

# SCORPIO

## Specifications

<b>Freq. Response</b>	<ul style="list-style-type: none"><li>• 10 Hz to 80 kHz <math>\pm</math> 0.5 dB (192 kHz sample rate, re 1 kHz)</li></ul>
<b>THD + Noise</b>	<ul style="list-style-type: none"><li>• 0.005% max (1 kHz, 22 Hz-22 kHz BW, trim @20, fader @ 0, -10 dBu in)</li></ul>
<b>Equivalent Input Noise</b>	<ul style="list-style-type: none"><li>• -131 dBV (-129 dBu) max (A-weighting, 76 dB gain, 150 ohm source impedance)</li></ul>
<b>Processing Engine</b>	<ul style="list-style-type: none"><li>• Highly extensible, full FPGA-based audio processing, 3 FPGAs</li><li>• Six-way ARM multiprocessor system</li><li>• 64-bit audio processing precision</li></ul>
<b>Audio Over Ethernet</b>	<ul style="list-style-type: none"><li>• Dante, 32 channels in, 32 channels out</li><li>• AES67 compatible</li><li>• 1 Gb/s Ethernet, 2 ports, transformer-balanced</li></ul>
<b>Inputs</b>	<ul style="list-style-type: none"><li>• Mic/Line inputs: 16 total, all fully featured; 6 on full-size XLR, 2 on TA3, 8 on TA5</li><li>• Mic-level inputs: (XLR, TA3, TA5): Class-A, discrete differential long-tail pair, 4k ohm input impedance</li><li>• Line-level inputs: (XLR, TA3, TA5): active-balanced, 4k ohm input impedance</li><li>• AES3 or AES42 available on XLR inputs 1 and 6</li><li>• AES42: +10 V, 250 mA available, type-1, auto-ASRC</li><li>• Rtn A, B, C (3.5 mm/10-pin): unbalanced 2-channel, 4k ohm input impedance</li><li>• Com Rtn 1,2 (TA3, 3.5mm) balanced, 1-channel, 8k ohm input impedance</li><li>• External Slate Mic (TA5): balanced, 8k ohm input impedance, menu-selectable 12 V phantom</li></ul>
<b>Maximum Input Level</b>	<ul style="list-style-type: none"><li>• Mic: +8 dBu (2.0 Vrms)</li><li>• Line: +28 dBu (19.5 Vrms)</li><li>• Rtn A, B, C: +18 dBu (6.2 Vrms)</li><li>• Com Rtn 1, 2: +24 dBu (12.3 Vrms)</li><li>• External Slate Mic: +12 dBu (3.2 Vrms)</li></ul>
<b>High-Pass Filters</b>	<ul style="list-style-type: none"><li>• Adjustable 40 Hz to 320 Hz, 18 dB/oct. 1st stage analog (before preamp), 2nd stage digital</li></ul>
<b>Limiters</b>	<ul style="list-style-type: none"><li>• Limiters available at all channels, buses, headphones, for all sample rates</li><li>• Analog first stage, all subsequent stages digital</li><li>• Attack time: 1 ms</li><li>• Release time: adjustable, 50 ms to 1000 ms</li><li>• Threshold: adjustable, -2 dBFS to -12 dBFS</li><li>• Selectable knee: hard or soft</li><li>• Selectable ratio: inf:1, 20:1</li></ul>
<b>Delay</b>	<ul style="list-style-type: none"><li>• Channel Adjustable 0-50 ms</li><li>• Output Adjustable 0-500 ms</li></ul>
<b>Maximum Gain</b>	<ul style="list-style-type: none"><li>• Trim stage (mic input): 76 dB</li><li>• Trim stage (line input): 36 dB</li><li>• Fader stage: 16 dB</li><li>• Bus stage: 16 dB</li><li>• Headphone stage: 20 dB</li><li>• Mic-to-Line: 108 dB</li><li>• Mic-to-Headphone: 112 dB</li></ul>
<b>Outputs</b>	<ul style="list-style-type: none"><li>• XLR (L, R) active-balanced, 250/3.2k/120 ohms (mic/-10/line)</li><li>• Hirose 10-pin (L, R) active-balanced, 250/3.2k/120 ohms (mic/-10/line)</li><li>• TA3 (X1-X6) active-balanced, 250/3.2k/120 ohms (mic/-10/line)</li><li>• 3.5mm (X7, X8): unbalanced, stereo, 1.8k ohms</li></ul>
<b>Headphone Outputs</b>	<ul style="list-style-type: none"><li>• 1/4", 3.5 mm</li><li>• TA5 (along with mic input pins) for single connection to headset + mic</li><li>• High output, 4 ohm output impedance, 400 mW + 400 mW at each connector, all individually driven</li><li>• Compatible with headphones of any impedance</li></ul>
