- Active Audio -
L'ACOUSTIQUE ACTIVE

UT26

DSP / Network Multichannel Audio Processing Unit

Description

➢ Multichannel audio processing

Implementing the CTB26 board equipped with Motorola DSP 56307, unit UT26 features high audio processing capability, 2 analog input, a stereo digital AES/EBU input, and 6 analog outputs.

➢ A versatile multi-processor system

Several UT26 units may be connected for creating a versatile multi-processor system. Audio bus BAN848 allows each unit to send / receive audio signals to / from other units. Very low latency : 20,83 µs. Maximum bus length : 100 m.
Multiple options can be added as daughter boards (RS232/485 converter, analog filtering of inputs and outputs, sensors… Contact us for more information).

➢ Large interface capability

Unit UT26 offers many interfacing possibilities :

- Digital Audio Bus BAN848
- Serial interface to PC (RS485, or RS232 with option CV232)
- BCL bus for interfacing a remote control, a sensor, …

➢ User interface

Bus BCL allows easy implementation of a remote control.
Else, PC software DADE may be used to send user specific commands (see “Programming”).

Versatile Multi-processor System

Unit UT26 is dedicated to digital audio signal processing.

Typical applications are :

- **Loudspeaker array control** (directivity, filtering…).
- **Active acoustic control**, anti-noise, active correction of room acoustics.
- **Multi-effect filtering** (delay, compressor, limiter, EQ, Reverb …)

Programming

Unit UT26 is shipped with our user friendly multi-processor Digital Audio Development Environment **DADE** (see www.activeaudio.fr). Connected to the serial or USB port of a PC, DADE handles all the CTB26 board resources (DSP, codec, BAN, flash memory...), so that the user just has to develop his own code as a DADE plugin and load it in the DSP.

Its numerous features are illustrated by a library of example plugins implementing delays, biquad filter cells, EFCOP convolution, decimation / interpolation, FFT, LMS,…

DADE allows reading / writing in data, program, & flash memories as well as in DSP registers, load plugins, send user-specific commands...

DSP code may also be developed using the Motorola / Freescale tools (ASM56300, GNU563c), or using powerful development environments such as Tasking EDE, and then loaded in the DSP via the JTAG port, using a JTAG emulator (contact us).

332 Bd Marcel Paul, F-44800 Saint Herblain. France
Phone : +33 2 40 92 39 90 - Fax : +33 2 40 92 39 91 - info@activeaudio.fr

Groupe ÉLECTRONAVALE
FT-UT26-0506A

UT26 – Technical Data [1]

Audio	Analog inputs	2 symmetrical input buffers. Connectors : Female 3 pts XLR. Full scale : ±3.25v (i.e. +9.5dBU). 1st order high-pass at 6Hz. Cross-talk : < -90dB. Impedance : 15 kΩ.
	Digital input	1 stereo AES/EBU. Connector : Female 3 pts XLR.
	Analog outputs	6 symmetrical output buffers, with DSP controlled power supply. Connectors : Male 3 pts XLR. Full scale : ±3.5v (i.e. +10dBU) [2]. 1st order high-pass at 4.5Hz. Cross-talk: < -90dB. Impedance : 46 Ω.
	With DSP in pass-thru mode	Dynamic range : 90dB (Lin 20Hz-22kHz). Frequency bandwidth (-1dB) : 20Hz-22kHz.
DSP [3]	Processor	Motorola 56307 24bits @160 Mips . + Coprocessor @130 Mips.
	Memories	Ultra-fast Internal Ram 64kWords (access time : 1 cycle). Flash memory 128kO.
Interfaces	RS232 [4]	Connector : SubD9 male. Half duplex up to 57600 baud.
	BAN848 [4]	Digital Audio Bus : 8 audio channels 16 bits / 48kHz, 1 command channel à 38 400 bauds, 1 clock channel. Max length : 100 m, with shielded multipair cable. Transfer duration : 1 period 48kHz, i.e. 20,83 µs. Connector : SubD25 female
	BCL	Serial RS485 link at 2400 baud, sensor interface, ON/OFF. Connector SubD15 female.
Mains		230v / 50Hz, 15W max.
Box	Dimensions	Rack 19" 1U. Dimensions 483 x 44 x 250 mm.
	Weight	Approx 4 kg.
	Paint	Black.
Options	CV232 [4]	Daughter board for RS232 PC interface.
	Daughter boards	Sockets are available on the main board to host daughter boards : - Filtering of the inputs, pre-EQ, - Filtering of the outputs, de-EQ, - Interfacing a sensor, a remote control,… Contact us for more information.

1 Data subject to changes
2 Other sensitivities are possible. Contact us.
3 See CTB26 board data sheet for more information.
4 In a multi-processor configuration, ports BAN848 are connected in « daisy chain ». A PC may be connected to the command channel of the BAN (RS485), or to one of the RS232 port of one of the units if it is equipped with option CV232.

332 Bd Marcel Paul, F-44800 Saint Herblain. France
Phone : +33 2 40 92 39 90 - Fax : +33 2 40 92 39 91 - info@activeaudio.fr

Groupe ÉLECTRONAVALE
FT-UT26-0506A