bit Ten D

Signal Interface Processor

ideato, progettato, costruito in Italia

Full DA 24 bit/48 kHz

bit Drive

Power Supply

Voltage	11 ÷ 15 VDC
Idling current	0.4 A
Switched off without DRC	2.5 mA
Switched off with DRC	4 mA
Remote IN voltage	7 ÷ 15 VDC (1.3 mA)
Remote OUT voltage	12 VDC (130 mA)

Signal Stage

Distortion-THD @ 1 kHz, 1V RMS Output	0.005 %
Bandwidth @ -3 dB	10 ÷ 22k Hz
S/N Ratio @ weighted	
Digital Input	105 dBA
Master Input	95 dBA
Aux Input	96 dBA
Channel Separation (@1 kHz)	85 dB
Input sensitivity (Speaker IN)	2 ÷ 15 V RMS
Input sensitivity (AUX in)	0.6 ÷ 5 V RMS
Input sensitivity (PHONE)	2 ÷ 15 V RMS
Input impedance (Speaker IN)	2,2 kΩ
Input impedance (AUX)	15 kΩ
Input impedance (PHONE)	2,2 kΩ
Max Output Level (RMS) @ 0.1% THD	4 V RMS

Input Stage

High Level (Speaker)	FL - FR - RL - RR - PHONE IN
Low Level (Pre)	AUX IN
Digital Optical IN (S/PDIF max 96 kHz/24 bit)	OPTICAL IN

Output Stage

Low Level Pre (Default)	FRONT L/R, REAR L/R, SUB
Digital AD Link	Ch 1 ÷ Ch 8 S/PDIF

Connection

From / to personal computer	1 x USB / B (1.1/2.0)
To Audison Electronics	AC Link controls

Crossover N.5 (one each output channel)

Mode	Full / High Pass / Low Pass / Band Pass
Type and slope	Linkwitz @ 12/24 dB Butterworth @ 6/12/18/24 dB
Crossover frequency	68 steps @ 20 ÷20k Hz
Phase control	0° ÷180°

Equalizer

Hi-Level Input (Speaker In)	Automatic De-Equalization
Outputs	N.5 Graphic: ± 12 dB @ 31 Band ISO 1/3 Oct. 20 ÷ 20k Hz

Time Alignment

Distance	0 ÷ 510 cm / 0 ÷ 200.8 in.
Delay	0 ÷ 15 ms
Step	0,08 ms; 2,8 cm / 1.1 in.
Fine set	0,02 ms; 0,7 cm / 0.27 in.

Size

W x H x D (mm / in.)	191 x 34 x 131 / 7.51 x 1.33 x 4.76
Weight (kg / lb.)	0,6 /1.322

Audio DSP and converters
32 bit Cirrus Logic (Clock speed: 147 MHz) Digital Signal Processing chip and A/D D/A converters working in PCM at 48 kHz with 24 bit resolution. The processor speed allows the user to hear and verify in real time the changes applied during the tuning.

Audio Inputs
4 independent high-level channels with automatic summing capability;
1 analog low-level stereo auxiliary input;
1 optical digital input;
1 high-level momentary audio interrupt input (with priority) on Phone Mute cable (settable through PC).

Audio Outputs
5 independent analog PRE channels featuring adjustable level;
1 AD Link output featuring 8 independent digital audio channels through a single CAT 5.S LAN cable for use with amplifiers featuring AD Link input.

Control Connections
1 USB /B (2.0) connector for PC connection;
1 AC Link control bus connector for DRC;
1 AC Link control bus for use with amplifiers featuring AC Link;
1 input for external Mute (settable through PC).

Configuration
Guided procedure that, thanks to a wide range of set names, provides the ability to assign each component to the bit Ten D connections and automatically coordinate their functions.

Turn-on Controls
ART, Automatic Remote Turn on/off, selectable from Hi-Level Front L. The ART can be enabled through an external switch;
Through the Remote IN;
Through vehicle ignition key trigger with memory function;
Through the DRC;
Automatically through the hands-free phone kit momentary interrupt.

In/Out Volume
Manual input sensitivity adjustment for the Master Hi-Level inputs (with supplied Test CD);
Manual input sensitivity adjustment for auxiliary inputs;
Independent level control for each output channel for system fine tuning (-40 ÷ 0 dB).

De-equalization
Automatic de-equalization of signal fed into the high-level inputs (with supplied Test CD) if necessary. It can also be performed without the PC.

Equalizers
31-band graphic equalizer (1/3 Oct.; ±12dB) for each analog and digital output channel.

Crossover Filter
Filter typology: Hi-pass, Lo-pass, Full Range or Band-pass with independent selectable cut-off slope;
Cut-off frequency: 70 steps available from 20 Hz to 20 kHz;
Cut-off slope: 6 to 24 dB/Oct.;
Filter alignment: Linkwitz or Butterworth;
Mute function: selectable for each output (on/off);
Phase: selectable for each output (0°/180°).

Signal channels reconstruction
It can reconstruct a stereo output signal from a multi-channel input signal. In addition it can reconstruct rear, centre and subwoofer output channels from a stereo input.

Time Alignment
Guided procedure for the speaker distance data entry with an automated calculation (distance to time) for each channel for accurate delay times. System also provides for manual fine tuning of delay (0.02 ms fine set).

DRC
Master Volume, Subwoofer Volume, Balance and Fader controls, Input selection, Memory selection, Adjustable display brightness. Access to digital features of amplifiers featuring AC Link.

Memory
2 presets separately managed and recalled with the DRC.

bit Ten D software
Windows (XP, Vista and 7) based software with “Standard” and “Expert” operating modes;
Screen resolution: 1024 x 600 px min.