

**OMNInet Audio DSP Modules**



The **DAA424-DSP** is a 4 channel, 24-bit analog audio output module that can select any of the channels (over 600 available on a fully loaded OMNInet system) and provide output digital signal processing to drive industry standard amplifiers and other audio devices at the end of the signal chain.

The signal processing chain is a coefficient-configurable, fixed-program, 24 bi-quad per channel architecture, providing a full set of user programmable processing functions. Combinations of filter functions can be achieved using the bi-quads. For example, a 2nd order Butterworth low pass filter would only need one bi-quad.

Control of the remote channels is accomplished using a 6.144Mb/s API channel embedded within the OMNInet management architecture. The application GUI is part of the comprehensive PathMaster Design and Control software suite.

**Module Features**

<b>Delay</b>	1 second per channel in 1ms increments
<b>Filter Architecture</b>	24 bi-quad filters per channel
<b>Filter Functions</b>	Parametric EQ Butterworth high pass, band pass and low pass Linkwitz-Riley high pass, band pass and low pass Bass and treble shelf filters Notch Filter
<b>Filter Parameters</b>	48-bit data path 28-bit filter coefficients Single cycle, 28 x 48-bit multiplier and 72-bit accumulator User defined bi-quad coefficients for custom products
<b>Processing Delay</b>	125µs Total
<b>Compressor/Limiter</b>	Programmable dual threshold DRC functions per channel
<b>Digital Gain</b>	Remotely controlled (to +24dB )