demodulator firmware.

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QMODs/QIPs ATSC 4Ks ATSC SDI 4i ATSC-mini Legacy DXLs QIP-D/DvX IPSDI4i IC

Model	Name	Version	COM / Baud Rate	MAC Address
<input type="checkbox"/> ATSC+1	My Tuner	2.28 / 5.15	COM17 / 230400	00-14-C8-02-26-A9

FW Pack Advanced Send Cmd Manuals

Use These Baud Rates for Serial COM Connection

☐ 300 ☐ 600 ☐ 1200 ☐ 2400 ☐ 4800 ☒ 9600
☒ 19200 ☒ 38400 ☒ 115200 ☒ 230400 ☐ 256000 ☐ 460800

[Click Refresh to update serial device list.](#)

Legacy Advanced Tab

- When serial communication is selected, CR Toolbox will search for devices using the baud rates selected in this tab. The selections in this tab are global for all serial devices and all serial ports.
- The front panel USB virtual serial port on the tuners will require a device driver to be installed. The driver is automatically installed in Windows 10 PCs. The device driver will need to be manually installed for previous supported versions of Windows

QMODs/QIPs ATSC 4Ks ATSC SDI 4i ATSC-mini Legacy DXLs QIP-D/DvX IPSDI4i IC

Model	Name	Version	IP Address	MAC Address
<input checked="" type="checkbox"/> ATSC+1	My Tuner	2.27 / 5.15	192.168.1.235	00-14-C8-02-26-A9

FW Pack Advanced Send Cmd Manuals

Send Command

> <ENTER> to Send

>NC <1NCCOMET

Legacy Send Cmd Tab

RS-232 ASCII serial commands may be sent to a tuner. The commands may be sent via Telnet to port 23 for an Ethernet connected device. For a serial connected device, the commands may be sent using the com port of the selected device.

A complete list of protocols for each product is available in the product manual for each model tuner.

Click the checkbox next to the device to receive the command. The beginning start character '>' is automatically included in the string. The responses will be displayed in the field on the right.

Pressing **Clear** will clear the history.

8. DXLs Display Control Centers

ICE-HE-DXL and IP-DXL display control centers may be discovered by CR Toolbox via the Ethernet port, the rear panel RS-232 serial port, or front or rear USB port. Application and Bootloader firmware updates may be performed over any connection type.

The following tasks are available for the QIP-D and QIP-DVX Decoder/Controllers.

Update – Download and update Application and Bootloader firmware

Advanced – Select the baud rates that will be checked when searching for tuners connected via serial ports.

Send Command – Send serial commands to a unit.

Manuals – Manuals and other technical information may be downloaded and saved.

HE Command – Send an iCC-Net command to one or multiple display controllers, tuner/controllers, or decoder/controllers.

QMODs/QIPsATSC 4KsATSC SDI 4iATSC-miniQMOD-HDMI 4KTunersDXLsQIP-D/I

Name	App V	BL V	IP Address	MAC Address
<input type="checkbox"/> My DXL	2.14	1.00	192.168.0.251	00-14-C8-10-00-6C

UpdateAdvancedSend CmdManualsHE Cmd

Firmware Folder

C:\CR Data\Toolbox\DXL

Select Folder

Download

Update

☐ Application2.14

☐ Bootloader1.00

Start

Cancel

Elapsed Time 00:00

DXLs Update Tab

When launched, CR Toolbox will check for firmware updates. If the **Download** button is red, a new firmware version is available for download

- **Select Folder** to specify where on the PC to copy the downloaded firmware files. It is recommended to use the default location.
- Click on the **Download** button.

The Application firmware or Bootloader firmware may be updated individually via Ethernet or RS-232.

- Click on the checkbox next to the unit or units to be updated.
- Click on the checkbox next to **Application** and/or **Bootloader** and select the desired firmware version from the drop-down menu.
- Click the **Start** button to initiate the firmware update. The status bar shows the update progress. If multiple devices are selected, they will be updated in sequence.

- **Cancel** will stop the current update and any following updates.

QMODs/QIPs ATSC 4Ks ATSC SDI 4i ATSC-mini QMOD-HDMI 4K Tuners **DXLs** QIP-D/I

Name	App V	BL V	IP Address	MAC Address
<input type="checkbox"/> My DXL	2.14	1.00	192.168.0.251	00-14-C8-10-00-6C

Update Advanced **Send Cmd** Manuals HE Cmd

Use These Baud Rates for Serial COM Connection

☐ 300 ☐ 600 ☐ 1200 ☐ 2400 ☐ 4800 ☒ 9600
☒ 19200 ☐ 38400 ☒ 115200 ☒ 230400 ☐ 256000 ☐ 460800

[Click Refresh to update serial device list.](#)

Install Device Driver for Front Panel Serial USB

This driver is not needed for Windows 10 or higher.
After clicking Install, a dialog will pop up.

Install

DXLs Advanced Tab

- When serial communication is selected, CR Toolbox will search for devices using the baud rates selected in this tab. The selections in this tab are global for all serial devices and all serial ports.
- The front panel USB virtual serial port on the tuners will require a device driver to be installed. The driver is automatically installed in Windows 10 PCs. The device driver will need to be manually installed for previous supported versions of Windows

QMODs/QIPs ATSC 4Ks ATSC SDI 4i ATSC-mini QMOD-HDMI 4K Tuners **DXLs** QIP-D/I

Name	App V	BL V	IP Address	MAC Address
<input checked="" type="checkbox"/> My DXL	2.14	1.00	192.168.0.251	00-14-C8-10-00-6C

Update Advanced **Send Cmd** Manuals HE Cmd

Send Command

> [<ENTER> to Send](#) **Clear**

>R5

<R5=19200

DXLs Send Cmd Tab

RS-232 ASCII serial commands may be sent to a display control center. The commands may be sent via Telnet to port 23 for an Ethernet connected device. For a serial connected device, the commands may be sent using the com port of the selected device.

