# FireWire Connection

The Onyx 400F is equipped with two 6-pin FireWire connectors and comes with a 6-pin to 6-pin FireWire cable. This works with Macintosh laptops and desktops, and most PC desktops with a built-in FireWire connector or with a PCI or PCMCIA FireWire card added.

Many laptop PCs have a 4-pin FireWire connector. If this is the case, you will need to purchase a 6-pin to 4-pin FireWire adapter cable. These are readily available at computer stores or online.
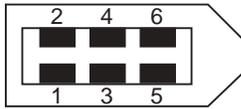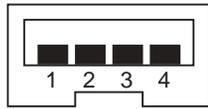
6-pin Male FireWire   4-pin Male FireWire

6-pin FireWire Wiring:
Pin 1 = Power
Pin 2 = Ground
Pin 3 = TPB–
Pin 4 = TPB+
Pin 5 = TPA–
Pin 6 = TPA+

4-pin FireWire Wiring:
Pin 1 = TPB–
Pin 2 = TPB+
Pin 3 = TPA–
Pin 4 = TPA+

Appendix C: Technical Info

Onyx 400F Specifications

Frequency Response

Mic Input to Line Output (Gain @ unity):

@48 kHz
+0, –3 dB, 10 Hz to 24 kHz

@96 kHz
+0, –3 dB, 10 Hz to 48 kHz

@192 kHz
+0, –3 dB, 10 Hz to 96 kHz

Mic Input to Digital Output (S/PDIF, 192 kHz sample rate):
+0, –3 dB, 10 Hz to 96 kHz

Distortion (THD & IMD)

Mic Input to Line Output (@ +4 dBu output):
THD+N: < 0.003%, 20 Hz to 20 kHz BW,
1 kHz input @ +4 dBu, preamp at unity gain

Mic Input to Digital Output (S/PDIF, 48 kHz sample rate):
THD+N: < 0.001%, 20 Hz to 20 kHz BW,
10mV rms input, gain at –1 dB FS output

Dynamic Range

>107 dB (Mic In to Line Out)

Noise

Signal-to-Noise:
>87 dB (ref. +4 dBu, Mic In to Line Out, Gain @ unity)

Equivalent Input Noise (E.I.N.), 20 Hz to 20 kHz Bandwidth, 150Ω source impedance:
–129 dBu @ +60 dB gain

Common Mode Rejection Ratio (CMRR)

Mic In: >60 dB @ 1 kHz, Gain @ maximum

Crosstalk

Mic Input to Line Output:
< –100 dB @ 1 kHz, +10 dBu signal on adjacent input, 150Ω source impedance

Input Gain Control Range

Mic In: 0 dB to +60 dB
Line In: –20 dB to + 40 dB

Phantom Power

+48 VDC

Rated Output

Line: +4 dBu
Maximum Rated Output:
                +24 dBu @ Balanced Line-Level Outputs

Input Impedance

Mic Input: 2.4 kΩ balanced
Inst Input: 1 MΩ
Line: 20 kΩ balanced, 10 kΩ unbalanced

Output Impedance

Line: 100 Ω balanced

Signal Level LEDs

–40 dB, –20 dB, –10 dB (normal operating level),
OL = 22 dBu

Sample Frequency Selections

44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz,
176.4 kHz, 192 kHz

Analog Input Connectors

Four balanced XLR/TRS mic/line inputs
Four balanced 1/4" TRS line inputs
Two 1/4" TS high-impedance instrument inputs

Analog Output Connectors

Eight balanced 1/4" TRS line-level outputs

Digital Input Connectors

One BNC connector for external word clock input
One RCA connector for S/PDIF input
One 5-pin DIN for MIDI input
Two 6-pin FireWire input/output

Digital Output Connectors

One BNC connector for external word clock output
One RCA connector for S/PDIF output
One 5-pin DIN for MIDI output

DSP

TMS320C6713 Floating-Point Digital Signal Processor
operating at 225 MHz, delivering up to 1350 million
floating-point operations per second (MFLOPS),
1800 million instructions per second (MIPS), and
450 million multiply-accumulate operations per
second (MMACS)

AC Power Requirements

Power Consumption: 20 watts

Universal AC Power Supply:
100 VAC – 240 VAC, 50-60 Hz

Physical Dimensions and Weight

Height: 1.75 in/44 mm
Width: 17.50 in/445 mm (main body of unit)
               19.00 in/483 mm (with rack ears)
Depth: 7.63 in/194 mm (including front knobs and
               rear BNC jack)
Weight: 5.6 lb/2.5 kg

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