Pulse16 MX INPUTS & OUTPUTS

16
ANALOG I/O

32
ADAT I/O

64
MADI I/O

2
PHONES OUT

16 x 16 BALANCED TRS

balanced analog I/O, max 192kHz
Gain/Levels: -8dBu...+20dBu (1dB steps).

MADI SFP PORT

SFP MADI module with optical LC connector (Multimode).
Singlemode Module optional.

4 x 4 ADAT TOSLINK

Each ADAT port transfers eight channels at a sample rate of
48kHz (= 32 In + 32 Out).

Word Clock I/O

BNC with 75 Ohm internal termination.
On/Off via display.

MIDI I/O

For Remote Control and MIDI-over-MADI
(with installed MADI module).

PHONES STEREO TRS (FRONT)

Monitoring of every stereo/mono I/O via an additional
stereo DAC.

FERROFISH AD/DA CONVERTERS IN COMPARISON

Use this comparison table when you need to make a decision that involves considering multiple audio Inputs and Outputs, Standard types (MADI, ADAT etc.) or connection types of our AD/DA converters.

	Pulse16	Pulse16 MX	Pulse16 DX	A32pro	A32pro Dante
Sample Rate	96 kHz	192 kHz	192 kHz	192 kHz	192 kHz
Connection	6,3 mm balanced jack	6,3 mm balanced jack	6,3 mm balanced jack	D-Sub 25	D-Sub 25
Analog In	16	16	16	32	32
Analog Out	16	16	16	32+2	32+2
Input Gain	-10dBV to +20dBu*	-10dBV to +20dBu*	-10dBV to +20dBu*	-10dBV to +20dBu	-10dBV to +20dBu
Output Level	-10dBV to +20dBu*	-10dBV to +20dBu*	-10dBV to +20dBu*	-10dBV to +20dBu	-10dBV to +20dBu
Analog I/O Level Staging	digital	digital	digital	Hybrid	Hybrid
Headphones Out	1	1	1	2	2
ADAT I/O	32x32	32x32	32x32	32x32	32x32
MADI (LWL)	optional Update	✔ (SFP)	✔ (SFP)	✔	✔
MADI (BNC)		optional	optional	optional	optional
Dante I/O			✔		✔
Wordclock I/O	✔	✔	✔	✔	✔
Aktive Jitter Elimination	✔	✔	✔	✔	✔
MIDI I/O	✔	✔	✔	✔	✔
MIDI-over-MADI	optional Update	✔		✔	✔
Routing Matrix	✔	✔	✔	✔	✔
Preset Management	✔	✔	✔	✔	✔
Redundant Power Supply				✔	✔
TFT-Displays	2	2	2	4	4

* +24dBu BTO Option available

Pulse16 MX SPECIFICATIONS

MADI I/O (AES10)

PULSE 16 MX (Multimode included)

PULSe 16 optional via SFP
SFP port for MADI optical Multimode or Singlemode SFP module

- 64 channels @32kHz, 44.1kHz, 48kHz
- 32 channels @64kHz, 88.2kHz, 96kHz
- 16 channels @128kHz, 176.4kHz, 192kHz

Support of MIDI over MADI.
Latency: 2 samples

Analog Inputs (AD)
2 x 24 Bit A/D Converter
16 x TRS ¼" (6.3mm), female

- Digital gain: +20dBu … -8dBu, 1dB steps
- Digital gain (+24dBu Option): +24dBu … -4dBu, 1dB steps

Latency

- @48kHz: 12/fs, 0.25ms
- @96kHz: 9/fs, 0.09ms
- @192kHz: 5/fs, 0.03ms

OpAmps

RC4580

Level indicator

TFT screen, 28 levels

Analog Outputs (DA)
2 x 24 Bit D/A Converter
16 x TRS ¼" (6.3mm), female

- Digital gain: +20dBu … -8 dBu, 1dB steps
- Digital gain (+24dBu Option): +24dBu … -4dBu, 1dB steps

Latency

- @48kHz: 7.8/fs, 0.16ms
- @96kHz: 5.4/fs, 0.06ms
- @192kHz: 6.6/fs, 0.03ms

OpAmps

RC4580

Headphones Out

- 1 x ¼" (6.3mm) TRS jack, stereo.
- Selectable mono or stereo source.
- Digitally controlled volume level.

ADAT I/O

4+4 optical ports (8 channels each with 48 kHz)

- 16 channels @32kHz, 44.1kHz, 48kHz
- 16 channels @64kHz, 88.2kHz, 96kHz
- 8 channels @128kHz, 176.4kHz, 192kHz (SMUX4 – only with installed MADI MX option)

Latency: 2 samples

MIDI I/O

- 2 x DIN5 connector for remote control of the unit
- Conversion MIDI <> MIDI over MADI possible (MADI MX option required.)

Wordclock I/O

- BNC: 1 x input, 1 x output
- 75 Ohm Termination switchable for input

Power Supply

12V, 3A

- 1 x input jack with screw lock.
- Power required: 12VA in operation, 0,1VA in standby mode (Efficiency Level VI)
- Internal resettable polyfuse
- 1 x power supply included

Additional Features

- SMUX4 with 192 kHz operation (requires installed MADI option).
- Delay-compensation for MADI chain (requires installed MADI option).
- MIDI over MADI Preset Management (requires installed MADI option)

Internal Clock

- TCXO (temp. compensated oscillator) with high accuracy.
- Initial accuracy: +/-1.5ppm
- Over temperature range: +/-2.5ppm
- Aging: +/-1ppm

PLL

- Digitally controlled PLL / Jitter reduction system
- Output jitter: 50ps … 100ps typ.

LCD Displays

- 2 x TFT Color Screens for the complete control of all analog I/O levels and all settings of the unit
- One Key Control provides an easy control of all functions.
- Multi language help pages guides available (No need to study the manual.)

Dimensions

- 1HU
- Depth: 19cm (7.5") (including connectors)

Weight

2 kg (4.4lbs)

Ambient temperature

41°F up to 113°F (+5°C up to +45°C)

CV Out option
Allows the output of DC voltage at the analog outputs of the Pulse16. This allows control voltages (CV) to be generated via a CV plugin in a DAW, allowing modular systems to be controlled from the analog outputs.

+24dBu I/O option
This option raises the maximum input and output level of the 16 analog inputs and outputs from +20dBu to +24dBu, which then complies with the SMPTE standard.

Please note that these are BTO (built-to-order) options which cannot be retrofitted.