<b>Maximum Output Level</b> (all into 10k load)	<ul style="list-style-type: none"><li>• Line: +20 dBu (7.8 Vrms)</li><li>• "-10": +6 dBu (1.5 Vrms)</li><li>• Mic: -20 dBu (0.078 Vrms)</li><li>• X7/X8 Out: +6 dBu (1.5 Vrms)</li><li>• Headphone outputs (1/4", TA-5, X9/X10): +14 dBu (4.0 Vrms)</li></ul>
<b>A/D converters</b>	<ul style="list-style-type: none"><li>• 32-bit, 120 dB, A-weighted dynamic range typical</li><li>• Sampling rates 44.1 kHz, 47.952 kHz, 48 kHz, 48.048 kHz, 88.2 kHz, 96 kHz, 192 kHz</li></ul>
<b>Digital Outputs</b>	<ul style="list-style-type: none"><li>• AES3 transformer-balanced, in pairs; 1-2 (XLR-L), 3-4 (XLR-R), 5-8 (Hirose 10-pin A)</li><li>• 110 ohm, 2 V p-p, AES and S/PDIF compatible</li></ul>
<b>Recording</b>	<ul style="list-style-type: none"><li>• Internal 256 GB SSD</li><li>• Two removable SD Cards</li><li>• Simultaneous recording to internal SSD and the two SD cards</li><li>• exFAT formatting</li><li>• 36 tracks (32 iso channels, 4 buses)</li><li>• Broadcast WAV monophonic and polyphonic file format</li><li>• 64-bit WAV (RF64) monophonic and polyphonic; support for files &gt; 4 GB</li></ul>
<b>USB</b>	<ul style="list-style-type: none"><li>• USB-C (USB 3.1 type 1) for file transfer of internal SSD, both SD Cards</li><li>• USB-A host for keyboard, external controller, external USB hubs supported for connecting multiple devices</li></ul>
<b>Wireless</b>	<ul style="list-style-type: none"><li>• Built-in Bluetooth v5.0 BLE (not supported with rev 1.0 release of SD-Remote)</li></ul>
<b>Timecode and Sync</b>	<ul style="list-style-type: none"><li>• Modes Supported: Off, Rec Run, Free Run, 24h Run, External, including External Auto-Record and Continuous modes.</li><li>• Frame Rates: 23.98, 24, 25, 29.97 DF, 29.97 ND, 30 DF, 30 ND</li><li>• Sample/Timecode Accuracy: 0.1 ppm (0.25 frames per 24 hours)</li><li>• Timecode Input: 20k ohm impedance, 0.3 V - 3.0 V p-p (-17 dBu - +3 dBu)</li><li>• Timecode Output: 75 ohm impedance, 5 V p-p (+12 dBu)</li><li>• Word Clock Input: 10k/75 ohm selectable impedance, 1-5 V p-p input sensitivity</li><li>• Word Clock Output: 75 ohm impedance, 5 V p-p output, at SR</li></ul>
<b>Remote Control</b>	<ul style="list-style-type: none"><li>• USB MIDI Control - 3rd party fader controllers</li><li>• SD-Remote Android app</li><li>• USB Keyboard</li><li>• External Timecode Record Trigger</li></ul>
<b>LCD</b>	<ul style="list-style-type: none"><li>• 320x240, Transflective, excellent sunlight visibility</li><li>• Larger touchscreen display available via USB-connected SD-Remote app</li></ul>
<b>Power</b>	<ul style="list-style-type: none"><li>• External: dual 10-18 V inputs on locking TA4 connectors, pin-4 = (+), pin-1 = (-)</li><li>• Dual rear-mount Sony-style L-mount batteries with chargers</li><li>• Idle Current Draw: 875 mA @ 12 V (10.5 W)</li><li>• Intelligent power-down of unused mic preamps and other internal circuits</li></ul>
<b>Environmental</b>	<ul style="list-style-type: none"><li>• Operating: -20° C to 60° C, 0 to 90% relative humidity (non-condensing)</li><li>• Storage: -40° C to 85° C</li></ul>
<b>Dimensions (H x W x D)</b>	<ul style="list-style-type: none"><li>• 5.1 cm x 32 cm x 20.5 cm ( 2 in x 12.6 in x 8.1 in)</li></ul>
<b>Weight</b>	<ul style="list-style-type: none"><li>• 5.8 lbs (2.63 kg) unpackaged, without batteries</li></ul>