

# TGX10 DSP power amplifier 4x2500W, live

## TGX-Series



- Multichannel DSP amplifier for live applications
- Power density of 10kW in 2RU
- Fully integrated DSP with native 96 kHz and FIR Drive technology
- OMNEO integration for seamless compatibility with Dante and OCA
- Full color touch screen for control without software

### Parts included

Quantity	Component
1	TGX 4-channel power amplifier
4	M6x20 screw for rack mounting
1	Installation manual
1	Mains power connector, 32 A with safety & assembly instruction
1	Safety instruction booklet

### Technical specifications

OUTPUT POWER				
<b>Load impedance</b>	2 Ω	2.7 Ω	4 Ω	8 Ω
<b>Maximum Output Power<sup>1</sup></b> All channels driven	2600 W	3000 W	2500 W	1250 W
<b>Number of amplifier channels</b>	4			
<b>Maximum Output Voltage</b>	150 V <sub>peak</sub>			
<b>Maximum Output Current</b>	53 A <sub>peak</sub>			
AMPLIFIER				
<b>Voltage Gain</b> ref.1 kHz	32.0 dB, adjustable 24-40 dB			

OUTPUT POWER	
<b>Input Sensitivity</b> ref. to Max. Output Voltage	10.7 dBu (2.66 V), adjustable 2.7-18.7 dBu
<b>THD</b> 3 dB below Max., AES17, 1 kHz	< 0.05 %
<b>IMD-SMPTE</b> , 60 Hz, 7 kHz	< 0.05 %
<b>DIM100</b> , 3.15 kHz, 15 kHz	< 0.15 %
<b>Crosstalk</b> ref. 1 kHz, 12 dB below Max., 8 Ω	< -80 dB
<b>Frequency Response</b> ref. 1 kHz, analog in to speaker out	20 Hz to 20 kHz (±0.5 dB)
<b>Damping Factor</b> , 20 Hz to 200 Hz, 8 Ω	> 400
<b>Output Stage Topology</b>	Class D, fixed frequency
<b>Signal to Noise Ratio</b>	
A-weighted, analog input	112 dB
A-weighted, digital input	115 dB
<b>Output Noise</b>	
A-weighted, analog input	< -70 dBu

**OUTPUT POWER**

A-weighted, digital input	< -73 dBu
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**DIGITAL SIGNAL PROCESSING**

<b>Sampling rate</b>	48 kHz/96 kHz, OMNEO/Dante synchronized
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**Signal Delay/Latency**

Analog in to Speaker Out, 48 kHz/96 kHz	0.70 ms/0.53 ms
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AES3 in to Speaker Out, 48 kHz/96 kHz	1.00 ms/0.66 ms
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<b>Dante Network Latency</b>	typ. 1.00 ms
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<b>Signal Processing</b>	32/40 bit, floating point
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User EQ	12 filters per channel, selectable as PEQ, Lo-Shelv, Hi-Shelv, Lo-ShelvQ, Hi-ShelvQ, Hi-Pass, Lo-Pass and Notch; 2 filters of them with additional asymmetric filter type
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User Delay	0 to 2000 ms per channel (units: $\mu$ s, ms, s, cm, m, inches, feet)
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Array EQ	5 filters per channel, selectable as PEQ, Lo-Shelv, Hi-Shelv, Lo-ShelvQ, Hi-ShelvQ, Hi-Pass, Lo-Pass, and All-Pass
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Array Delay	0 to 500 ms per channel (units: $\mu$ s, ms, s, cm, m, inches, feet)
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Speaker EQ	10 filters per channel, selectable as PEQ, Lo-Shelv, Hi-Shelv, Hi-Pass, Lo-Pass, and All-Pass
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Speaker X-Over	Hi-Pass and Lo-Pass per channel, 6/12/18/24/30/36/42/48 dB Bessel/Butterworth, 12/24/48 dB Linkwitz-Riley; Alignment Delay, 0 to 20 ms per channel
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Speaker FIR	up to 1025 taps, Linear Phase Filter, Linear Phase Brickwall X-Over
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Speaker Limiters	Peak Anticipation Limiter and RMS/TEMP Limiter per channel
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Other functions	Source Selection and Mix, Level, Mute, Polarity, Sine and Noise Generator, Level Meters, Impedance Measurement, and Load Monitoring
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**Memory**

