COBALT

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You can update your card by downloading the new Update software by going to the **Support>Firmware** link at www.cobaltdigital.com. Download "Firmware Update Guide", which provides simple instructions for downloading the latest firmware for your card onto your computer, and then downloading it to your card through DashBoard™.

Software updates are field-installed without any need to remove the card from its frame.
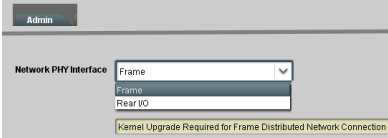
The table below lists released software versions and describes the corresponding functions additions, improvements and/or corrections.

Software Version	Description
Rev 2.098 (10/20/2020 – present) All 9902-UDX models All BBG-1002-UDX models	**Corrections:** • Closed captioning status when CC source is analog input bridge mode to SDI. • Fixes incorrect per-channel audio delay choices for audio bus channels 5 thru 16. • Fixes parity error in two UDWs of ATC timecode packets. **Additions/Improvements:** • Adds controls to explicitly set HRD flags in apply ST352 VPID (OETF and colorimetry) in SDI output video. • Adds UDP Raw ANC data insertion mode. • (-DSP models only) Adds DSP **Auto Adjust Delay** feature that provides alert if additional video delay is needed to restore lip sync for program video using card DSP functions (such as RTLL and/or Dolby encoding). • SD card recovery process improved and allows recovery to most recently installed firmware, licensing, and saved presets. • Where video quality event screening is present (option +QC), adds failover choice to stay on failover input choice even if primary input "comes back", thereby preventing bouncing between two input choices if primary input is unreliable. • Adds Bootloader Revision field in card Product Info tab. Shows revision or if card requires bootloader update.
Rev 2.083 (5/8/2019 – 10/20/2020) All 9902-UDX models All BBG-1002-UDX models	**Corrections:** • (BBG-1000 variants only) Fixes rare cases where certain front-panel button presses could result in unit front-panel control lock-up. • Improves presets performance where large-scale manipulations could occur (such as Delete All Presets). Also provides enhanced stability and conformity when accessing presets from both DashBoard™ remote control and the built-in web browser UI. **Note:** 9902-UDX-DSP download row on website includes DSP firmware rev 2.0. Unless target -DSP device does not contain this version, this firmware does not need to be uploaded to the card/device (i.e., no new DSP version exists since the last firmware release).
Rev 2.079 (1/17/2019 – 5/8/2019) All 9902-UDX models All BBG-1002-UDX models	**Improvements:** • Adds Parameter Blast checkbox (located on the Admin > System tab). When enabled, Parameter Blast can reduce the time it takes for a card/device to appear and populate in DashBoard (this is especially relevant where high-latency connections are present). This is facilitated by reducing some handshakes on initial DashBoard setup where control settings are static (not being manipulated) while the card is first appearing. (Note that the frame network card is the arbiter of all frame/card communications and in some cases may not accept full extent of parameter blast under some conditions.) **Corrections:** • On -DSP models, removes nuisance error warning in DashBoard during firmware upgrades that model is not recognized. **Note:** 9902-UDX-DSP download row on website includes DSP firmware rev 2.0. Unless target -DSP device does not contain this version, this firmware does not need to be uploaded to the card/device (i.e., no new DSP version exists since the last firmware release).

Software Version	Description

Rev 2.078
(12/11/2018 – 1/17/2019)
All 9902-UDX models
All BBG-1002-UDX models
	Improvements:
	• Adds new preset functionality including new controls for deleting all presets on a card and managing how preset uploads get processed.
	• Extends max EAS crawl length from 256 to 2048 characters.
	• Increases per-channel audio delay from 800ms to 1500ms.
	• WebUI improvements.
	  - Improved page loading time.
	  - All controls and status parameters supported and displayed (previously, some controls/parameters were not exposed on WebUI).
	  - User-selectable page color/background schemes (which are persistent across power cycling and/or reboots).
	• Trouble Slate and Logo Insertion tabs now display the name of each graphic. The name of each graphic is also displayed in the Event Setup tab under the Event Action column. (This functionality requires uploading graphic files into bin files using the latest posted web conversion tool at **http://a.cdi-eng.com:55080/cgi-bin/image_upload.py**
	Full compatibility is maintained meaning older graphics bin files will work with new firmware and new graphics BIN files with the name encoded will work with older firmware versions.
	
	Note: 9902-UDX-DSP download row on website includes DSP firmware rev 2.0. Unless target -DSP device does not contain this version, this firmware does not need to be uploaded to the card/device (i.e., no new DSP version exists since the last firmware release).

