

Fireface 400

36-Channel 192 kHz, Bus-powered FireWire Audio Interface



I/O Connectivity

- 18 Input / 18 Output channels
- 8 x Analog I/O
- 1 x ADAT I/O or
- 1 x SPDIF I/O (optical)
- 1 x SPDIF I/O (coaxial)
- 2 x MIDI I/O
- 2 x FireWire 400
- 2 x Mic Preamp with digitally controlled gain

The Fireface 400 is more than just a "little brother" to the Fireface 800 – it is a completely new device and features all of the proven RME analog and digital circuitry. It is the only device in its class with active jitter suppression, stand-alone functionality and complete controllability from the front panel. It has highly flexible I/Os in professional quality, and an unsurpassed 648-channel matrix router – at sample rates up to 192 kHz. With a unique feature set and unparalleled performance, the Fireface 400 sets new standards among 19-inch half-rack products.

All inputs and outputs can be freely mixed, routed, and distributed with RME's TotalMix software. Up to 9 totally independent stereo submixes can be set up. Every output channel, and every submix channel can be recorded directly and without external cable loops.

TotalMix can be completely MIDI remote controlled. The DSP-based hardware calculates RMS and Peak levels for all channels, without causing any significant CPU load.

Eight analog inputs and outputs (all balanced, except outputs 7/8) with software controlled reference levels (-10 dBV, +4 dBu, Lo/HiGain), realized discretely in the analog domain, ensure highest dynamic range and fidelity.

The Fireface 400 features 2 balanced microphone inputs with a digitally controlled input stage, individually switchable 48V phantom power, and Neutrik Combo connectors for XLR and TRS. These can also be used as additional line inputs. A pre-amplification of up to 65 dB (adjustable in 1 dB-steps over a range of 55 dB), exceptional EIN (Equivalent Input Noise) performance even at low pre amplification settings, and extremely low THD+N let these preamps surpass many reference devices.

All level settings are 100% reproducible and can also be comfortably adjusted by software. Inputs 3 and 4 are flexible universal balanced inputs. They operate exactly like inputs 5 to 8 on the rear and can be adjusted to accept standard studio input levels (+4 dBu, LoGain). The input impedance can be switched from line (10 kOhm) to instrument (470 kOhm), and offers an additional analog input amplification of up to 18 dB in steps of 0.5 dB.

One ADAT I/O provides digital connection to mixers and converters. In combination with an ADI-8 DS/QS or OctaMic II, there are up to 16 analog inputs (respectively 12 @ 96 kHz). The coaxial SPDIF I/O is fully AES/EBU compatible and works up to 192 kHz. SPDIF can also be accessed through the optical I/O. Inputs 5 to 8 on the rear feature RME's proven level references, -10 dBV, +4 dBu and Lo Gain can be selected in the settings dialog, equivalent to +2 dBV, +13 dBu and +19 dBu for digital full scale. The same applies to the balanced rear analog outputs 1 to 6. The hi-power phones output offers high volumes even with low-impedance headphones.

The Fireface 400 is flexible when it comes to power supply. Besides the Bus-powering option the included switching power supply accepts voltages from 100 to 240 Volts, and can be operated all over the world.

Of course the Fireface 400 offers a second FireWire port for hub functionality. Several devices can be connected to one FireWire interface and operated in parallel.

A Word Clock input and output plus two MIDI I/Os (special breakout cable included) complete the list of features and turn the Fireface 400 into an entire audio system of the highest quality.

Features

- Sample rates up to 192 kHz on all channels (except ADAT)
- Two digitally controlled Mic Preamps in high-end quality
- Two balanced universal inputs for line and instrument signals
- SteadyClock for maximum jitter suppression and clock refresh
- Simple stand-alone operation with rotary encoder and front panel display
- TotalMix: 648-channel mixer with 42-bit internal resolution
- 54 Level Meter Peak/RMS, hardware-calculated
- Full mobility with Bus Power support (Power over FireWire)

Specifications

- Input AD: 6 x 1/4" TRS (4 x Line, 2 x Line/Instrument), 2 x XLR/TRS Combo connector (2 x Mic/Line), all servo-balanced.
- Output DA: 6 x 1/4" TRS, servo-balanced, DC-coupled signal path. 1 x 1/4" TRS unbalanced
- Input Digital: 1 x ADAT optical or SPDIF optical, SPDIF coaxial (AES/EBU compatible)
- Output Digital: 1 x ADAT optical or SPDIF optical, SPDIF coaxial (AES/EBU compatible)
- MIDI: 2 x MIDI I/O via breakout cable (4 x 5-pin DIN jacks), for 32 channels low jitter hi-speed MIDI
- Dynamic range AD: 110 dB RMS unweighted, 113 dBA
- THD AD: < -100 dB (< 0.001 %)
- THD+N AD: < -98 dB (< 0.0012 %)
- Crosstalk AD: > 110 dB
- Dynamic range DA: 110 dB RMS unweighted, 113 dBA (unmuted)
- THD DA: -100 dB (0.001 %)
- THD+N DA: -96 dB (0.0015 %)
- Crosstalk DA: > 110 dB
- Input/Output level for 0 dBFS @ Hi Gain: +19 dBu
- Input/Output level for 0 dBFS @ +4 dBu: +13 dBu
- Input/Output level for 0 dBFS @ -10 dBV: +2 dBV
- Sample rate internally: 32, 44.1, 48, 64, 88.2 kHz, 96 kHz, 128, 176.4, 192 kHz
- Sample rate externally: 28 kHz - 200 kHz
- Frequency response AD/DA, -0.1 dB: 5 Hz - 20.4 kHz (sf 44.1 kHz)
- Frequency response AD/DA, -0.5 dB: 1 Hz - 43.3 kHz (sf 96 kHz)
- Frequency response AD/DA, -1 dB: 1 Hz - 80 kHz (sf 192 kHz)

FireWire Interfaces . Made by RME

Optimal hardware adaption, a unique Low-Latency-Concept and a high grade of performance and compatibility. It's no surprise customers and testers respect RME Fireface interfaces as the reference for FireWire audio and the first choice for mobile recording, with first class sound, minimal latencies and highest stability.

The secret of success: RME is the only manufacturer not to use a third party FireWire audio technology, but an own, self-developed FireWire Audio Core with an outstanding performance and uncompromising pro audio features. RME combined their outstanding FireWire technology with famous RME features: TotalMix, ultra-low latencies down to one millisecond, including on-the-fly latency changes, support of multiple devices, sample rates up to 192 kHz and much more.



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