A complete list of protocols is available in the product manual for each model of display control center.

Click the checkbox next to the device to receive the command. The beginning start character '>' is automatically included in the string. The responses will be displayed in the field on the right.

Pressing **Clear** will clear the history.

QMODs/QIPs ATSC 4Ks ATSC SDI 4i ATSC-mini QMOD-HDMI 4K Tuners DXLs QIP-D/I

Name	App V	BL V	IP Address	MAC Address
<input checked="" type="checkbox"/> My DXL	2.14	1.00	192.168.0.251	00-14-C8-10-00-6C

Update Advanced Send Cmd Manuals HE Cmd

☐ DXL Release Notes_V2.14.pdf
☐ ICE-HE-DXL_Product_Manual_FINAL.pdf
☐ IP-DXL_Product_Manual_FINAL.pdf

Manuals Folder C:\CR Data\Toolbox\Manuals

DXLs Manuals Tab

Product manuals and other technical information related to decoders may be downloaded and saved. Click on the checkbox next to the desired documents and press the **Download** button. Click on **Open Folder** to open the Manuals folder in Windows File Explorer.

QMODs/QIPs ATSC 4Ks ATSC SDI 4i ATSC-mini QMOD-HDMI 4K Tuners DXLs QIP-D/I

Name	App V	BL V	IP Address	MAC Address
<input checked="" type="checkbox"/> My DXL	2.14	1.00	192.168.0.251	00-14-C8-10-00-6C

Update Advanced Send Cmd Manuals HE Cmd

Head End Command

\$A5\$02\$00\$02\$50\$31

Command Builder

Code	Parameters	Dev #
P1		512

Sample Commands

Command can be typed into the Command box in hex or use the Command Builder to generate. Use decimal format in the command builder.

DXLs HE Cmd Tab

iCC-Net Commands may be sent through the ICE-HE-DXL and IP-DXL to display controllers, tuner/controllers, and decoder/controllers. Commands may be entered using the Command Builder fields. The hex representation of the string will automatically be generated in the field above.

The **Sample Commands** drop down menu includes a list of various sample commands. The commands may be used as a starting point and edited for a particular application.

9. QIP-D/QIP-DvX IPTV Decoder-Controllers

QIP-D and QIP-DVX IPTV decoder/controllers may be discovered by CR Toolbox via the Ethernet port or the rear panel RS-232 serial port. A full firmware update requires an Ethernet connection. The Application and Bootloader firmware may be updated using the serial connection.

The following tasks are available for the QIP-D and QIP-DVX Decoder/Controllers.

Update – Download and update all firmware

Adv Update – Update the Application or Bootloader firmware individually

Advanced – Select the baud rates that will be checked when searching for tuners connected via serial ports

Channel List – Create, edit, download, and upload the channel list

Send Command – Send serial commands to a unit

Manuals – Manuals and other technical information may be downloaded and saved

CR Toolbox

Update Help About

CR Toolbox

Internet Serial

Local IP Address 192.168.1.14

Network Adapter Atheros AR8151 PCI-E Gigabit Ethernet Controller

Use ☐ Ethernet ☐ QMOD/QIP Front Panel USB

Other IP Addresses 192.168.2.123 QIP-D Add/Modify Remove Refresh

QMODs/QIPs ATSC 4Ks ATSC SDI 4i ATSC-mini Legacy DXLs QIP-D/DvX IPSDI4i IC

☐ All

Name	Device #	App V	BL V	Dec V	IP Address	MAC Address
<input checked="" type="checkbox"/> My QIP-DVX	257	3.14	1.02	1.37	192.168.2.123	00-14-C8-19-00-02

Update Adv Update Channel List Advanced Send Cmd Manuals

Firmware Folder C:\CR Data\Toolbox\Qipd Select Folder Download

Update To 3.24

Start Cancel

Updating My QIP-DVX Application – Running

Status Elapsed Time 00:08

Top-board Application needs update from 3.14 to 3.24.

Updating My QIP-DVX Application – Running

QIP-D/DvX Update Tab

The firmware update process updates the Application firmware, Bootloader firmware and Decoder firmware. Any existing firmware versions that are up to date will be skipped.

When launched, CR Toolbox will check for firmware updates. If the **Download** button is red, a new firmware version is available for download

- **Select Folder** to specify where on the PC to copy the downloaded firmware files. It is recommended to use the default location.
- Click on the **Download** button.
- To update, select the firmware package version to update to from the **Update To** drop-down menu. Reverting a tuner to previous firmware is allowed, if desired.
- Click on the checkbox next to the unit or units to be updated.
- Click **Start** to initiate the update process. The status bar shows the update progress. If multiple devices are selected, they will be updated in sequence.
- **Cancel** will stop the current update and any following updates.

ATSC 4Ks ATSC SDI 4i ATSC-mini QMOD-HDMI 4K Tuners DXLs QIP-D/DvX IP-SDI4i

☐ All

Name	Device #	App V	BL V	Dec V	IP Address	MAC Address
<input type="checkbox"/> My QIP-DVX	257	3.24	1.02	1.37	192.168.1.123	00-14-C8-19-00-02

Update Adv Update Channel List Advanced Send Cmd Manuals

Firmware Folder C:\CR Data\Toolbox\Qipd

Update ☐ Application 3.24 ☐ Bootloader 1.02

Start Cancel

Elapsed Time 00:00

QIP-D/DvX Adv Update Tab

The Application firmware or Bootloader firmware may be updated individually. The Application and Bootloader firmware files are included in the firmware package that may be downloaded in the **Update** tab.

