

# PULSE16 Series Technical Specifications

OCT-2022

MADI I/O: Optical multimode (coax or optical singlemode SFP available as option)  
64 channels @32kHz, 44.1kHz, 48kHz  
32 channels @64kHz, 88.2kHz, 96kHz  
16 channels @128kHz, 176.4kHz, 192kHz\*  
MIDI over MADI implemented  
Latency: 2 samples

ADAT I/O: 4+4 x optical interfaces  
32 channels @32kHz, 44.1kHz, 48kHz  
16 channels @64kHz, 88.2kHz, 96kHz  
8 channels @128kHz, 176.4kHz, 192kHz \*\*

Wordclock BNC: 1 x input, 1 x output  
75 Ohm termination switchable for input

MIDI I/O: 2 x DIN5 jacks for remote control and firmware updates

A/D Converter: 2 x CS5368 or 4x ESS9840, both in 24Bit configuration, max 196kHz \*\*  
16 x 6.3mm phone jack, balanced  
Maximum input level: +20dBu  
Digital gain: +20dBu...-8dBu, 1dB steps  
S/N: 114dB or better  
THD+N: -105dB or better  
Interchannel isolation: 110dB or better  
Latency @32kHz, 44.1kHz, 48kHz:  $\leq 12/fs$  (0.25ms @48kHz)  
Latency @64kHz, 88.2kHz, 96kHz:  $\leq 9/fs$  (0.09375ms @96kHz)  
Latency @128, 176.4 or , 192kHz:  $\leq 5/fs$  (0.026ms @192kHz) \*\*  
OpAmps: RC4580  
Level indicator: TFT screen, 28 levels

D/A Converter: 2 x CS4365 (Cirrus Logic), 24Bit, max 196kHz \*\*  
16 x 6.3mm phone jack, balanced  
max. output level: +20dBu  
digital gain: +20dBu...-8dBu, 1dB steps  
S/N: 114dB (A-weighted)  
THD+N: -100dB  
interchannel isolation: 110dB  
latency @32kHz, 44.1kHz, 48kHz: 7.8/fs (0.1625ms @48kHz)  
latency @64kHz, 88.2kHz, 96kHz: 5.4/fs (0.05625ms @96kHz)  
latency @128kHz, 176.4kHz, 192kHz: 6.6/fs (0.03437ms @192kHz) \*\*  
OpAmps: RC4580  
Level indicator: TFT screen, 28 levels

Headphone Output:Independent stereo channel  
Select any mono or stereo source  
Digital volume control

FPGA Processor: Routing of all 112+112 channels  
Independent selection of headphone output

PLL: Digital controlled PLL / Jitter reduction system  
Output jitter: 50ps ... 100ps typ.

Internal Clock: Temperature compensated oscillator, with high accuracy  
Initial accuracy: +/-1.5ppm  
Over temperature range: +/-2.5ppm  
Aging: +/-1ppm

Presets: 7 presets  
Each preset contains routing, input gains and output levels information.  
Part of the preset (routing, gains, levels) can be selected when loading

Lock Feature: Unit can be (un-)locked using a factory set secret 6 digit number

Power Supply: Input jack with screw lock  
Power supply included (wide-range input), Output: 12V, 3A

\*\* Remark: 128kHz, 176.4kHz, 192kHz only available if MADl option is installed (or on MX & DX)