

You can update your card by downloading the new Update software by going to the **Support>Firmware** link at [www.cobaltdigital.com](http://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 or disconnect the card/device.**

The table below lists released software versions and describes the corresponding functions additions, improvements and/or corrections.

**Note:** Date ranges are approximate.

**Note:** ImmediaTV ("ITV") has been acquired by Cobalt Digital Inc ("CDI"). The supplier name and model numbers for the MVN-RX100 series have changed. (9990-DEC-MPEG and BBG-1099-DEC-MPEG are CDI versions of ITV MVN-RX100 and ITV-RX100C, respectively.) This change is backward-compatible with archived configurations. This change does not affect the OEM versions of this product.

Software Version (Date)	Description
Release 1.2.0 (11/1/2018 – 7/24/2017)	<p><b>Additions / Improvements:</b></p> <ul style="list-style-type: none"> <li>• Adds support for RIST (Reliable Internet Stream Transport) protocol and licensing of this option (<b>+RIST/ARQ-DEC</b>). Cobalt's proprietary RTP/ARQ method of transmission over the Internet has been replaced by the Reliable Internet Stream Transport protocol, as per the Video Services Forum TR-06-1. While interoperability between RIST and RTP/ARQ is possible, users are encouraged to upgrade all links to <b>+RIST/ARQ-DEC</b> where RTP/ARQ was previously used.</li> <li>• Adds a fast manual Restart Playback button.</li> <li>• Adds a log display control to reduce control traffic on heavily-loaded openGear frames.</li> </ul> <p><b>Corrections:</b></p> <ul style="list-style-type: none"> <li>• Improves decoder robustness for inputs that are not clean, including signal fades, transitions between scrambled/clear signals, and general data corruption (e.g., from marginal RF links).</li> <li>• Reduces the RTSP keep-alive period from 60 seconds to 30 seconds for improved compatibility with cameras that require this feature.</li> <li>• Fixes minor compliance issue with SD-SDI output which caused a small number of downstream devices not to lock to the signal.</li> <li>• Corrects an issue whereby the decoder would not connect to an RTMP server specified by IP address.</li> <li>• Corrects an issue whereby the decoder would not recognize the SMPTE-35 PID if there were multiple registration descriptors in the PMT and the Cue registration descriptor was not the first.</li> <li>• Improves A/V sync for the second audio channel.</li> <li>• Fixes occasional VANC data corruption with SMPTE-2038 and SCTE-104.</li> <li>• Improves stability when there are multiple decoders in an openGear chassis.</li> </ul>
– Release Notes continued on next page –	

Software Version (Date)	Description
Release 1.1.0 (3/26/2018 – 11/1/2018)	<p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• Firmware versions earlier than 1.1 are not compatible with the Hardware Revision 2. Hardware Revision 2 decoders will not accept a downgrade to any release earlier than 1.1.</li> <li>• Firmware version 1.1 can be loaded to both Hardware Revision 1 and Revision 2 decoders.</li> <li>• Hardware Revision 2 decoders support new openGear Rear I/O Modules where the HDMI output has been replaced by a second SDI output (openGear model 9990-DEC-MPEG-SDI2 only).</li> </ul> <p><b>Additions / Improvements:</b></p> <ul style="list-style-type: none"> <li>• Some off-the-shelf network scanners incorrectly report a number of security vulnerabilities in previous versions of the firmware. Even though none of the reported vulnerabilities are real, some internal software components have been updated to avoid these issues.</li> <li>• Maximum ARQ window has been increased from 500 ms to 2500 ms. Please contact Cobalt Support for an advance copy of a 9223 encoder firmware update with matching windows.</li> <li>• Adds ability to turn enable/disable decoder restart on PCR discontinuity. This allows the decoder to track feeds that stop and start again on a different resolution.</li> <li>• Source IP address is displayed for HLS sources.</li> <li>• (BBG-1190-DEC-MPEG only) Adds the ability to turn off the front panel screen saver.</li> </ul> <p><b>Corrections:</b></p> <ul style="list-style-type: none"> <li>• SDI A/V sync improvements.</li> <li>• Fixes cases where, for some network sources, sometimes the SDI output would not produce a valid signal, even though the decoder was correctly locked to the source.</li> <li>• Provides HLS stability improvements, including DNS-related issues. (Occasionally, on a long run from an HLS feed out in the Internet that required DNS to work, the decoder could stop and indicate that DNS was failing.)</li> <li>• Minor correction to the color space output to correctly match the 601 and 709 standards.</li> <li>• Fixes lack of closed-captioning output if the incoming bitstream had 708 captions without 608 captions.</li> <li>• Fixes RTMP issue to accommodate some sources occasionally sending a tag with no data. This was causing the decoder to hang.</li> <li>• Fixes stability issues when there are multiple decoders in an openGear chassis and there are signal issues that causes decoders to restart.</li> </ul>
Release 1.0.0 (7/24/2017 – 3/26/2018)	<p><b>Additions / Improvements:</b></p> <ul style="list-style-type: none"> <li>• Adds support for de-embedding SMPTE-2038 generic ancillary data packets.</li> <li>• Adds support for SCTE-35 to SCTE-104 conversion.</li> <li>• Adds new Statistics tab for ancillary data.</li> <li>• Adds support for selecting the desired video PID in a multi-angle stream.</li> <li>• Adds support for RTP/ARQ, interoperating with the xx23 Encoder firmware version 3.0.</li> <li>• (BBG-1000, BBG-1100 standalone versions only) Adds enhanced support for multiple default gateways. If default gateways are defined for both the control and streaming ports, the streaming port default gateway will be used to reach RTMP, RTSP and HLS servers, and the control port default gateway will be used to reach DashBoard and SNMP managers.</li> <li>• Automatic faster DashBoard startup over long latency links for the BBG-1000 and BBG-1100 standalone versions. This mode is compatible with all versions of DashBoard.</li> </ul>
– Release Notes continued on next page –	

