



Digital 8-channel signal processor with 48 kHz / 24 Bit signal path

Features

- Extremely powerful “fixed point” Audio DSP with 64 Bit resolution and 1.2 billion MAC operations per second
- HELIX Extension Card slot (HEC) for additional input / output modules like Bluetooth® Audio Streaming
- Smart highlevel input with ADEP circuit (Advanced Diagnostics Error Protection)
- Start-Stop capability down to 6V supply voltage
- Freely definable signal routing with separate matrices for line, SPDIF and HEC/AUX
- More than 320 biquad filters for sound optimization available
- Time alignment with up to 20 ms delay time per channel, additionally reverse time alignment for in-phase summation of the inputs
- Optimized signal path and power supply for further improved sound quality
- Inputs: 6 x RCA/Cinch, 6 x Highlevel and 1 x optical SPDIF
- Outputs: 8 x RCA/Cinch with max. 6 Volts output voltage
- Will be launched together with the brand new upcoming DSP PC-Tool V4

HELIX DSP.2 vs. HELIX DSP

HARDWARE	DSP.2	DSP
HELIX Extension Card slot	Yes	-
Highlevel inputs	6	4
Output voltage	6 Volts	4 Volts
DSP resolution	64 Bit	56 Bit
DSP power	295 MHz with 1.2 billion MAC operations/sec.	172 MHz
Distortion (THD+N)	< 0.0008 % (digital input) < 0.002 % (analog input)	< 0.001 % (digital input) < 0.003 % (analog input)
Input sensitivity adjustment	Externally	Internally
ADEP circuit (Advanced Diagnostics Error Protection)	Yes	-
Auto remote switch	Yes	-
SOFTWARE	DSP.2	DSP
Signal routing matrices	3	2
Input EQs	5 band parametric	-
Input reverse time alignment	5 ms per channel	-
Signal detections	3 (main, HEC/AUX, optical)	1 (optical)
Output EQs	30 band parametric per channel	30 band parametric per channel
High- and lowpass filters	Up to -42 dB/Oct.	Up to -30 dB/Oct.
Time alignment	20 ms per channel	15.6 ms per channel
Phase control	11.25° steps	11.25° steps
Allpass filter	Yes	Not yet
Optical output routing matrix	Yes, with HEC module	-
Automatic output limiter	Yes	-

Major selling points

- Latest technology with up-to-date hardware
- Very good price / performance for a 6in / 8out DSP
- All necessary inputs for modern car integration
- Future-proof with HEC slot
- New DSP PC-Tool V4 software



Technical data

Inputs	6 x RCA / Cinch 6 x Highlevel speaker input 1 x Optical SPDIF (12 - 96 kHz) 1 x Remote In	Signal-to-noise ratio (A-weighted)	112 dB (digital input) 107 dB (analog input)
Input sensitivity	RCA / Cinch 2 - 4 Volts Highlevel 3.5 - 11 Volts	Distortion (THD+N)	< 0.0008 % (digital input) < 0.002 % (analog input)
Outputs	8 x RCA / Cinch 1 x Remote Out	IM distortion (IMD)	< 0.003 % (digital input) < 0.005 % (analog input)
Output voltage	6 Volts	Crosstalk	> 90 dB
Frequency response	10 Hz - 22,000 Hz	Operating voltage	9.6 - 18 Volts (max. 5 sec. down to 6 Volts)
DSP resolution	64 Bit	Current draw	< 480 mA
DSP power	295 MHz 1.2 billion MAC operations/second	Additional features	HEC slot, Ground lift switch, Control Input, ADEP circuit
Data converters	A/D: BurrBrown D/A: BurrBrown	Dimensions (H x W x D)	40 x 177 x 120 mm / 1.58 x 6.97 x 4.72"

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