COBALT

+DSP • DSP-Based Dolby® Encode/Decode, Loudness Processing, and Upmixing Audio Options

Our latest **+DSP** suite of DSP-based audio processing features represents our greatest single-device audio proc capacity. The DSP-based platform supports multiple audio DSP options using a processing core (which supports numerous simultaneous processing engines) that uses license "credits" which allows flexible tailoring of multiple proc function instances. In this manner, the +DSP option provides much more flexibility than other audio processor packages that used fixed processing assets (for example, this flexibility allows "trading" credits for more Dolby encoders while backing out of loudness processors or other engine assets).

Audio proc options include Dolby® Real-Time Loudness Leveling automatic loudness processing, Dolby® encode/decode, and Linear Acoustic® UPMAX™ automatic upmixing. DSP options can be ordered with new-card purchase, or field-installed as software option upgrades.

Multiple instances of Dolby encoding, loudness processing, and upmixing can be supported on the same card.

▪ **Dolby® Digital/Digital Plus™ Encoding (ENCD-5.1 / ENCD-2.0)** – Provides Dolby® Digital/Digital Plus™ encoding from any combination of audio sources supported by the card (including upmixed and loudness-processed signals). Full metadata support using internally generated or external metadata via SMPTE 2020, or from a same-card decoder. Available in 5.1 or 2.0 versions.

▪ **Dolby® Decoding** – Provides Dolby® Digital/Digital Plus™/E decode from any card digital audio channel pair, with Digital/Digital Plus dynamic range control and full bitstream summary displays.

▪ **Dolby® Real-Time Loudness Leveling Loudness Processing (RTLL-5.1 / RTLL-2.0)** – Provides full-featured loudness processing, including peak limit, aggressiveness, and dialog intelligence modes. Available in 5.1 or 2.0 versions.

▪ **Linear Acoustic® UPMAX™ Upmixing (UPMIX-LA)** – Featuring Linear Acoustic UPMAX™ technology, the 5.1 upmixer uses any stereo pair accommodated by the card and generates a six-channel 5.1 complement (L, R, C, LFE, Ls, Rs) from the stereo source, thereby allowing legacy stereo programming to adapt to and fully utilize 5.1-channel audio capabilities.

Option

+DSP
Audio DSP Options

+DSP-ENCD – Dolby® 5.1/2.0 D/D+ Encode
+DSP-DEC – Dolby® Decode
+DSP-RTLL – 5.1/2.0 Loudness Processing
+DSP-UPMIX-LA – UPMAX™ Upmixing

DOLBY DIGITAL
DOLBY DIGITAL PLUS
LINEAR ACOUSTIC®

FEATURES

DSP-based platform supports multiple audio DSP options, with multiple instances available using allocatable license "credits"	Linear Acoustic UPMAX™ DSP audio option available, with multiple upmixers enabled on the same card/device
Dolby D/D+ encoding and D/D+/E decoding options, with multiple encoders/decoders enabled on the same card/device	Provides up to eight processing engines that can be set as Dolby encoders/decoders, loudness processors, or upmixers as desired. Multiple-instance functionality supports multiple-stream audio such as SAP and multi-language.
Dolby Real-Time Loudness Leveling (RTLL) loudness leveling with full parametric control setup, with multiple loudness processors enabled on the same card/device	

OPTIONS

Dolby® Encoder Options (**+DSP-ENC**) – Available as Dolby Digital, Digital Plus, and E encode. (See Ordering Information for full details.)

Dolby® Decoder Options (**+DSP-DEC**) – Provides Dolby Digital, Digital Plus, and E decode

Dolby® Real-Time Loudness Leveling Automatic Loudness Processing Options (**+DSP-RTLL**) – Provides advanced loudness processing with comprehensive parametric controls. Available as surround 5.1 and stereo 2.0. (See Ordering Information for full details.)

Linear Acoustic® UPMAX™ Upmixing (**+DSP-UPMIX-LA**) – Provides automatic 2.0-to-5.1 Linear Acoustic® UPMAX™ upmixing

ORDERING INFORMATION

Note: DSP options are supported only on certain latest-revision card and BBG-1000 models that are factory-equipped for DSP support (identified with **-DSP** in their part numbers). Available now are openGear models 9934-AUD-PRO, 9902-UDX-DSP, and 9902-UDX-DSP-CI, as well as standalone models BBG-1034-AUD-PRO and BBG-1002-UDX-DSP which support all options listed here.

+DSP-RTLL-5.1 Dolby® RTLL™ 5.1-Channel Loudness Processor Option

+DSP-RTLL-2.0 Dolby® RTLL™ Stereo Loudness Processor Option

+DSP-ENCD-5.1 Dolby® Digital/Digital Plus 5.1 Encoder

+DSP-ENCD-2.0 Dolby® Digital/Digital Plus 2.0 Encoder

+DSP-DEC Dolby® Decoder

+DSP-UPMIX-LA Linear Acoustic® UPMAX™ 2.0-to-5.1 Upmixer