- Click on the checkbox next to the unit or units to be updated.
- Click on the checkbox next to **Application** and/or **Bootloader** and select the desired firmware version from the drop-down menu.
- Click the **Start** button to initiate the firmware update. The status bar shows the update progress. If multiple devices are selected, they will be updated in sequence.
- Cancel** will stop the current update and any following updates.

ATSC 4Ks ATSC SDI 4i ATSC-mini QMOD-HDMI 4K Tuners DXLs QIP-D/DvX IP-SDI4i

☐ All

Name	Device #	App V	BL V	Dec V	IP Address	MAC Address
<input type="checkbox"/> My QIP-DVX	257	3.24	1.02	1.37	192.168.1.123	00-14-C8-19-00-02

Update Adv Update Channel List Advanced Send Cmd Manuals

Channel List

☒ From Unit ☐ In File

My QIP-DVX

Channel	Channel Name	Prog	Mode	IP Address	Port
<input type="checkbox"/> 1-1	Fox	1	UDP	239.27.0.27	1234
<input type="checkbox"/> 1-2	CNN	2	UDP	239.27.0.28	1234
<input type="checkbox"/> 2-1	Weather	1	UDP	239.27.0.29	1234
<input type="checkbox"/> 2-2	KOBJ	2	UDP	239.27.0.30	1234
<input type="checkbox"/> 3-1	ESPN	1	UDP	239.27.0.31	1234
<input type="checkbox"/> 3-2	Blom	2	UDP	239.27.0.32	1234

C:\CR Data\Toolbox\Qipd\Channel List Manual.txt Create File Get File

Add/Modify Remove

Channel Channel Name Prog Mode IP Address Port

Send Channel List

QIP-D/DvX Channel List Tab

Channel Lists for QIP-Ds and QIP-DVXs can be created, viewed, and edited. A channel list can also be saved to a file and copied to any number of QIP-Ds. More detailed information on channel lists is available in the QIP-D and QIP-DVX product manuals.

- To create a channel, fill in the fields for **Channel**, **Channel Name**, **Prog** (Program), **IP Address**, and **Port**. Select the appropriate protocol from the **Mode** dropdown list. Click **Add/Modify** to populate the list with the channel. Repeat to add additional channels.
- To modify an existing channel, click the checkbox next to the channel in the list. Edit the desired fields. Click **Add/Modify**.
- To delete the channel from the channel list, click on the checkbox next to the channel in the list. Click **Remove**.
- To upload the completed channel list to one or more QIP-D or QIP-DVX units, click on the checkbox next to unit(s) in the equipment list. Click **Send Channel List**.

- A channel list may be saved as a text file. Click **Create File** to save the current list.
- A saved channel list may be recalled by clicking on **Get File**.

ATSC 4Ks ATSC SDI 4i ATSC-mini QMOD-HDMI 4K Tuners DXLs QIP-D/DvX IPSDI4i

☐ All

Name	Device #	App V	BL V	Dec V	IP Address	MAC Address
<input type="checkbox"/> My QIP-DVX	257	3.24	1.02	1.37	192.168.1.123	00-14-C8-19-00-02

Update Adv Update Channel List **Advanced** Send Cmd Manuals

Use These Baud Rates for Serial COM Connection

☐ 300 ☐ 600 ☐ 1200 ☐ 2400 ☐ 4800 ☒ 9600
☒ 19200 ☒ 38400 ☒ 115200 ☒ 230400 ☐ 256000 ☐ 460800

[Click Refresh to update serial device list.](#)

Install Device Driver for Front Panel Serial USB

This driver is not needed for Windows 10 or higher.
After clicking Install, a dialog will pop up.

Install

QIP-D/DvX Advanced Tab

- When serial communication is selected, CR Toolbox will search for devices using the baud rates selected in this tab. The selections in this tab are global for all serial devices and all serial ports.
- The section for **Install Device Driver for Front Panel Serial USB** does not apply to the QIP-D or QIP-DVX units.

ATSC 4Ks ATSC SDI 4i ATSC-mini QMOD-HDMI 4K Tuners DXLs QIP-D/DvX IPSDI4i

☐ All

Name	Device #	App V	BL V	Dec V	IP Address	MAC Address
<input type="checkbox"/> My QIP-DVX	257	3.24	1.02	1.37	192.168.1.123	00-14-C8-19-00-02

Update Adv Update Channel List **Advanced** **Send Cmd** Manuals

Send Command

[<ENTER> to Send](#) **Clear**

QIP-D/DvX Send Cmd Tab

RS-232 ASCII serial commands may be sent to a QIP-D or QIP-DVX. The commands may be sent via Telnet to port 23 for an Ethernet connected device. For a serial connected device, the commands may be sent using the com port of the selected device.

A complete list of protocols is available in the product manuals for the QIP-D and QIP-DVX.

A list of the available commands will be returned if a '>HELP' command is sent.

Click the checkbox next to the device to receive the command. The beginning start character '>' is automatically included in the string. The responses will be displayed in the field on the right.

Pressing **Clear** will clear the history.

