MicroLAB Systems

Ultimate DSP Development Solutions

Audio SIOX DCM

Audio AD/DA and DAT I/F SIOX Daughter-card Modules for TORNADO DSP Systems/Controllers

covers:
T/SDAS-4215, T/SDAS-ATEL2, T/SDAS-AU/8L, T/SDAT, T/X-XTLI, T/X-XTSI

general features

- compact SIOX DCMs fit to *TORNADO* SIOX rev.B site
- CD quality analog I/O (T/SDAS-4215, T/SDAS-ATEL2 and T/SDAS-AU/8L) and digital audio DAT I/F (T/SDAT)
- hardware/software compatible stereo (T/SDAS-4215 and T/SDAS-ATEL2), and 2/4/8-channel (T/SDAS-AU/8L) configurations
- each analog I/O channel connects to Line/MIC/Phones
- optional connection of each analog I/O channel (T/SDAS-ATEL2) to external Telephone Line I/F (T/X-XTLI) or to external telephone station I/F (T/X-XTSI)
- ideal for audio and multimedia applications with optional telephone line/equipment interfacing

T/SDAS-4215, T/SDAS-ATEL2 and T/SDAS-AU/8L DCM

- based upon CS4215 or AD1849 multimedia stereo audio codec chips
- each A/D channel comprises of PGA, 16-bit ΣΔ ADCand optional u/A-law encoder
- each D/A channel comprises of optional u/A-law decoder, monitor path, 16-bit ΣΔ DAC, and output attenutor
- programmable sampling frequency up to 48 kHz
- line and microphone input mux for each A/D channel
- line and phone (T/SDAS-4215 and T/SDAS-ATEL2) outputs for each D/A channel
- line I/O meets both professional +22dBU (T/SDAS-4215) and consumer 2Vrms (all) specs
- two digital inputs and two digital outputs per every AD/DA channel (T/SDAS-ATEL2) for connection to external telephone interface options (T/X-XTLI and T/X-XTSI)

T/SDAT DCM

- 24-bit programmable digital audio DAT I/F
- compatible with AES/EBU and S/PDIF
- 32kHz, 44.1kHz, 48kHz and AUTO sampling frequencies
- programmable C, U and V bits
- transmitter flags and error processing

T/X-XTLI and T/X-XTSI telephone I/F options

- external options for T/SDAS-ATEL2 (also compatible with T/SDAS-SCOM1 and T/SDAS-SCOM2 SIOX DCMs)
- connect any AD/DA channel of T/SDAS-ATEL2 to either PSTN phone line (T/X-XTLI) or to local telephone equipments (T/X-XTSI)
- meet and exceed FCC, DOC and other requirements
- V34/Fast 56kbps compatible

software tools

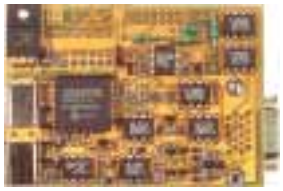
- Hypersignal RIDE DSP algorithm development & simulation IDE
- demo samples

applications

- audio and multimedia
- speech processing
- vocoders/fax/modem
- PSTN and telephone equipment interfacing
- answering machines and office phone-menus
- automatic speech/fax/modem PSTN recorders

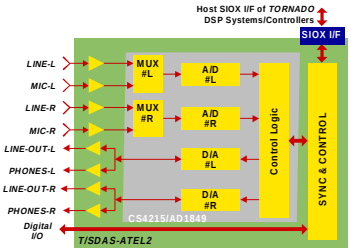
T/SDAS-ATEL2 Stereo Audio SIOX DCM with Telephone Line/Station Interface Option

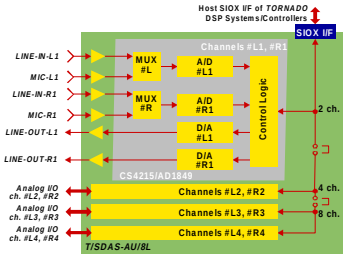
T/SDAS-AU/8L 2/4/8-channel Audio SIOX DCM