Rev 2.037 (5/11/2018 – 12/11/2018) All 9902-UDX models All BBG-1002-UDX models	**Improvements:** • (-DSP models only) Adds DSP Usage ("fuel gauge") to indicate percentage of DSP cores being utilized. Helps prevent over-allocation. • (-DSP models only) DSP Dolby Decode adds Auto-Detect Else Mute and Auto-Detect Else Pass PCM modes. • Reduction in openGear frame traffic for reporting card parameter updates. • Adds support for several rear modules that were previously reported as Unknown. • Adds support for Spanish and Norwegian characters on the Idents/Character Burners. • Adds support for qualified +SCTE104 event triggering. A specific field and value within a SCTE104 message can be used as an additional qualifier. Use case might be to trigger only on a specific event number. • Adds support for software option +FRC (Linear Frame Rate Conversion). • Adds Noise Reduction and Detail Enhancement controls to scaler. **Corrections:** • Corrects mis-calibration of DashBoard audio level meters (bars). Full red = 0dBFS; Red/yel point = -10 dBFS; Yel/green point = -20 dBFS. • Fixes line shift that would occur with 1080psf input to 1080psf output using scaler. **Note:** This release consists of the card basic upgrade .bin file **rev_2.037.bin** file and the audio DSP upgrade file **DSP_Upgrade_rev_2.0.bin** file. If card/device is not currently loaded with either or both of these revs, the file(s) should be uploaded to the card/device for full upgrade changes specified here (order of uploading does not matter).
Rev 2.013 (8/2/2017 – 9/20/2017) All 9902-UDX models All BBG-1002-UDX models	• Initial release for xx02-UDX-DSP models. **Note:** For xx02-UDX models, this release is a manufacturing maintenance release. Fielded xx02-UDX do not require installation of this release.
Rev 2.009 (6/20/2017 – 8/2/2017) All 9902-UDX models All BBG-1002-UDX models	**Improvements/Additions:** • Adds support for software options +CQS, +T-SLATE, and +LOGO. • Adds various control enhancements (such as input raster/frame rate selection filtering) and other refinements. **Corrections:** • Addresses MIB compliance issues. **Known Issue:** • (Option +COLOR) Although the **Black Hard Clip** thru **Chroma Saturation Clip** controls are located on the Color Correction sub-tab page, these controls are enabled / disabled using the **Video Proc** enable control on the basic Color Proc sub-tab page. Make certain this control is set to Enabled if control usage of these control is desired.
Rev 1.186 (2/23/2016 – 6/20/2017) All 9902-UDX models All BBG-1002-UDX models	**Corrections:** • Fixes issue where card would not respond to OGCP-9000 Remote Control Panel control commands. **Known Issue:** • (Option +COLOR) Although the **Black Hard Clip** thru **Chroma Saturation Clip** controls are located on the Color Correction sub-tab page, these controls are enabled / disabled using the **Video Proc** enable control on the basic Color Proc sub-tab page. Make certain this control is set to Enabled if control usage of these control is desired.
Rev 1.179 (1/5/2016 – 2/23/2016) All 9902-UDX models All BBG-1002-UDX models	**Corrections:** • Fixes issue where gain, mute, or invert output audio controls are not honored for settings other than default when using Flex Mix on AES or analog audio outputs. **Improvements/Additions:** • Adds GPO forced state setup upon power-up, as well as forced static states or follow event triggers. • (option +TTS) Adds support for Spanish-language option 2L-SPAN. • Adds NTP and timezone controls for card time.

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    9902-UDX Release Notes (rev 2.098)

Software Version	Description
Rev 1.177 (12/1/2015 – 1/5/2016) All 9902-UDX models All BBG-1002-UDX models	**Corrections:** • Fixes a potential remote control (DashBoard, etc.) communications drop-out condition in long-term use under certain conditions.

Rev 1.176
(11/30/2015 – 12/1/2015)
All 9902-UDX models
All BBG-1002-UDX models
	Corrections:
	• (+TTS option): Invalid XML files no longer cause card to dropout of DB.
	• (+TTS option): Watch folders reconnect after reboot of servers hosting SMB shares.
	• (+TTS option): CIFS share status would report total number of files incorrectly in some cases.
	• Improves de-embedder alignment checking to avoid falsely flagging align errors for out-of-sequence but valid audio.
	• Incoming CC is stripped when insertion is enabled. DashBoard controls added to remove and regenerate closed-captioning, with line no. control for regenerated insertion.
	• (+TTS option) Fixes program audio ducking where program audio uses downmix or flex mix audio sources. Previously, program ducking settings were not honored using these audio sources during TTS playout.
	Improvements/Additions:
	• (+TTS option) enhancements:
	  • XML parser fields can accept longer text strings
	  • In **Event Action** drop-down selection list, "TTS Folder 1 Play New or Old" thru "TTS Folder 3 Play New or Old" selections added
	• (+QC option): Video Quality Events triggering can be extended to 15 minutes holdoff before an event is triggered.
	Known Issues:
	• Timecode burn-in will only produce a burn-in when the card is outputting (passing) ATC_VITC timecode data. However, regardless of input or card-generated (free run) timecode source, burn-in can be accomplished by making certain **ATC_VITC Insertion** is set to Enabled on corresponding SD or HD insertion controls on the **Timecode** tab.

