

Impact Twin Tech Specs

Digital Inputs and Outputs

Connector (S/PDIF)	RCA Phono, 75 Ohm
Formats (S/PDIF and TOSLINK)	S/PDIF (24 bit), IEC 958, Pro-status bits
Connector (ADAT® or TOSLINK)	Optical Pipe
Format (ADAT®)	8-ch. @ 48 kHz, 4-ch. SMUX @ 96 kHz
Digital IO Engine	TCAT DICE II, handling all IO formats
Clock and Jitter	
Internal Sample Rates	44.1, 48, 88.2, 96, 176.4 and 192 kHz
External Sample Rates	43 to 193 kHz, jitter rejection at all rates
Jitter Rejection Engine	JET™ technology in TCAT DICE II
Jitter Rejection Filter (4th order)	> 3 dB @ 10 Hz, > 100 dB @ 600 Hz
DIO Interface Jitter	< 1 ns peak, BW: 700 Hz to 100 kHz
AD/DA Conversion Jitter	< 42 ps RMS, BW: 100 Hz to 40 kHz
Digital Output Phase (stand-alone and across network)	< 0.5 % of Sample Period
Input Slip Sample Tolerance(all DIs)	+50 % to -50 % of sample period
Processing Delay DIO @ 96/48 kHz	0.15/0.3 ms
Frequency Response DIO	DC to 23.9 kHz ± 0.01 dB @ 48 kHz

Line Inputs Ch. 1, 2, 3, 4

Connectors	1/4" Phone Jack (balanced)
Impedance, Bal./Unbal.	20 kOhm/25 kOhm
Full Scale Input Level @ 0 dBFS	+13 dBu
THD+N	< -100 dB (0.001 %) @ 1 kHz, -1 dBFS
SNR	>111 dB(A), >108 dB, 20 Hz to 20 kHz
Freq. Response	+0/-0.5 dB, 20 Hz to 20 kHz
Crosstalk	< -100 dB, 20 Hz to 20 kHz

ADC

A to D Conversion	24 bit, 128 x oversampling bitstream
A to D Delay	0.68 ms / 0.63 ms @ 44.1 kHz / 48 kHz

Mic. Inputs Ch. 1, 2

Connectors	Neutrik Combo (XLR)
Sensitivity Full Range Pad on/off	-10/+10 dBu <> -52/-32 dBu
Total Preamp gain	62 dB
Impedance, Pad on/off	2000/1300 ohm
NF @ Rg = 150 ohm, Max. Gain	< 4 dB
EIN @ Rg = 150 ohm, Max. Gain	< -127 dBu
THD+N, Min. Gain	< -100 dB (0.001%) @ 1 kHz, -1 dBFS
SNR, Min. Gain	>109 dB(A), >106 dB, 20 Hz to 20 kHz

48 bit Precision EQ

Hi Gain	+/- 12 dB
Hi Frequency	200 Hz to 40 kHz
Hi Bell	On: 6 dB/oct. shelve / Off: Parametric
Hi Mid Gain	+/- 12 dB
Hi Mid Frequency	200 Hz to 20 kHz
Hi Mid Bandwith	0.10 to 4.0
Lo Mid Gain	+/- 12 dB
Lo Mid Frequency	20 Hz to 2 kHz
Lo Mid Bandwidth	0.10 to 4.0
Lo Gain	+/- 12 dB (only available when Lo cut is off)
Lo Frequency	20 Hz - 400 Hz
Lo CUT	On: Cut / Off: 6 dB/oct. shelve

Compression/De-Essing

Compression/De-Essing styles	"Female Voice", "SoftFemale Voice", "HardMale Voice", "SoftMale "Voice", "Hard", "Guitar", "Bass", "Speak", "Sax", "Trumpet", "Snare", "Percussion", "All purpose"
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Instr. Inputs Ch. 1, 2

Connectors	Neutrik Combo (1/4" Phone Jack)
Sensitivity Range	-25 dBu <> +17 dBu
Total Preamp gain	42 dB
Impedance	1 MOhm
THD+N, Min. Gain	< -100 dB (0.001%) @ 1 kHz, -1 dBFS
SNR, Min. Gain	>107 dB(A), >104 dB, 20 Hz to 20 kHz
Crosstalk	< -100 dB, 20 Hz to 20 kHz

Monitor/Line Outputs Ch. 1, 2, 3, 4

Connectors	1/4" Phone Jack. Ground sensing design.
Impedance	< 100 Ohm
Level Range (Ch. 1, 2)	-40 dBu <> +12 dBu (analog gain scale)
Fixed Full Scale Range (Ch. 3, 4)	+12 dBu
THD+N	< -94 dB (0.002%) @ 1 kHz, -1 dBFS
SNR	>111 dB(A), >108 dB, 20 Hz to 20 kHz
Freq. Response	+0/-0.1 dB, 20 Hz to 20 kHz
Crosstalk	< -100 dB, 20 Hz to 20 kHz

DAC

D to A Conversion	24 bit, 128 x Oversampling Bitstream
D to A Delay	0.70 ms / 0.65 ms @ 44.1 kHz / 48 kHz

Headphone Outputs

Connectors	2 x 1/4" Phone Jack (Stereo)
Impedance	80 Ohm
Gain Level Range	-80 dBu <> +16 dBu @ 300 ohm (analog gain scale)
THD+N	< -94 dB (0.002%) @ 1 kHz, -1 dBFS
SNR	>103 dB(A), > 100 dB, 20 Hz to 20 kHz
Freq. Response	+0/-0.1 dB, 20 Hz to 20 kHz

Crosstalk	< -100 dB, 20 Hz to 20 kHz
Power @ 40 Ohm Load	200 mW
Power @ 600 Ohm Load	93 mW
EMC	
Complies With	EN 55103-1 and EN 55103-2, FCC part 15 Class B, CISPR 22 Class B
Certified To	IEC 60065, EN 60065, UL60065 and CSA E60065 CSA FILE #LR108093
Environment	
Operating Temperature	32° F to 122° F (0° C to 50° C)
Storage Temperature	-22° F to 167° F (-30° C to 70° C)
Humidity	Max. 90 % non-condensing
Control Interface	
MIDI	In/Out: 5 Pin DIN
FireWire (DAW)	IEEE 1394a, IEC 61883
General	
Dimensions (W x H x D)	9.28" x 2.48" x 9.5" (235.8 x 63 x 241.2 mm)
Weight	3.3 lb. (1.5 kg)
Finish	Acrylic front panel. Plated and coated steel back plate. Rubber coated soft touch cover surrounding metal chassis.
PPM Meter (Ch. 1, 2)	3 LEDs per channel
Mains Power Supply (included)	12V DC, Adapter for 90 to 240 VAC, 50 to 60 Hz (auto select)
FireWire bus-powered	8 to 30 VDC
Power Consumption	<14 W
Warranty Parts and labor	1 Year