QMODs/QIPs
ATSC 4Ks
ATSC SDI 4i
ATSC-mini
Legacy
DXLs
QIP-D/DvX
IPSDI4i
ICI

☐ All

Name	Device #	App V	BL V	Dec V	IP Address	MAC Address
<input type="checkbox"/> My QIP-DVX	257	3.24	1.02	1.37	192.168.2.123	00-14-C8-19-00-02

Update
Adv Update
Channel List
Advanced
Send Cmd
Manuals

☐ QIP-D Installation_Manual_03112019.pdf
☐ QIP-D Release Notes_V3.24_HD1.37.pdf
☐ QIP-D Product Manual Final.pdf
☐ QIP-DVX Product Manual_FINAL.pdf

Manuals Folder

QIP-D/QIP-DvX Manuals Tab

Product manuals and other technical information related to decoders may be downloaded and saved. Click on the checkbox next to the desired documents and press the **Download** button. Click on **Open Folder** to open the Manuals folder in Windows File Explorer.

10. IP-SDI 4i IPTV Decoder

The IP-SDI 4i IPTV decoder may be discovered by CR Toolbox via the Ethernet port or the rear panel RS-232 serial port. A full firmware update requires an Ethernet connection. The Application and Bootloader firmware may be updated using the serial connection.

The following tasks are available for the IP-SDI 4i IPTV Decoder.

Update – Download and update all firmware

Adv Update – Update the Application or Bootloader firmware individually

Advanced – Select the baud rates that will be checked when searching for tuners connected via serial ports

Channel List – Create, edit, download, and upload the channel list

Send Command – Send serial commands to a unit

Manuals – Manuals and other technical information may be downloaded and saved

CR Toolbox

Update Help About

CR Toolbox

Internet

Serial

Local IP Address192.168.1.14

Network AdapterAtheros AR8151 PCI-E Gigabit Ethernet Controller

UseEthernetQMOD/QIP Front Panel USB

Other IP Addresses

PortsCOM17

Refresh

QMODs/QIPs

ATSC 4Ks

ATSC SDI 4i

ATSC-mini

Legacy

DXLs

QIP-D/DvX

IPSDI4i

IC

Name	Device #	App V	BL V	Dec V	IP Address	MAC Address
<input type="checkbox"/> IP-SDI 4i-0003		3.13	1.00	1.09	192.168.1.244	00-14-C8-1A-00-03

Update

Adv Update

Channel List

Advanced

Send Cmd

Manuals

Firmware Folder

C:\CR Data\Toolbox\IpSDI4i

Select Folder

Download

Update To

3.13

Start

Cancel

Status

Elapsed Time 00:00

IP-SDI 4i Update Tab

The firmware update process updates the Application firmware, Bootloader firmware and Decoder firmware. Any existing firmware versions that are up to date will be skipped.

When launched, CR Toolbox will check for firmware updates. If the **Download** button is red, a new firmware version is available for download

- **Select Folder** to specify where on the PC to copy the downloaded firmware files. It is recommended to use the default location.
- Click on the **Download** button.
- To update, select the firmware package version to update to from the **Update To** drop-down menu. Reverting a tuner to previous firmware is allowed, if desired.
- Click on the checkbox next to the unit or units to be updated.
- Click **Start** to initiate the update process. The status bar shows the update progress. If multiple devices are selected, they will be updated in sequence.
- **Cancel** will stop the current update and any following updates.

QMODs/QIPs ATSC 4Ks ATSC SDI 4i ATSC-mini Legacy DXLs QIP-D/DvX IP-SDI 4i IC

Name	Device #	App V	BL V	Dec V	IP Address	MAC Address
<input type="checkbox"/> IP-SDI 4i-0003		3.13	1.00	1.09	192.168.1.244	00-14-C8-1A-00-03

Update Adv Update Channel List Advanced Send Cmd Manuals

Firmware Folder: C:\CR Data\Toolbox\IpSDI4i

Update ☐ Application 3.13 ☐ Bootloader 1.00

Start Cancel

Elapsed Time 00:00

IP-SDI 4i Adv Update Tab

The Application firmware or Bootloader firmware may be updated individually. The Application and Bootloader firmware files are included in the firmware package that may be downloaded in the **Update** tab.

- Click on the checkbox next to the unit or units to be updated.
- Click on the checkbox next to **Application** and/or **Bootloader** and select the desired firmware version from the drop-down menu.
- Click the **Start** button to initiate the firmware update. The status bar shows the update progress. If multiple devices are selected, they will be updated in sequence.
- Cancel** will stop the current update and any following updates.

QMODs/QIPs ATSC 4Ks ATSC SDI 4i ATSC-mini Legacy DXLs QIP-D/DvX IP-SDI 4i IC

Name	Device #	App V	BL V	Dec V	IP Address	MAC Address
<input type="checkbox"/> IP-SDI 4i-0003		3.13	1.00	1.09	192.168.1.244	00-14-C8-1A-00-03

Update Adv Update Channel List Advanced Send Cmd Manuals

Channel List

☒ From Unit IP-SDI 4i-0003 ☐ In File

Channel	Channel Name	Prog	Mode	IP Address	Port
<input type="checkbox"/> 1-1	Fox	1	UDP	239.27.0.27	1234
<input type="checkbox"/> 1-2	CNN	2	UDP	239.27.0.28	1234
<input type="checkbox"/> 2-1	Weather	1	UDP	239.27.0.29	1234
<input type="checkbox"/> 2-2	KOBJ	2	UDP	239.27.0.30	1234
<input type="checkbox"/> 3-1	ESPN	1	UDP	239.27.0.31	1234
<input type="checkbox"/> 3-2	Bloom	2	UDP	239.27.0.32	1234

Create File Get File

Add/Modify Remove

Channel Channel Name Prog Mode IP Address Port

Send Channel List

IP-SDI 4i Channel List Tab

Channel Lists for the IP-SDI 4i units can be created, viewed, and edited. A channel list can also be saved to a file and copied to any number of IP-SDI 4i units. More detailed information on channel lists is available in the IP-SDI 4i product manuals.

