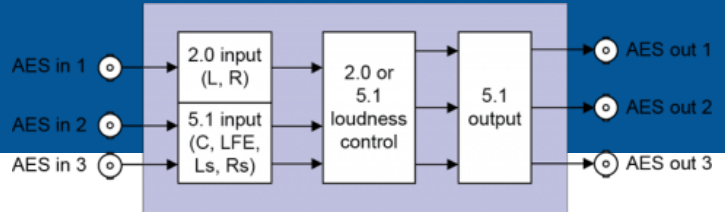


DTS Neural Loudness Control

Stereo, StereoDual Mono, 5.1, 5.1+2, 4 x Stereo



DTS Neural Loudness Control answers the need of TV broadcasters and network operators to manage perceived loudness levels within a specific desired volume range. Unlike traditional volume

management solutions, this innovative system uses the DTS Neural Technologies perceptual loudness measurement tool to model how the human ear will perceive the loudness of the audio content. This process accounts for many variables that can affect how audio is perceived, including spectral and density differences, and temporal overlaps. By accounting for the human experience of listening, DTS Neural loudness measurement accommodates both stereo and multichannel audio equally well.

Features

- ITU-BS 1770 compliant
- Real-time measurement and control of loudness from the broadcast facility guarantees a consistent viewer experience, independent of consumer equipment
- Uses a perceptual hearing model to accurately measure loudness and not traditional intensity-based means such as RMS or SPL, to achieve much more accurate and natural correction
- Works equally well with stereo (2.0) and multichannel (5.1) program audio content, supporting any stereo format (2.0, LtRt, LoRo, LwRw) and any multichannel/surround mixes
- Manages loudness without creating a squashed or compressed sound and with no negative impact on sound signature
- Correction of greater than ± 12 dB without hearing any audible cues indicating that the original content was anything but perfect
- Manages loudness while shaping the sound signature to preserve a loud or quiet spectral balance
- Uses advanced psychoacoustic and signal processing technology to accurately detect and regulate the perceived loudness of 2.0 and 5.1 sources; this is something that can't be accomplished with traditional intensity-based volume control solutions
- Available for the Selenio™ MCP, Selenio 6800+™, X100™ and X50™ processing platforms

Details

After measurement, DTS Neural Loudness Control applies appropriate gain or attenuation to achieve the desired target loudness level (Dial Norm). The correction process preserves the spectral balance of the original signal by adapting the frequency response of the low and high frequencies to compensate for level differences within the original signal. DTS Neural Loudness Control can be used in a protection role that only affects content that falls aggressively outside the desired target or in a management role to tightly control loudness and guarantee intelligibility without the distracting side effects of traditional volume management solutions.

The Selenio 6800+™ platform includes the all-in-one APM6803+ and DAPM6802+ Advanced Audio Processing modules.

There is a plug-in option available for adding the loudness control to the Selenio X50™ and Selenio X100™ video and audio processors.

The Selenio™ Media Convergence Platform supports DTS Neural Loudness Control as well.

Specifications

Specifications and designs are subject to change without notice.

Sample Rate	32 to 48 kHz (AES/EBU, wordclock-slave)
Number of Available Channels	Depending on configuration, up to 4 AES3 input (stereo) and 4 AES3 output (stereo)

Ordering Information

DTS NEURAL SURROUND LOUDNESS CONTROL FOR SELENIO MEDIA CONVERGENCE PLATFORM	
SELOPT-ADVAUD	APM (Audio Processing Module) plug-in advanced audio processing for FS, XD (requires software key license option(s))
SELOPT-SK-DTS	1 software key license for DTS Neural technologies option (3 software key licenses required for DTS Neural Surround UpMix or DownMix or 5.1 DTS Neural Loudness Control, 4 software key licenses required for DTS Neural Surround MultiMerge, 1 software key license required for 2.0 DTS Neural Loudness Control)

FOR LOUDNESS CONTROL (SELENIO MCP)

SELOPT-SK-EN-LCL	Software keyed option for ENC1 - Support for DTS Neural Loudness Control for up to 4 stereo pairs, or one 5.1 and a stereo pair. When in use will reduce the maximum audio encodes to 4 stereo pairs
SELOPT-SK-E2-LCL	Software keyed option for ENC2 - Support for DTS Neural Loudness Control for up to 4 stereo pairs, or one 5.1 and a stereo pair. When in use will reduce the maximum audio encodes to 4 stereo pairs

