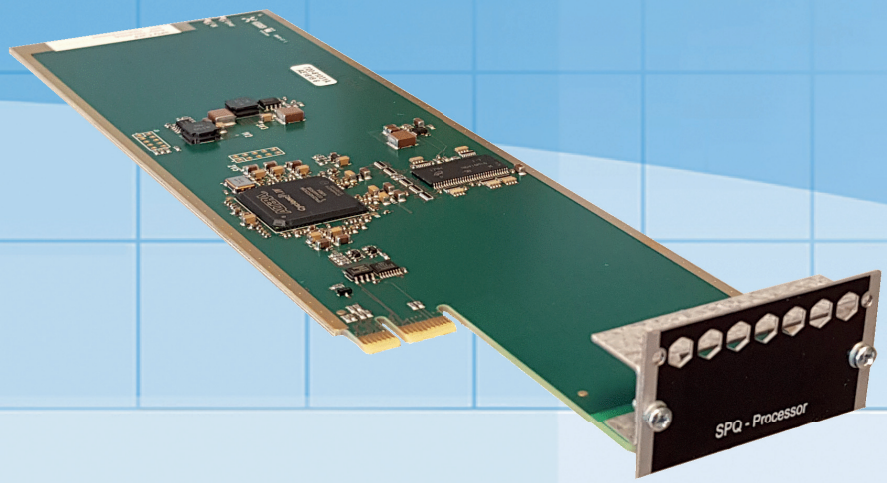
SPQ - Speaker Processor Card for AX32 and Penta 720



The SPQ – Speaker Processor Card for AX32 and the 720-610 Card for Penta 720, provides 128 filter channels with a total of 1,024 filters and delay control on all channels. The card is mounted in the 8 slot modular card section.

The SPQ Card provides filters for speaker equalization and bass management with characteristics and channel layouts configured and managed via the DADman control software.

Penta 720 and AX32 frame

Key features:

- 128 channels @ 48 kHz
- 1,024 filters, with the Parametric EQ, High Pass, Low Pass and Shelving characteristics
- Delay up-to 800 ms per channel
- Total processing latency 7 samples
- Native filters for all sample rates from 44,1 kHz to 384 kHz

NTP TECHNOLOGY

DAD

Specifications

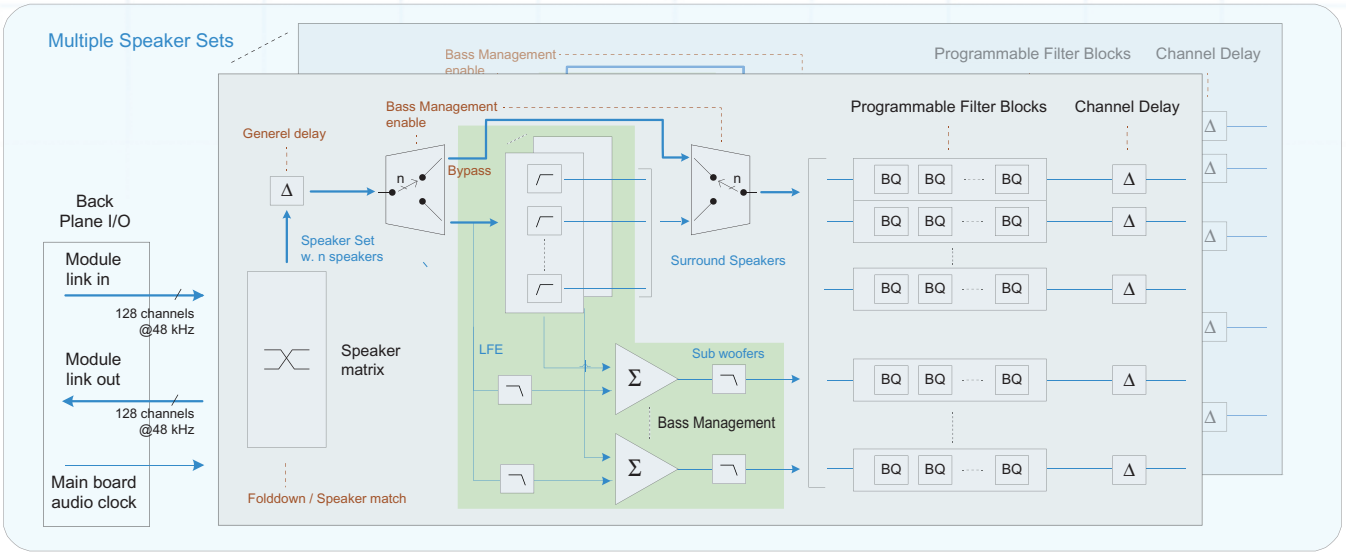
Description

The SPQ – Speaker Processor Card is mounted in the 8 slot card section of the AX32 or Penta 720 base unit. Normally one card is installed, but if more channels are needed more cards can be installed. The SPQ card does not have any I/O connectivity as it is a pure processing card. The SPQ Card provides filters for channel-based speaker EQ and well as Bass Management.

The SPQ – Speaker Processor Card can be configured to various different filter characteristics and channel layouts via the DADman control software and is all integrated and easily managed by the Pro | Mon monitor control section in DADman. The SPQ Card supports all the system sample rates and will reconfigure automatically and fast when sample rates are changed, with equal filters and delay independent of the sample rate. Delay can be set individually per channel as well as generally for a whole set of speakers to also accommodate lib-sync applications.

The SPQ setting are stored in the Pro | Mon monitor profile in DADman and speaker settings can be recalled separately from stored monitor profiles, for a fast change of parameters. Measurement of the speaker curves and frequency responses have to be done using a separate measurement program, as this is not a part of the SPQ and Pro | Mon functionality.

The block diagram of the SPQ Speaker Processor Card is shown below.



General

No. of EQ channel	Up-to 128 per card and up-to 16 per speaker channel
No. of filters	Up-to 1,024 per SPQ card
No. of Bass management channels	32 seperately managed Subs
Delay	General control, and channel control
Numer of cards	Up-to 8 can be installed
Power consumption	4,5 W

Audio processing

No. of filter channels	128@48 kHz. Channels scales downwards with sample frequency i.e. 16 channels@384 kHz
Filter implementation	1.024 bi-quad IIR filters
Filter types	Parametric EQ, Butterworth: Low pass, high pass Linkwitz Riley: Low Pass, high pass Shelving: low pass, high pass
Frequency range	20 - 20 kHz
Filter Q and Gain	0,5 to 10, +/- 12dB
Filte r slopes	6 to 24 dB/oct
Sample rates	44.1, 48, 88,2, 96, 176,4, 192, 352,8 and 384 kHz. (DSD is not supported)
Delay range	10 micro sec. to 800 ms per channel, rounded to samples
Audio processing delay	2 samples on the card, 7 samples total in the unit. All channels are alligned

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