- To create a channel, fill in the fields for **Channel**, **Channel Name**, **Prog** (Program), **IP Address**, and **Port**. Select the appropriate protocol from the **Mode** dropdown list. Click **Add/Modify** to populate the list with the channel. Repeat to add additional channels.
- To modify an existing channel, click the checkbox next to the channel in the list. Edit the desired fields. Click **Add/Modify**.
- To delete the channel from the channel list, click on the checkbox next to the channel in the list. Click **Remove**.
- To upload the completed channel list to one or more IP-SDI 4i units, click on the checkbox next to unit(s) in the equipment list. Click **Send Channel List**.

- A channel list may be saved as a text file. Click **Create File** to save the current list.
- A saved channel list may be recalled by clicking on **Get File**.

QMODs/QIPs ATSC 4Ks ATSC SDI 4i ATSC-mini Legacy DXLs QIP-D/DvX IPSDI4i IC

Name	Device #	App V	BL V	Dec V	IP Address	MAC Address
<input type="checkbox"/> IP-SDI 4i-0003		3.13	1.00	1.09	192.168.1.244	00-14-C8-1A-00-03

Update Adv Update Channel List **Advanced** Send Cmd Manuals

Use These Baud Rates for Serial COM Connection

☐ 300☐ 600☐ 1200☐ 2400☐ 4800☒ 9600

☒ 19200☒ 38400☒ 115200☒ 230400☐ 256000☐ 460800

[Click Refresh to update serial device list.](#)

IP-SDI 4i Advanced Tab

- When serial communication is selected, CR Toolbox will search for devices using the baud rates selected in this tab. The selections in this tab are global for all serial devices and all serial ports.

QMODs/QIPs ATSC 4Ks ATSC SDI 4i ATSC-mini Legacy DXLs QIP-D/DvX IPSDI4i IC

Name	Device #	App V	BL V	Dec V	IP Address	MAC Address
<input checked="" type="checkbox"/> IP-SDI 4i-0003		3.13	1.00	1.09	192.168.1.244	00-14-C8-1A-00-03

Update Adv Update Channel List **Advanced** **Send Cmd** Manuals

Send Command

<ENTER> to Send

>S4

<S4=Setup+Menu

IP-SDI 4i Send Cmd Tab

RS-232 ASCII serial commands may be sent to an IP-SDI 4i. The commands may be sent via Telnet to port 23 for an Ethernet connected device. For a serial connected device, the commands may be sent using the com port of the selected device.

A complete list of protocols is available in the product manual for the IP-SDI 4i.

A list of the available commands will be returned if a '>HELP' command is sent.

Click the checkbox next to the device to receive the command. The beginning start character '>' is automatically included in the string. The responses will be displayed in the field on the right.

Pressing **Clear** will clear the history.

Model	Name	Version	IP Address	MAC Address
<input type="checkbox"/> ATSC+1	My Tuner	2.27 / 5.15	192.168.1.235	00-14-C8-02-26-A9

FW Pack Advanced Send Cmd **Manuals**

☐ 232-ATSC 4 Release Notes S228_HD644.pdf
☒ 232-ATSC+1 Release Notes S228_HD515.pdf
☐ 232-ATSC+1_PM225.pdf
☐ 232-ATSC4_PM_227.pdf
☐ ATSC+SDI_PM225.pdf
☐ ATSC-SDI 4 Release Notes S228_HD341.pdf
☐ ATSC-SDI Release Notes S228_HD222.pdf

Download

Manuals Folder C:\CR Data\Toolbox\Manuals Open Folder

IP-SDI 4i Manuals Tab

Product manuals and other technical information related to the decoders may be downloaded and saved. Click on the checkbox next to the desired documents and press the **Download** button. Click on **Open Folder** to open the Manuals folder in Windows File Explorer.

11. ICC1-TC HDTV Tuner-Controller

The ICC1-TC does not have an Ethernet port. The device may be connected via the rear panel RS-232 serial port.