Software Version (Date)	Description
Release 1.0.0 (cont.) (7/24/2017 – 3/26/2018)	<p><b>Corrections:</b></p> <ul style="list-style-type: none"> <li>• Corrects SCTE-35 PIDs incorrectly presented in the GUI as audio PIDs.</li> <li>• Improved robustness for partially corrupted streams.</li> <li>• In RTMP Server mode, improved compatibility with a wider range of RTMP clients. In particular, the following are now supported and tested:               <ul style="list-style-type: none"> <li>- Adobe FMLE (Flash Media Live Encoder)</li> <li>- Wowza server, stream target feature.</li> </ul> </li> <li>• Improved compatibility with RTSP servers:               <ul style="list-style-type: none"> <li>- Improved RTSP audio support - correct some audio drift issues.</li> <li>- Added automatic RTSP keep-alive messages for improved compatibility with RTSP devices that require them.</li> <li>- Addressed compatibility issues with cameras from the following vendors:                   <ul style="list-style-type: none"> <li>- Cohu</li> <li>- Panasonic</li> </ul> </li> </ul> </li> <li>• Fixes SDI output issues with 1080i50 and internet-originated streams.</li> <li>• Corrects an issue whereby the last ancillary data packet will be repeated if the ancillary data in the bitstream stops coming.</li> <li>• Minimum allowed latency increased from 0 to 200 milliseconds. Values below 200 milliseconds do not usually work for most sources, causing the decoder to stutter.</li> <li>• Corrects some reliability issues regarding the chassis communication (openGear version only).</li> <li>• Addresses some incorrect reporting on SMPTE-2022 statistics.</li> <li>• Corrects an issue whereby the DNS settings would not take effect until the unit was rebooted.</li> </ul> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• Updated manuals (v1.0) are available and should be used to properly use the new features described here.</li> <li>• RTMP Server Mode now requires a separate license.</li> <li>• For reliability purposes, this release will automatically update the Factory image in the unit.</li> </ul>
Release 0.8.0 (2/9/2017 – 7/24/2017)	<p><b>Additions / Improvements:</b></p> <ul style="list-style-type: none"> <li>• Adds support for audio decoding in RTSP mode (only AAC is supported).</li> </ul> <p><b>Corrections:</b></p> <ul style="list-style-type: none"> <li>• Fixes rare cases where memory corruption can occur within the decoder. <b>Updating to this release is strongly recommended for all users.</b></li> <li>• Fixes cases where some decoded signals can show CRC errors on the decoder SDI output.</li> <li>• Compatibility improvements in RTMP mode, which improves compatibility with encoded streams not sourced from Cobalt products.</li> </ul> <p><b>Note:</b> An initial upgrade/reboot from version 0.7.0 to 0.8.0 may take up to <b>4 minutes</b> for the card to return to operating/up status. Please plan accordingly if the card is expected to be used immediately after upload for live re-connection. (This delay occurs on the reboot immediately following upgrade upload and not for any subsequent power-up or reboots.)</p>
Release 0.7.0 (1/4/2017 – 2/9/2017)	<p><b>Additions / Improvements:</b></p> <ul style="list-style-type: none"> <li>• Improvements to the SDI output signal.</li> <li>• Improvements in genlock stability and accuracy</li> <li>• Support for audio passthrough, both in genlock and non-genlock modes.</li> </ul>