Rev 1.164 (11/5/2015 – 11/30/2015) All 9902-UDX models All BBG-1002-UDX models	**Corrections:** • Corrects issue where Input audio routing controls would not function unless repeatedly toggled in some cases. • "Preset Engaged" status field functions as expected and displays last preset loaded. • Corrects intermittent issue where non-PCM input pairs are not properly handled, resulting in Dolby pairs muting at output. • Corrects cases where analog audio LTC input did not route to Timecode processor. • Removes audio ramp up until the mixer has been updated to be aware of non-PCM routes. This could result in PCM ducking applied to Dolby data, causing corruption until ramping ceased. **Improvements/Additions:** • Adds support for options +TTS and +AFD • Adds SD card recovery support • Audio silence detection extended to 15+ minutes
Rev 1.129 (8/6/2015 – 11/5/2015) All 9902-UDX models All BBG-1002-UDX models	**Corrections:** • Corrects potential problem resulting in repeated reboots after upload via WebUI. • Corrects issue where card could drop out of Dashboard where large data transactions occurred.
Rev 1.126 (7/30/2015 – 8/6/2015) All 9902-UDX models All BBG-1002-UDX models	**Improvements/Additions:** • Adds support for selection of card data network connection (not to be confused with card remote control) via rear I/O module Ethernet connector or via frame card network switch/shared Ethernet connection. **Note:** Frame net connection allows cards with per-card Ethernet connection to connect with network via a shared frame Ethernet port instead of per-card dedicated Ethernet connectors on the card's rear module. Frame net connection is available only on certain frame models. Also, the card must have a Kernel Version of 1.4 or greater to support this function (kernel version and download is separate of card application firmware version listed here). If card does not have compatible frame net support, it is shown on the Admin page as shown below. All new cards have the latest kernel version. If a kernel update is desired for a fielded card, please contact Support. • Adds Audio Flex Buses. • Adds new Character Burner positioning and appearance controls. **Corrections:** • Corrects potential image artifacts when deinterlacing is used with SD input. • Corrects issue where AES SRC may not engage or disengage as expected when using manual enable/disable. • SDI and analog reticule enable no longer inadvertently ganged.

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Software Version	Description
Rev 1.91 (1/23/2015 – 7/30/215) All 9902-UDX models All BBG-1002-UDX models	**Improvements/Additions:** • Adds support for fully functional +QC option that allows "canned" card event actions or user presets for frozen/ black frame detect events. • Improved closed captioning absence/presence detect. Function now detects SD line 21 events as well as packet-based CEA 608/708 events. • (+ANC option) Adds support for TCP ANC data insertion/extraction. • Card power-up time reduced by appr. 10 seconds. **Corrections:** • Corrects cases where psf-to-i timecode alignment was not correctly performed. This could occur where the frame offset was greater than zero, and the timecode source selected for **3:2 Alignment** was not correspondingly also selected as a Source Priority selection on the card **Timecode** tab. • Throttling of timecode and audio meter frame canbus communications to prevent overloading some frame Network Controller cards. • Fixes illegal output values that were outputted during the switch line when framesync was enabled. This could cause a "Reserved Data Error" in certain downstream monitoring systems. • Adds support for SD-SDI with V-bit transition on lines 10 thru 20 (previously, only line 20 transition was supported).
Rev 1.76 (11/21/2014 – 1/23/2015) All 9902-UDX models All BBG-1002-UDX models	**Improvements/Additions:** • Framesync stability improvements • Minor DashBoard GUI enhancements **Corrections:** • EDH ANC error bits now correctly set (earlier version could show an error when none was occurring). • Condition where, when multiple Dolby pairs were present in embedded audio, Dolby pairs could have phase alignment issues resulting in the pair being not recognized as Dolby in downstream systems has been corrected. A phase alignment issue affecting PCM pairs (but not as easily causing errors) has also been corrected in this release. • Corrects condition where If the card is power-cycled or rebooted, saved presets were not displayed in the **Select Preset:** drop-down.Saved presets are now displayed and directly available for use following a card power-cycle or reboot.
Rev 1.67.0000 and earlier	• Initial release