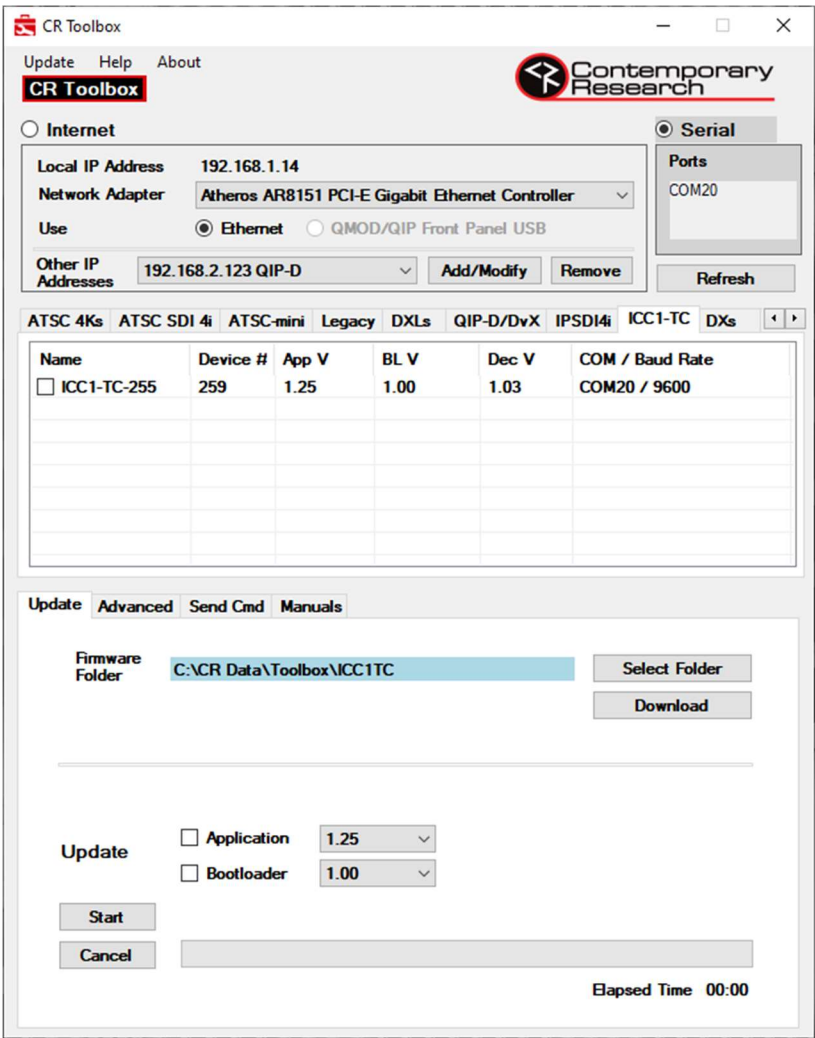
The following tasks are available for the ICC—TC HDTV Tuner-Controller.

Update – Download all firmware, update Application and Bootloader firmware

Advanced – Select the Baud Rates that will be checked when searching for tuners connected via serial ports

Send Command – Send serial commands to a unit

Manuals – Manuals and other technical information may be downloaded and saved



ICC1-TC Update Tab

The Application firmware or Bootloader firmware may be updated individually. The Application and Bootloader firmware files are included in the firmware package that may be downloaded in the **Update** tab.

- Click on the checkbox next to the unit or units to be updated.
- Click on the checkbox next to **Application** and/or **Bootloader** and select the desired firmware version from the drop-down menu.
- Click the **Start** button to initiate the firmware update. The status bar shows the update progress. If multiple devices are selected, they will be updated in sequence.
- **Cancel** will stop the current update and any following updates.
- Full firmware update instructions can be downloaded from the **Manuals** tab.

ATSC 4Ks ATSC SDI 4i ATSC-mini Legacy DXLs QIP-D/DvX IPSDI4i ICC1-TC DXs

Name	Device #	App V	BL V	Dec V	COM / Baud Rate
<input type="checkbox"/> ICC1-TC-255	259	1.25	1.00	1.03	COM20 / 9600

Update Advanced **Send Cmd** Manuals

Use These Baud Rates for Serial COM Connection

☐ 300 ☐ 600 ☐ 1200 ☐ 2400 ☐ 4800 ☒ 9600
☒ 19200 ☒ 38400 ☒ 115200 ☒ 230400 ☐ 256000 ☐ 460800

Click Refresh to update serial device list.

ICC1-TC Advanced Tab

- When serial communication is selected, CR Toolbox will search for devices using the baud rates selected in this tab. The selections in this tab are global for all serial devices and all serial ports.

ATSC 4Ks ATSC SDI 4i ATSC-mini Legacy DXLs QIP-D/DvX IPSDI4i ICC1-TC DXs

Name	Device #	App V	BL V	Dec V	COM / Baud Rate
<input checked="" type="checkbox"/> ICC1-TC-255	259	1.25	1.00	1.03	COM20 / 9600

Update Advanced **Send Cmd** Manuals

Send Command

<ENTER> to Send

>NM

<NMI CC1-TC-255

ICC1-TC Send Cmd Tab

RS-232 ASCII serial commands may be sent to an ICC1-TC.

A list of the available commands will be returned if a '>HE' command is sent.

Click the checkbox next to the device to receive the command. The beginning start character '>' is automatically included in the string. The responses will be displayed in the field on the right.

Pressing **Clear** will clear the history.

Name	Device #	App V	BL V	Dec V	COM / Baud Rate
<input type="checkbox"/> ICC1-TC-255	259	1.25	1.00	1.03	COM20 / 9600

Update

Advanced

Send Cmd

Manuals

☐ ICC1-TC Release Notes_V1.25_HD1.03.pdf
☐ ICC1-TC Product Manual FINAL.pdf
☐ ICC1-TC Firmware Update Instructions FINAL.pdf