DTS NEURAL SURROUND LOUDNESS CONTROL IN SELENIO 6800+

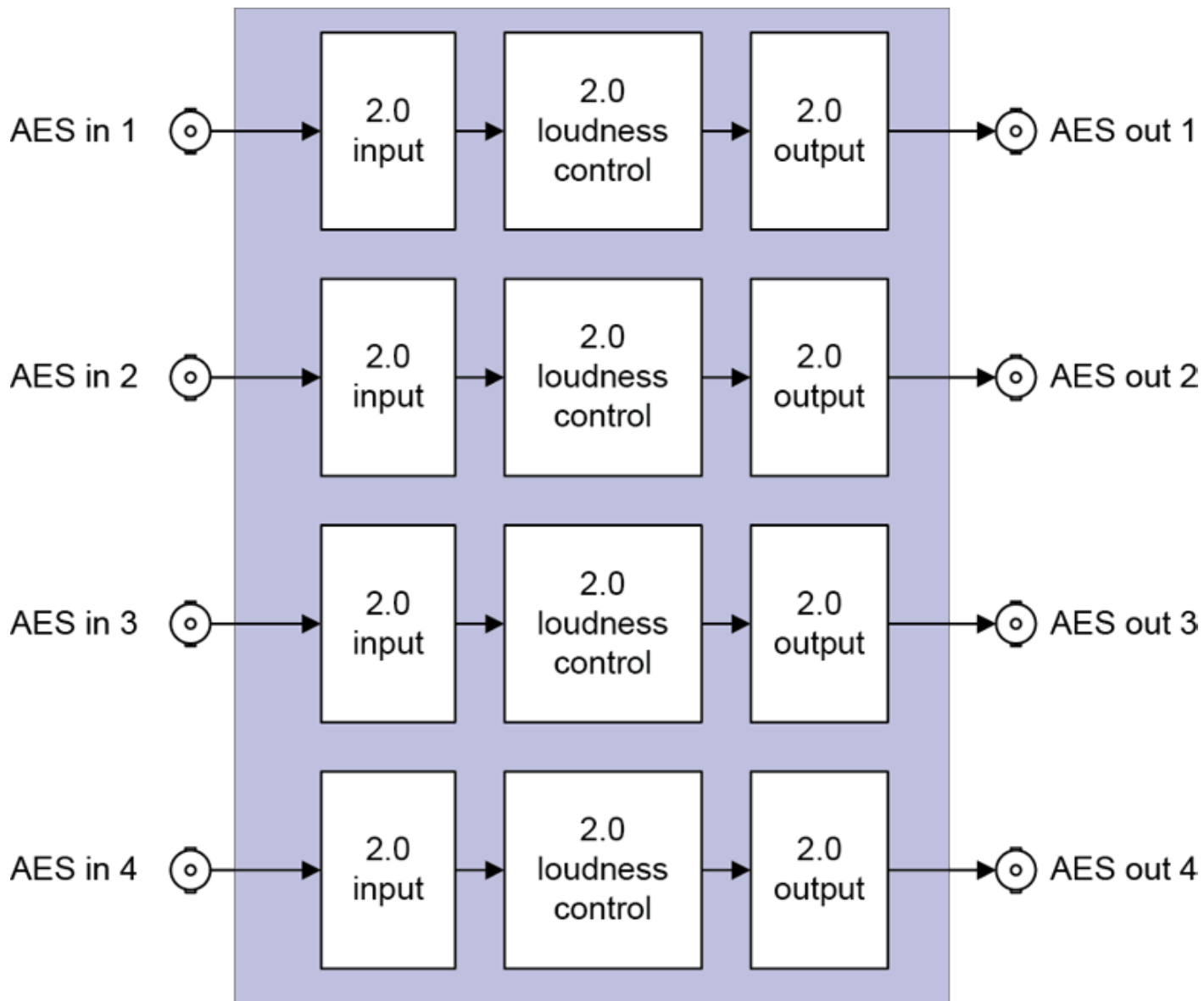
APM6803+RLYT	HD/SD with relay bypass multichannel audio processing station with 8 discrete AES. Supports all DTS Neural Surround Sound and Loudness Control functions. Supports up to 2 Dolby decoders and encoders. Licenses are required for all DTS and Dolby functions
APM6803+T	SD/HD/3G multichannel audio processing station with 8 discrete AES. Implements all DTS Neural Surround Sound and Loudness Control functions. Supports up to 2 Dolby decoders and encoders. Licenses are required for all DTS and Dolby functions
DAPM6802+D	HD/SD-SDI dual channel advanced embedded audio Loudness Control processing module, supports all DTS Neural Surround Sound and Loudness Control functions. Licenses are required for all DTS functions. Takes 2 slots in 6800+ frame
DAPM6802+RLYD	HD/SD-SDI with relay bypass dual channel advanced embedded audio Loudness Control processing module, supports all DTS Neural Surround Sound and Loudness Control functions. Licenses are required for all DTS functions. Takes 2 slots in 6800+ frame
68OPT-DTS	1 software key license for DTS Neural technologies option (3 software key licenses required for DTS Neural Surround UpMix or DownMix or 5.1 DTS Neural Loudness Control, 4 software key licenses required for DTS Neural Surround MultiMerge, 1 software key license required for 2.0 DTS Neural Loudness Control)