DSP Presets	1 Factory + 20 User
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<b>Source Supervision and Fallback</b>	AES3 Lock and OMNEO/Dante network supervision, switchover to alternative Source Selection
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**CONNECTIVITY**

**Analog Audio Input/Thru**

Type	4 x 3-pin XLR female/male
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Maximum Input Level	+24 dBu
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Input Impedance, active balanced	20 k $\Omega$
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Reference level equal to digital input	+21 dBu for 0 dBFS
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**Digital Audio Input/Thru**

Type	2 x 3-pin XLR (alternative use of Analog In/Thru)
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Format	AES3 (AES/EBU)
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Input Sample Rates	32 to 192 kHz, internal Sample-Rate-Converter
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**OUTPUT POWER**

Thru Connector	active buffered, direct bypass if device is unpowered
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**Network**

Type	2 x Neutrik etherCON/RJ45, redundant PRIMARY/SECONDARY
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Format	1000base-T/100base-TX, integrated switch
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Network Audio Inputs	8 channels, 48/96 kHz, OMNEO/Dante format
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Network Audio Outputs (Monitor)	2 channels, 48/96 kHz, OMNEO/Dante format
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<b>Front side Service Port</b>	1 x USB Type A
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<b>Mains Input</b>	1 x Neutrik powerCON-HC
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<b>Speaker Output</b>	4 x NL4
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**GENERAL**

**User Interface**

Display	320 x 240 pixel, 3.5" color TFT
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Front panel indicators	Full color LED illuminated ring
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Front panel operating elements	Rotary encoder, Capacitive Touch Screen
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Rear panel indicators	2 x LED (AES3 Input mode active, Amp-Find)
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Rear panel operating elements	Mains switch
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<b>Power Requirements</b>	100 V to 240 V, 50 Hz to 60 Hz AC
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**Power Consumption**

Rated Power Consumption	1200 W
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1/8 Maximum Output Power at 4 $\Omega$	1765 W
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Idle Mode (no input signal)	80 W
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Standby Mode	< 18 W
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<b>Power Supply Topology</b>	Switching Mode Power Supply with digital controlled Power Factor Correction
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<b>Protections</b>	Audio Limiters, High Temperature, DC, HF, Short Circuit, Back-EMF, Peak Current Limiters, Inrush Current Limiters, Turn-on Delay, Mains Circuit Breaker Protection, Mains Over/Under voltage Protection
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<b>Cooling:</b>	Front-to-rear, temperature controlled fans, supervised
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<b>Ambient Temperature Limits</b>	+5 $^{\circ}$ C to +40 $^{\circ}$ C (+40 $^{\circ}$ F to +105 $^{\circ}$ F)
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<b>IEC Protection Class</b>	Class I (grounded)
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<b>Electromagnetical Environment</b>	E1, E2, E3
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<b>Color</b>	Black
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<b>Dimensions (W x H x D), mm</b>	483 x 88.1 x 514.2
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<b>Weight</b>	15.0 kg (33.0 lb)
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<b>Shipping Weight</b>	17.2 kg (37.8 lb)
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Amplifier at rated conditions; all channels driven, 4 Ω loads, analog input, 32 dB gain, 48 kHz sample rate, unless otherwise specified.

<sup>1</sup>Test signal for max. output power according IHF-A-202 (Dynamic-Headroom, burst 1 kHz/20 ms on/480 ms off/low level -20 dB).

