

# Fireface UCX

USB / FireWire

Interfaces

**NEW** 36-Channel 192 kHz Bus-powered  
FireWire 400 audio interface



## I/O Connectivity

18 Input / 18 Output channels

8 x Analog I/O

2 x Mic Preamp with digitally  
controlled gain

1 x ADAT I/O or 1 x SPDIF I/O (optical)

1 x SPDIF I/O (coaxial)

2 x MIDI I/O

1 x Word Clock I/O

1 x RME Remote Connector

FireWire and USB operation

The Fireface UCX is a highly integrated pro audio solution in an ultra-compact format for studio and live recordings. It continues RME's long tradition of designing compact high-end interfaces, packing into a half-rack size unit what usually would be spread out over two or three 19 inch panels.

In doing this the Fireface UCX marks a new packing record: 300 electronic components more than inside the already well-stocked Fireface UC! 50 of these to shield the internal high-end electronic from the pulsating DSP heart. RME packed once again all the latest technologies, introduced with the award winning flagship UFX, plus a bunch of newly developed ones, into a half 19 inch housing with full mobile usability.

The result is an awesome combination of RME's most successful products: Fireface UFX, Firefaces UC/400 and Babyface. The UCX is not just a smaller version of the UFX. It continues the tradition of RME's tremendously successful compact interfaces and combines it with the great usability experience of the Babyface through the included remote.

**Sound quality.** Equipped with a new 2011 A/D and D/A high-performance converter design all I/Os operate at up to 192 kHz. The AD/DA conversion supersedes the outstanding technical specifications of the Fireface UC/400 with an impressive 114 dBA dynamic range on both record and playback. The advanced multi-bit converter architecture guarantees excellent S/N and THD specs across a wide analog level range. In the best RME tradition and product philosophy, the UCX converters and preamps have no characteristic "sound" of their own. They neither add nor remove anything, but capture the original signal just as it is.

Due to its efficient jitter reduction, RME's superior SteadyClock™ finalizes the state-of-the-art AD/DA conversion, even when clocking to an external digital source.

All analog I/Os provide a low latency converter design with impressive 14 samples for the ADC, and 7 samples for the DAC, independent of the used sample rate. These values are about a quarter of the Fireface UC/400 (43/28), and even outperform much more expensive devices. A technical breakthrough that reduces the overall latency of timing critical applications, in live situations, and in computer-based recording studios. The converter latency is so low (0.4 ms at 48 kHz) that it can be ignored, turning analog digital monitoring into real analog-style monitoring!



**Professional level support.** A great converter needs to support the common studio levels for the perfect adaptation to other analog equipment without loosing headroom. Like all other RME devices the UCX supports the common professional studio levels: -10 dBV, +4 dBu, Lo / HiGain. The software-controlled reference levels, realized discretely in the analog domain, ensure highest dynamic range and fidelity.

Inputs 3 to 8: -10 dBV, +4 dBu and Lo Gain (adjustable in TotalMix in two groups – channels 3/4 and 5 to 8).

Outputs 1 to 6 : -10 dBV, +4 dBu and Hi Gain.

Phones/line out 7/8: -10 dBV, +4 dBu and Hi Gain.

The phones output (channels 7/8) can be set to a different reference as channels 1 to 6.

**Preamps.** The crown jewels of the UCX are the two high-end mic and instrument preamps with **AutoSet** (see page 3) – built right into the front.

Like in the UFX, both preamps use core technology of RME's Micstasy - a high-end preamp for supreme sonic demands and critical applications, like professional recordings of classical and acoustic music. The outstanding preamp design boasts extremely low distortion, excellent signal to noise ratio and a perfectly flat frequency response that lets these preamps surpass those of other devices costing several times the price of the UCX. A premium solution for transmitting and amplifying any audio source truly unchanged, be it high-level stage or typical studio signals, lower level and high-impedance instruments, or dynamic, condenser and ribbon microphones.

The digitally controlled gain of up to 65 dB, adjustable in steps of 1 dB over a range of 55 dB, is individually set for each preamp with the encoder knob on the front or in TotalMix FX on the host computer. All level settings are 100% reproducible and can also be adjusted using a MIDI remote controller.

Each channel can be individually switched to 48V phantom power. LEDs for signal, clip and activated phantom power give a complete overview on the unit's status. The two TRS inputs on the front will alternatively operate as Hi-Z inputs. Directly plug in up to two guitars or other instruments - no other hardware is required.

**TotalMix FX.** The UCX provides the complete effects engine from the UFX - all effects are available at all sample rates.

The DSP-based TotalMix mixer allows fully independent routing and mixing of all 18 input and playback channels to all 18 physical outputs. Up to 9 totally independent stereo submixes plus a comprehensive Control Room section offer unrivalled monitoring capabilities and unsurpassed routing flexibility.

Two DSPs ensure an impressive performance even in extreme applications. As usual with RME, TotalMix is available with all channels at all sample rates, completely unlimited. The second DSP calculates the effects only, therefore has sufficient resources. For example, at 48 kHz 36 EQs, 36 Low Cuts, 26 Compressors and Echo can be activated. With activated Reverb and Echo still 36 EQs, 36 Low Cuts and 16 Compressors are available.



**Integrated Monitoring Controller.** Thanks to the included remote control and the multi-functional rotary encoder the UCX is not only a perfect desktop level controller for the main monitors and phones. The integrated TotalMix FX high-end mixer provides an impressive set of monitoring control features for modern Mix-In-the-Box studios or live mixing sessions. Among them Dim, source selection, monitor switching, integrated Talkback, a flexible CUE setup, Mute and Mute FX, Mono and much more.