DTS NEURAL SURROUND LOUDNESS FOR SELENIO X50

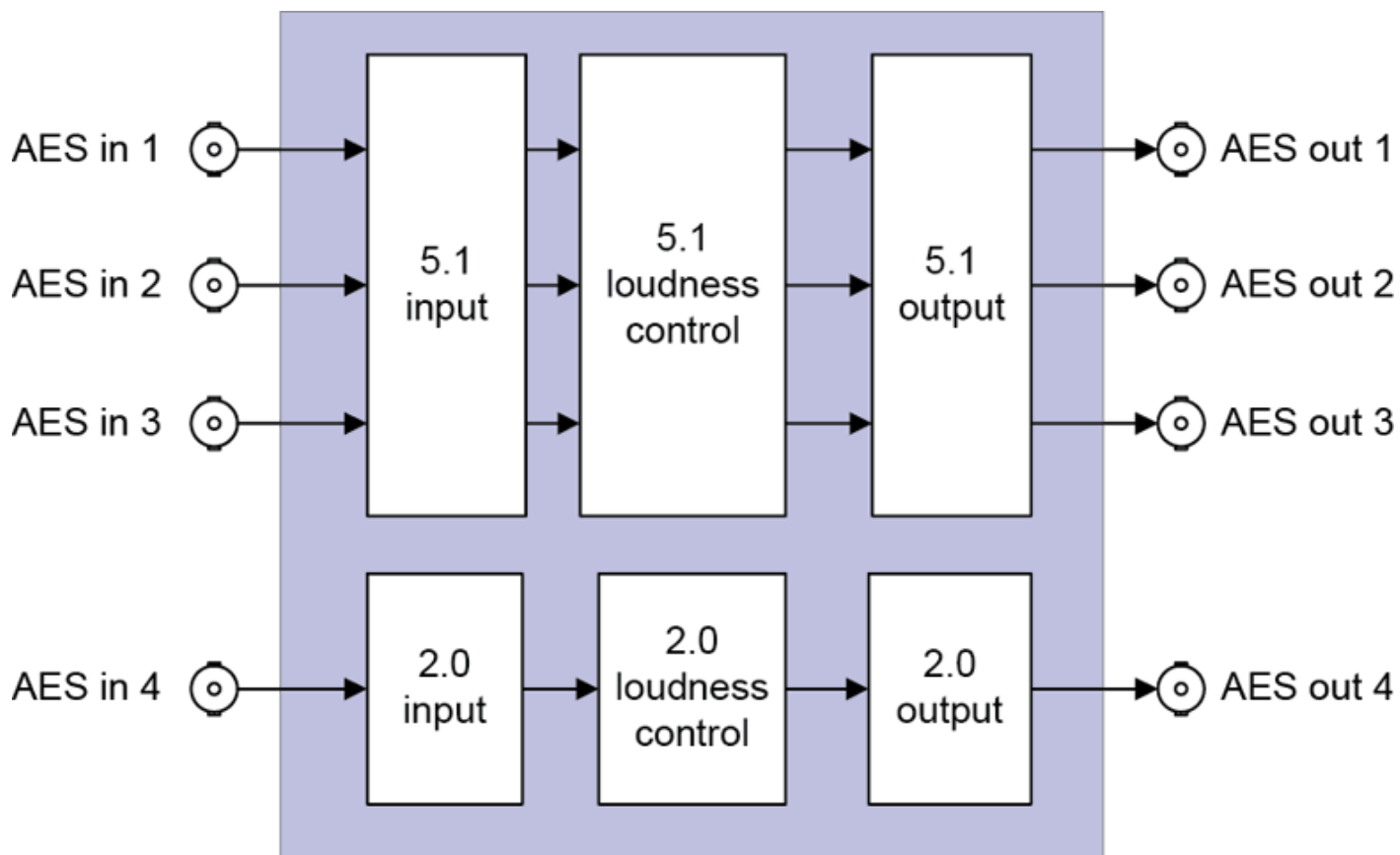
X50OPT-ADVAUD	APM (Audio Processing Module) plug-in advanced audio processing for X50-AV-2PS (requires software key license option(s))
X50OPT-SK-DTS	1 software key license for DTS Neural technologies option (3 software key licenses required for DTS Neural Surround UpMix or DownMix or 5.1 DTS Neural Loudness Control, 4 software key licenses required for DTS Neural Surround MultiMerge, 1 software key license required for 2.0 DTS Neural Loudness Control)

DTS NEURAL SURROUND LOUDNESS CONTROL FOR SELENIO X100

X100OPT-ADVAUD	Plug-in advanced audio submodule option (required for Dolby and DTS options)
X100OPT-SK-DTS	1 DTS Neural Surround and Loudness Control software key license option (1 for 2.0 Loudness Control or 2 x 1.0 Loudness Control, 3 for Upmix, Downmix, 5.1 Loudness Control, 4 for Multimerge, 4 x 2.0 Loudness Control, 1 x 5.1 + 2 Loudness Control), requires X100OPT-ADVAUD



2.0 and 5.1 Loudness Control



5.1 Loudness Control with DownMix