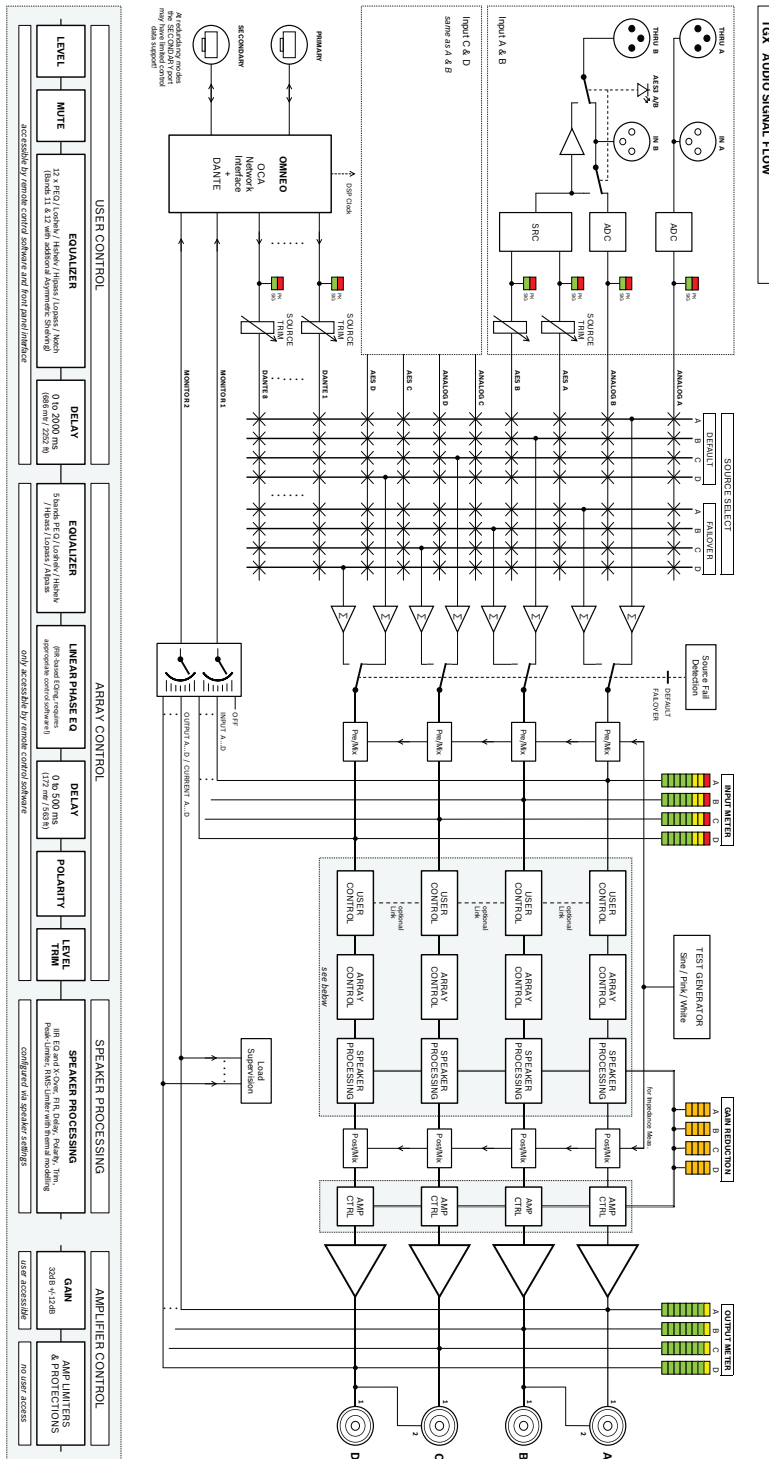


Fig. 1: Block diagram

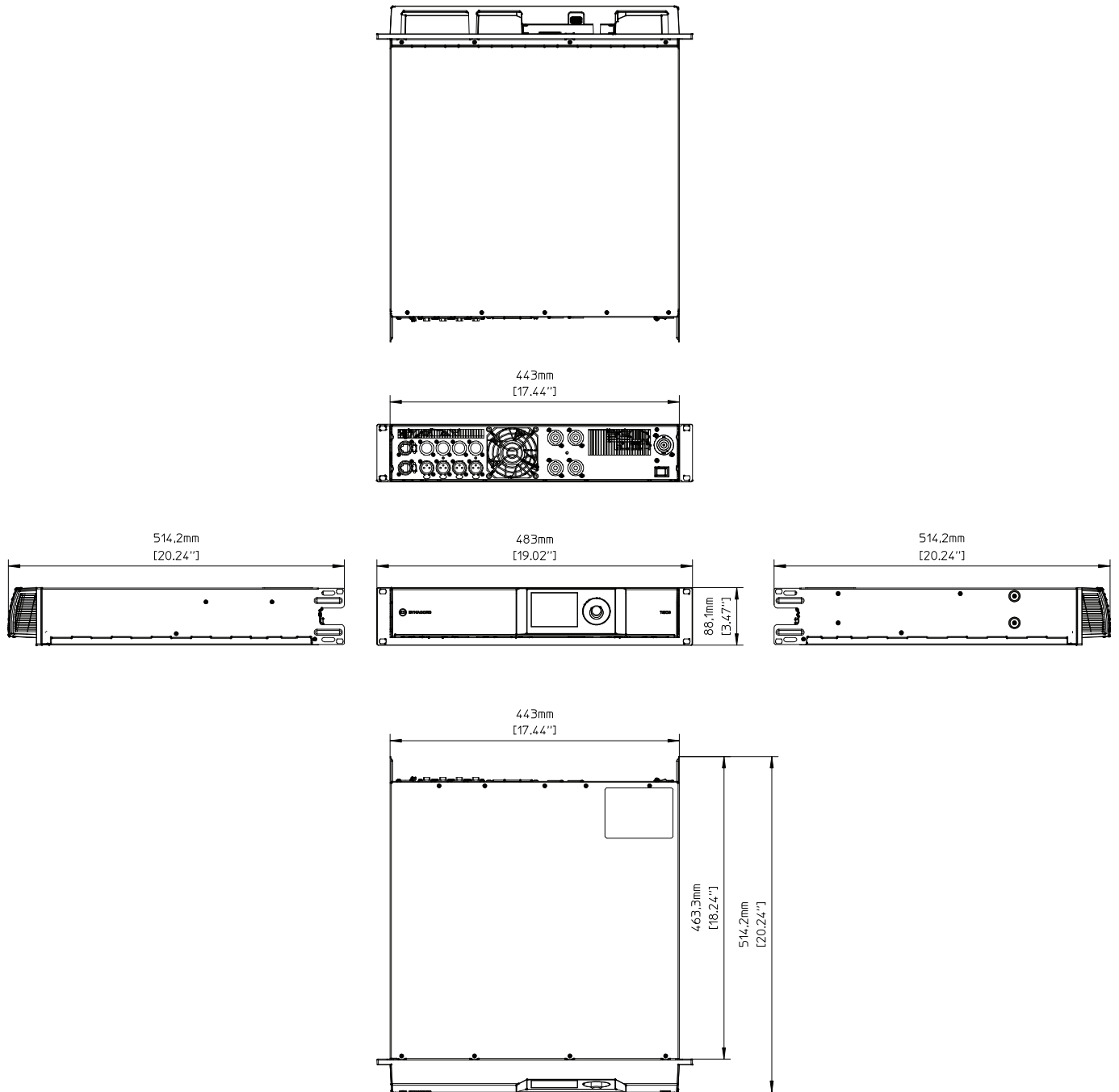


Fig. 2: Dimensions: TGX

## Ordering information

**TGX10 DSP power amplifier 4x2500W, live**  
 DSP power amplifier 4x2500W @ 4 ohms, OMNEO, 8 Dante-,  
 4 AES-3/analog inputs, XLR/NL4 connectors, 100-240V, black  
 Order number **TGX10 | F.01U.328.094**

### Accessories

**PCO32A30-US Power cord, powerCon32/NEMA L5-30**  
 Power cord, powerCON32 to NEMA L5-30 mains connector,  
 2m, black  
 Order number **PCO32A30-US | F.01U.349.975**

**PCO32A16-EU Power cord, powerCon32/CEE7/7**  
 Power cord, powerCON32 to CEE7/7 (Schuko, 16A) mains  
 connector, 2m, black  
 Order number **PCO32A16-EU | F.01U.349.976**

**PCO32A16-UK Power cord, powerCon32/BS1363**  
 Power cord, powerCON32 to BS1363 (UK-plug) mains  
 connector, 2m, black  
 Order number **PCO32A16-UK | F.01U.349.977**

**DC-RMK15 Rear rackmount kit for amplifiers**  
 Rack Mount Kit for amplifiers, Length 15,5"; 1L/1R  
 Order number **DC-RMK15 | F.01U.135.402**



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