The flexibility of RME's DSP-driven TotalMix FX monitoring tool set is impressive: any physical output can be assigned to the directly knob-controlled monitor outputs (Main out, Speaker B, Phones 1, 2 ...). Just assign the SPDIF output as Speaker B or as Phones Out - any output can be used. The functions Talkback, Listenback, Mono and Dim will work automatically for the assigned outputs in the expected way. CUE mixes can be sent to a predefined output, an external input can be assigned and monitored with a simple click. Convenience for any studio or live situation at its best.

The included **Basic Remote Control** provides one big wheel dial, a button for level storage/recall, and a freely programmable button for nearly all TotalMix FX functions.

The optional **Advanced Remote Control** adds 6 freely programmable buttons with LEDs to the feature set (see page 11). Just assign all frequently used TotalMix functions to these buttons. Both remotes come with a flexible, 5 m (16 ft.) long cable.

**Class Compliant Mode.** The Fireface UCX is the first professional audio interface with the option to be used as Class Compliant interface. It then works without a driver as audio/MIDI interface on several operating systems, and **with Apple's iPad™ and iPad2** (Camera Connection Kit required). The UCX provides the iPad with the professional analog I/O connections it lacks. Superb microphone preamps with EQ, dynamics, AutoSet, in addition to professional balanced line outputs, and a hi-power headphone output. Plus level adjustments, reverb, echo, zero latency monitoring. All of this digitally via USB - which means no limitation in quality.

# Fireface UCX continued

## Comparison between Fireface UCX and Fireface UFX

	Fireface UCX	Fireface UFX
Inputs	18	30
Outputs	18	30
Analog I/Os	8	12
Advanced Parallel Conversion	-	4 x
AES/EBU I/O	-	1 x
SPDIF I/O	1 coaxial + 1 optical (opt. = ADAT I/O)	1 optical (alt. to 2nd ADAT I/O)
ADAT I/O	1 x	2 x
Mic Preamps (digitally controlled)	2 x	4 x
Word Clock I/O (BNC)	yes	yes
Phones Outputs (dedicated)	1 x	2 x
High Resolution Color Display	-	yes
MIDI I/O	2 x	2 x
Internal DSP hardware effects with X-Series effects engine	yes	yes
AutoSet for Mic/Inst. Preamps	4 x	4 x
RME Remote Support	yes	yes
Direct USB Recording™	-	yes
Size	1/2 19 inch	19 inch
All TotalMix FX features at up to 192 kHz	yes	yes
SMUX (up to 192 kHz)	yes	yes
Complete Stand Alone Operation with Setup Recall	yes	yes
USB & FireWire support (X-Core)	yes	yes

## Specifications

### AD, Line In 5-8, rear

- Signal to Noise ratio (SNR): 111 dB RMS unweighted, 114 dBA
- THD: < -105 dB, < 0.0005 %
- THD+N: < -98 dB, < 0.0012 %
- Channel separation: > 110 dB
- Maximum input level: +19 dBu
- Input: 6.3 mm TRS jack, electronically balanced
- Input sensitivity switchable to Lo Gain, +4 dBu, -10 dBV
- Input level for 0 dBFS @ Lo Gain: +19 dBu
- Input level for 0 dBFS @ +4 dBu: +13 dBu
- Input level for 0 dBFS @ -10 dBV: +2 dBV

### Line In 3-4 In, front - As AD, but

- Additional Gain stage: 0 up to +12 dB
- Maximum input level, Lo Gain, Gain 0 dB:  
Line +19 dBu, Inst +13 dBu
- Maximum input level, -10 dBV, Gain 12 dB:  
Line -7.5 dBu, Inst -13.5 dBu
- Input impedance Inst: 470 kOhm
- Input Gain Inst: +6 dB
- Input mode: Line balanced (TRS), Inst unbalanced (TS)

### Microphone/Line 1-2, front - As AD In 5-8, but:

- Input: Neutrik XLR/TRS Combo jack, electronically balanced
- Input impedance: XLR 2 kOhm, TRS 8 kOhm balanced
- Signal to Noise ratio (SNR): 112 dB RMS unweighted, 114 dBA

- Low Roll Off -0.5 dB: 18 Hz, -1 dB: 12 Hz
- Gain range: 0 dB, +10 up to +65 dB
- Maximum input level XLR, Gain 0 dB: +10 dBu
- Maximum input level XLR, Gain 65 dB: -55 dBu
- Maximum input level TRS, Gain +0 dB: +21 dBu
- Maximum input level TRS, Gain +65 dB: -44 dBu

### DA, Line Out 1-6, rear

- Dynamic range (DR): 111 dB, 114 dBA @ 44.1 kHz (unmuted)
- Frequency response @ 44.1 kHz, -0.1 dB: 8 Hz – 20.4 kHz
- Frequency response @ 96 kHz, -0.5 dB: 6 Hz – 45 kHz
- Frequency response @ 192 kHz, -1 dB: 5 Hz - 90 kHz
- THD: -100 dB, < 0.001 %
- THD+N: -96 dB, < 0.0015 %
- Channel separation: > 110 dB
- Maximum output level: +19 dBu
- Output: 6.3 mm TRS jack, servo-balanced
- Output impedance: 75 Ohm
- Output level switchable Hi Gain, +4 dBu, -10 dBV
- Output level at 0 dBFS @ Hi Gain: +19 dBu
- Output level at 0 dBFS @ +4 dBu: +13 dBu
- Output level at 0 dBFS @ -10 dBV: +2 dBV

### DA – Phones, 7/8, front - As DA, but:

- Output: 6.3 mm TRS jack, unbalanced
- Output impedance: 30 Ohm