

## **Element 88 Highlights**

- 16 IN x 16 OUT Thunderbolt Audio I/O box
- AD/DA conversion for recording up to 192kHz/24-bit
- 8 analog inputs with world-class mic preamps and selectable 48v phantom power for connecting microphones, instruments or line-level devices •4 combination inputs
- 4 XLR inputs
- 8 analog outputs •2 balanced L/R XLR outputs
- 2 balanced 1/4" outputs
- 2 1/4" stereo headphone output
- Single port Thunderbolt connectivity to Mac for ultra-low latency performance •1.41ms round-trip at 96kHz with a 32 buffer setting
- Optical IN: Supports ADAT, SMUX & S/PDIF •ADAT: 8 channels 44.1-48 kHz on 1 Toslink connector
- SMUX: 4 channels 88.2-96 kHz on 1 Toslink connector
- S/PDIF: 2 channels, up to 192 kHz on 1 Toslink connector
- Optical OUT: Supports ADAT, SMUX & S/PDIF •ADAT: 8 channels 44.1-48 kHz on 1 Toslink connector
- SMUX: 4 channels 88.2-96 kHz on 1 Toslink connector
- S/PDIF: 2 channels, up to 192 kHz on 1 Toslink connector
- Word Clock IN/OUT via BNC connections for syncing with other digital audio gear
- Apogee Control Software for Mac provides all control of hardware parameters including input gain, output level and low latency monitoring
- Apogee Control Mobile App provides wireless remote control of hardware via iPhone, iPad or iPod touch
- Works with Apogee Control desktop hardware remote control (Sold separately)
- Multi-Unit Thunderbolt support – Connect any two Element audio I/O boxes directly to Thunderbolt ports on your computer
- Apogee Ensemble Thunderbolt expander – Connect any Element to the second port on an Ensemble

## **Element 88 with included rack ears**

### **Weights and Dimensions**

- 13.5" x 5.5" X 1.75"

- 35cm x 14cm X 4.5cm
- 3.5lbs
- 1.6kg

### **System Requirements**

#### **Mac OS:**

- Computer: Thunderbolt-equipped Mac (iMac, Macbook Pro, Macbook Air, Mac Pro)
- Memory: 4 GB RAM minimum, 8 GB recommended
- OS: 10.10 or greater
- Connection: Any available Thunderbolt port\*
- Power: DC Power supply included

\*Thunderbolt cable not included

#### **Compatible Software:**

- Any Mac Core Audio compatible application
- Recommended apps: Logic Pro, Pro Tools, Ableton Live, GarageBand, MainStage, Final Cut, Digital Performer, Studio One, Cubase, and Nuendo

#### **In the box:**

- Element 88
- Universal Power Supply with standard 3 pin-IEC cable
- Rack ears and mounting screws
- Quick Start Guide
- Warranty Booklet

#### **Mic Preamps:**

- 8 Mic preamps
- Gain: Up to 75 dB and advanced stepped gain circuit design
- Selectable 48v phantom power, Soft Limit and polarity invert
- EIN: 129dB (un-weighted) @ 60dB, 150Ohm input
- Max input level: +20dBu
- Input impedance: 3K Ohm

#### **A/D conversion:**

- Max input level (+4dBu ref/Mic): +20dBu
- Max input level (-10dBV ref): +6dBV
- Input impedance: 5KOhm
- Freq resp 10 Hz -20Khz: > +/-0.2dB (@44.1Khz)
- Rel. THD + N: -110dB
- Dyn. Range: 119dB (A-weighted)

**D/A conversion:**

- Max output level (+4dBu ref): +20dBu
- Max output level (-10dBV ref): +6dBV
- Line output impedance: 90 Ohm
- Freq resp 10Hz -20 Khz: > +/- 0.05dB (@44.1Khz)
- Rel. THD+N : -114dB
- Dyn Range: 123dB (A-weighted)
- Headphone Max output level: •560mW into 30 Ohm
- 90mW into 600 Ohm
- Headphone THD+N: -107 dB with 600 Ohm load @ 19 dBu
- Headphone Dyn Range: 117dB a-weighted