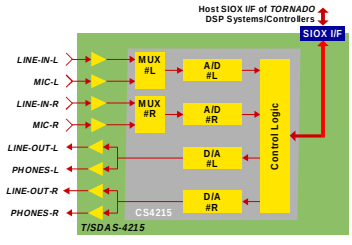


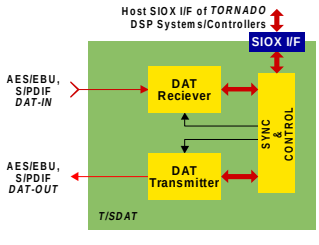
T/SDAS-4215 Stereo Audion SIOX DCM with Consumer/PRO Analog Audio Interface

T/SDAT Digital Audio Tape (DAT) SIOX DCM









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Technical Specifications for T/SDAS-4215, T/SDAS-ATEL2 and T/SDAS-AU/8L DCM

number of AD/DA channels	2 (T/SDAS-4215, T/SDAS-ATEL2) 2/4/8 (T/SDAS-AU/8L)
A/D resolution	16 bits ΣΔ ADC (A/D section of Crystal Semiconductor CS4215 or Analog Devices AD1849 multimedia stereo audio-codec chip)
A/D THD	-78dB typ
input A/D signal range	T/SDAS-4215: Line-IN: +22dBU/DIFF (PRO) , 2Vrms/SE (CONSUMER) @ 20 kOhm MIC-IN: 20mVrms/DIFF @ 20kOhm T/SDAS-ATEL2, T/SDAS-AU/8L: Line-IN: 2Vrms/SE @ 20 kOhm MIC-IN: 20mVrms/SE @ 20kOhm
A/D channel input PGA	0..+22dB with 1.5dB increment
input signal bandwidth	15Hz .. (sampling_frequency/2)
D/A resolution	16 bits ΣΔ DAC (D/A section of Crystal Semiconductor CS4215 or Analog Devices AD1849 multimedia stereo audio-codec chip)
D/A THD	-80dB typ
output D/A signal range	T/SDAS-4215: Line-OUT: +22dBU/DIFF (PRO) , 2Vrms/SE (CONSUMER) @ 600 Ohm PHONES-OUT: 2Vrms/SE @ 600 Ohm T/SDAS-ATEL2: Line-OUT: 2Vrms/SE @ 600 Ohm PHONES-OUT: 2Vrms/SE @ 600 Ohm T/SDAS-AU/8L: Line-OUT: 2Vrms/SE @ 600 Ohm
D/A channel output attenuator	0..-96dB with -1.5dB increment
output signal bandwidth	15Hz .. (sampling_frequency/2)
sampling frequency	5.5125 kHz, 6.615kHz, 8kHz, 9.6kHz, 11.025kHz, 16kHz, 18.9kHz, 22.05kHz, 27.42kHz, 32kHz, 33.075kHz, 37.8kHz, 44.1kHz, 48kHz
digital I/O levels	TTL @3.2mA (T/SDAS-ATEL2)
host TORNADO I/F	SIOX rev.B with SIO-0 port and one TM/IO line used

Technical Specifications for T/SDAT DCM

number of digital audio channels	2
digital audio data format	24 bits
sampling frequency	32kHz, 44.1kHz, 48kHz, AUTO
receiver options	channel status bits for PRO/CONSUMER modes, C/U user bits, error flags
transmitter options	programmable channel status bits for PRO/CONSUMER modes, C/U/V user bits
DAT I/F	AES/EBU, S/PDIF
host TORNADO I/F	SIOX rev.B with SIO-0 port and one TM/IO line used

Technical Specifications for T/X-XTLI and T/X-XTSI External Telephone I/F Options

host connection method	connects as external option to T/SDAS-SCOM1 or to any channel of T/SDAS-SCOM2 and T/SDAS-ATEL2 via dual-channel splitter T/X-X2C
available functions	T/X-XTLI: detects incoming ring, programmable pick-up the phone T/X-XTLI: programmable outgoing ring, line battery, detects line pick-up
compatible modem communication	V34/Fast
external line/equipment connector	RJ-45
applicable PSTN standards	FCC, DOC

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