Manuals Folder

C:\CR Data\Toolbox\Manuals

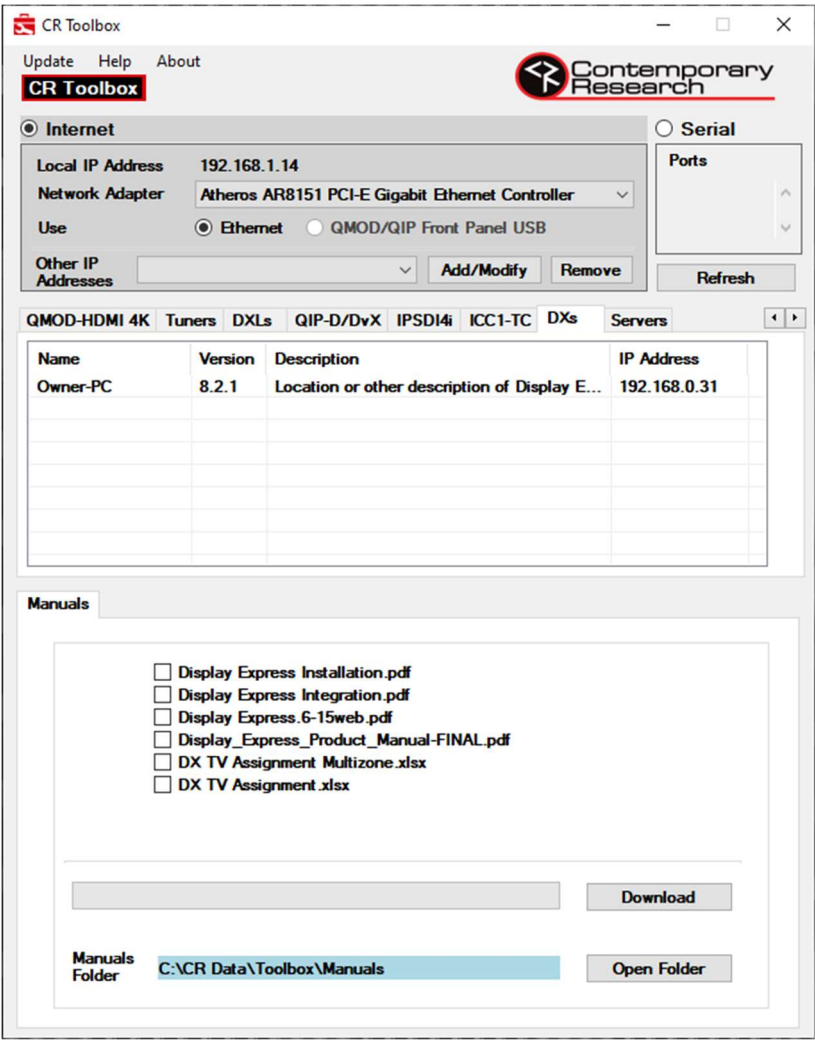
ICC1-TC Manuals Tab

Product manuals and other technical information related to the decoders may be downloaded and saved. Click on the checkbox next to the desired documents and press the **Download** button. Click on **Open Folder** to open the Manuals folder in Windows File Explorer.

12. DXs – Display Express Servers

The following tasks are available for Display Express Servers.

Manuals – Manuals and other technical information may be downloaded and saved

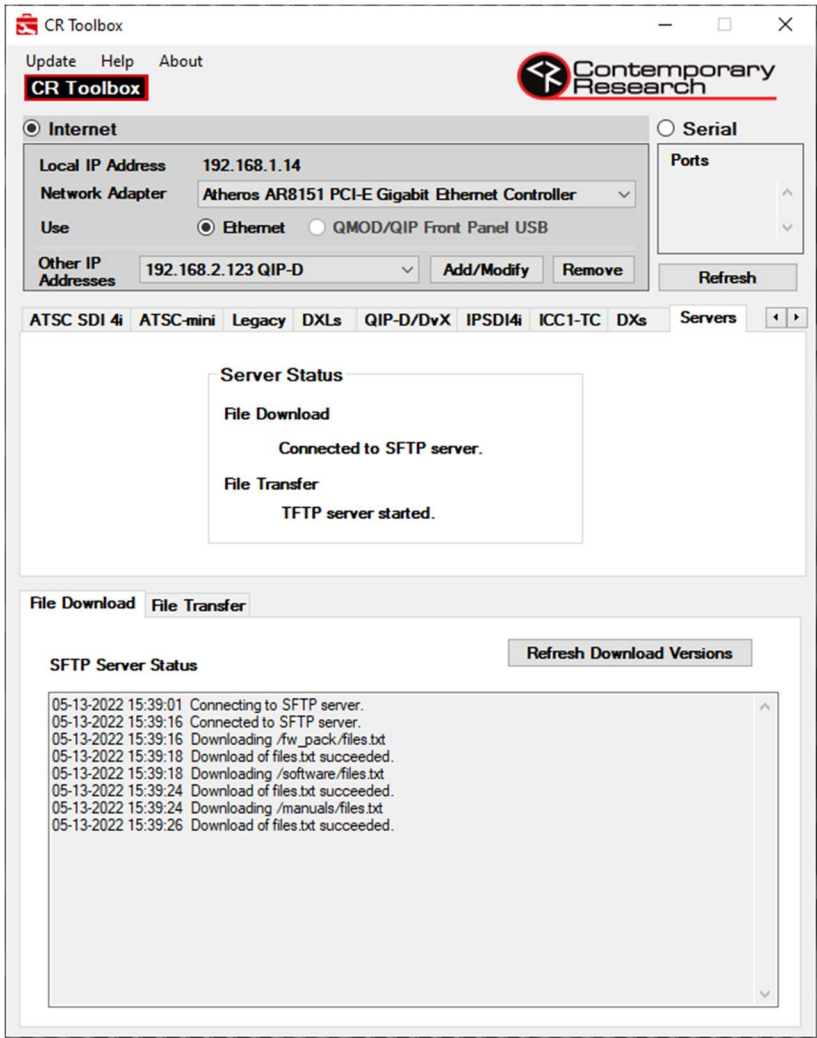


DXs Manuals Tab

Product manuals and other technical information related to Display Express may be downloaded and saved. Click on the checkbox next to the desired documents and press the **Download** button. Click on **Open Folder** to open the Manuals folder in Windows File Explorer.

