

Key Benefits:

- Live audio processing with high-quality throughput
- Powerful multi-channel "reference" noise cancellation
- Networkable, with all settings controllable via web browser
- Balanced or unbalanced analog audio connection
- Flexible rack mounting options

Best Uses:

- Radio/TV cancellation for live audio surveillance
- Reduction of ambient noises in live recording applications where multiple microphones are available

For more information, or to request a price quotation, send us an email at sales@salientsciences.com



MicroDAC 6

Multi-Channel Reference Canceller



MicroDAC 6 is a real-time audio processor that operates on up to four live audio signals simultaneously to cancel multiple interfering "reference" noise sources, such as radio and/or television sound, from monaural or stereo "primary" sources containing desired speech. All setup is accomplished via web browser through the Ethernet interface, through which the user may interactively operate the unit, adjust all filtering parameters, and store the complete filter setup in the unit's flash drive for 24/7, autonomous operation.

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MicroDAC 6

Technical Specifications

Power:

- 85 - 264 VAC, 47-63 Hz universal with IEC320 inlet, 100VA maximum

Physical:

- 5.25"H x 4.25"W x 12"D aluminum chassis, 10 lbs.
- Optional RMK kits (sold separately) for mounting 1, 2, or 3 units in a 3U x 19" rack space

Panel Controls:

Pushbuttons (19):

- 17 dome keypad switches for PRE/POST, channel selection for headphone MONITORING, and AUTO/MANUAL gain adjustment
- 1 dome keypad switch for POWER on/off
- 1 recessed switch for factory RESET

LED Indicators:

- Four-LED bar graph for each input channel
- Status LEDs to indicate LINK, ACTIVITY, and LOCKED condition

Analog:

Line Inputs (4):

- RCA jack (unbalanced line) or 3-pin Phoenix jack (balanced line) with 0.2" pin spacing and removable plug included
- -12 to +19 dBm sensitivity
- $Z_{IN} = 25k\Omega$, AC coupled

Line Outputs (2):

- RCA jack (unbalanced line) or 3-pin Phoenix jack (balanced line) with 0.2" pin spacing and removable plug included
- +6dBV maximum output level
- $Z_{OUT} = 100\Omega$, AC-coupled

Headphone Jack (1):

- Standard 3.5mm stereo headphone jack
- PRE/POST monitoring selection
- VOLUME control

Analog Conversion:

- 24-bit, >100dB dynamic range and SINAD
- 10kHz audio bandwidth, 24kHz sample rate

Digital:

Audio Inputs (2):

- S/PDIF coaxial interface for CH1/2 and CH3/4, RCA jack, 16-24 bit data resolution and 32-96kHz sample rates supported

Control Interface (3):

- RJ45 jack for 10/100 Ethernet interface, with built-in web server for controlling all functions via browser session
- Dual 3-pin Phoenix jacks for remote clearing (EXT CLR) or freezing (EXT FRZ) of adaptive filters via simple switch closure

Processing Functions:

- Basic noise reduction processing available for all four audio channels (CH1-CH4), including:
 - Dual FIR filter stages, each configurable as LMS adaptive filter (512 taps maximum), comb, lowpass, highpass, bandpass, bandstop, notch, or slot filter
 - Equalizer stage, configurable as adaptive spectral inverse filter (ASIF) or graphic equalizer
 - "Look-Ahead" AGC and limiter amplifier for compensation of near/far party and low-level audio signals
- Reference noise cancellation available for CH1, including:
 - 2CH (18750 taps on any one of CH2, CH3, or CH4)
 - 3CH (9375 taps each of any two of CH2, CH3, or CH4)
 - 4CH (6250 taps each on CH2, CH3, and CH4)
- Additional reference noise cancellation available for CH2, including:
 - 2CH (9000 taps on any one of CH1, CH3, or CH4)
 - 3CH (4500 taps each on any two of CH1, CH3, or CH4)
 - 4CH (3000 taps each on CH1, CH3, and CH4)

Algorithms:

- Time-domain, continuous adjustment, Normalized Least Mean Square (NLMS) for all 1CH Adaptive and Reference Canceller filters
- Automatic "crash detection" and clearing for all adaptive filters for reliable unattended operation

Cancellation Capability:

- >70dB for 1kHz sine wave (1CH Adaptive filters)
- >60dB for white noise (Reference Canceller filters)

CPU:

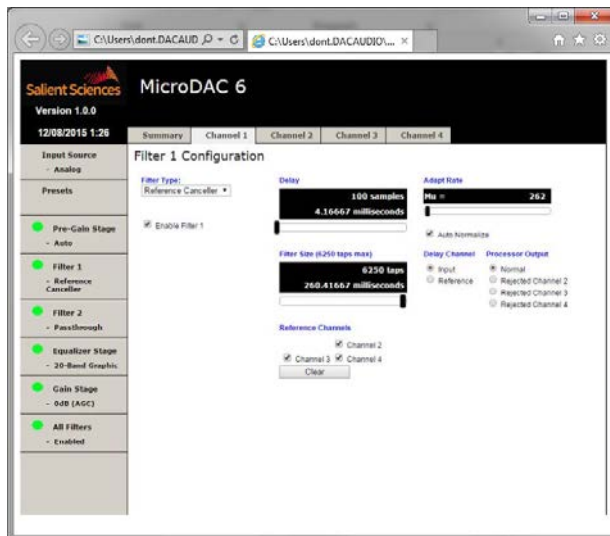
- Intel Core i3, 2 x 2.4GHz
- 2GB DDR3 RAM
- 8GB industrial CF drive
- Embedded Windows OS and Apache Tomcat web server

Computational Precision:

- 32-bit IEEE floating-point applied to 24-bit audio data



Rear Panel



Web Browser Interface