13. Servers

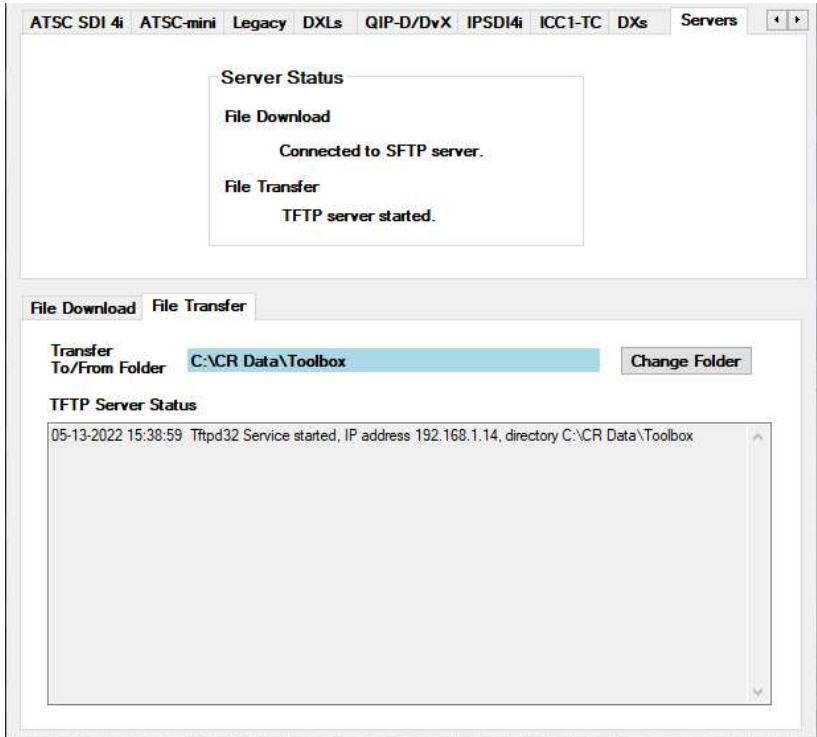
The **Servers** tab is used to show status information for the two servers used by CR Toolbox. The **SFTP Server** downloads files from CR to the PC. The **TFTP Server** transfers files to and from the PC and a device during a firmware update.



Servers File Download Tab

This tab shows the status of the **SFTP Server**.

When first launched, CR Toolbox checks for the newest download versions. Click **Refresh Download Versions**, and CR Toolbox will look up the newest again.



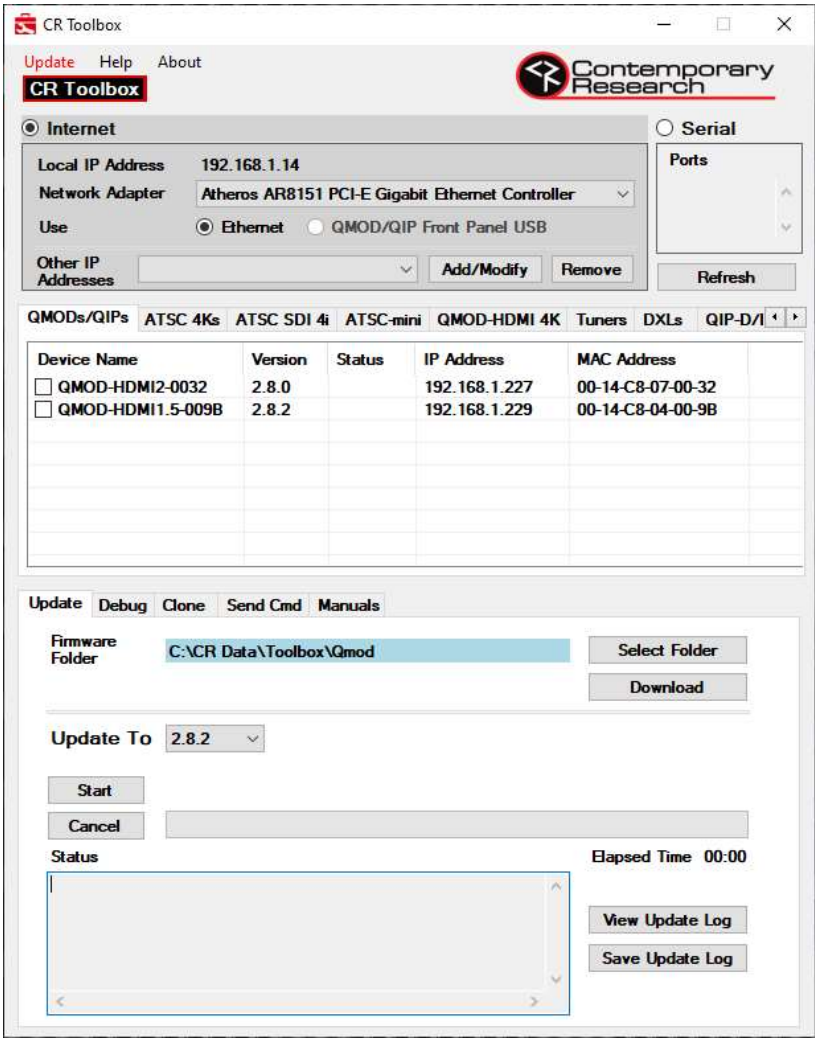
Servers File Transfer Tab

This tab shows the status of the **TFTP Server**.

CR Toolbox automatically sets the folder on the PC used for file transfer. The TFTP Server's folder may be manually set, this can be done by clicking **Change Folder**.

14. Updating CR Toolbox

CR Toolbox checks for updates every time it is launched. If an update is available, the **Update** text in the upper left corner will be red. Click on the **Update** text to initiate the download and installation. The existing version of CR Toolbox will be uninstalled. Any existing data files related to CR Toolbox will be retained.





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