

# TGX20 DSP power amplifier 4x5000W, live



- Multichannel DSP amplifier for live applications
- Market leading power density with 20kW 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				
Load impedance	2 Ω	2.7 Ω	4 Ω	8 Ω
Maximum Output Power <sup>1</sup> All channels driven	5200 W	6000 W	5000 W	2500 W
Number of amplifier channels	4			
Maximum Output Voltage	210 V <sub>peak</sub>			

Maximum Output Current	84 A <sub>peak</sub>
<b>AMPLIFIER</b>	
Voltage Gain ref. 1 kHz	32.0 dB, adjustable 24-40 dB
Input Sensitivity ref. to Max. Output Voltage	13.7 dBu (3.73 V), adjustable 5.7-21.7 dBu
THD 3 dB below Max., AES17, 1 kHz	< 0.05 %
IMD-SMPTE, 60 Hz, 7 kHz	< 0.15 %
DIM100, 3.15 kHz, 15 kHz	< 0.15 %
Crosstalk ref. 1 kHz, 12 dB below Max., 8 Ω	< -80 dB
Frequency Response ref. 1 kHz, analog in to speaker out	20 Hz to 20 kHz (±1 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	115 dB
A-weighted, digital input	118 dB
<b>Output Noise</b>	
A-weighted, analog input	< -70 dBu
A-weighted, digital input	< -73 dBu
<b>DIGITAL SIGNAL PROCESSING</b>	
<b>Sampling rate</b>	48 kHz/96 kHz, OMNEO/Dante synchronized
<b>Signal Delay/Latency</b>	
Analog in to Speaker Out, 48 kHz/96 kHz	0.70 ms/0.53 ms
AES3 in to Speaker Out, 48 kHz/96 kHz	1.00 ms/0.66 ms
<b>Dante Network Latency</b>	typ. 1.00 ms
<b>Signal Processing</b>	32/40 bit, floating point
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
User Delay	0 to 2000 ms per channel (units: μs, ms, s, cm, m, inches, feet)
Array EQ	5 filters per channel, selectable as PEQ, Lo-Shelv, Hi-Shelv, Lo-ShelvQ, Hi-ShelvQ, Hi-Pass, Lo-Pass, and All-Pass
Array Delay	0 to 500 ms per channel (units: μs, ms, s, cm, m, inches, feet)
Speaker EQ	10 filters per channel, selectable as PEQ, Lo-Shelv, Hi-Shelv, Hi-Pass, Lo-Pass, and All-Pass
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
Speaker FIR	up to 1025 taps, Linear Phase Filter, Linear Phase Brickwall X-Over

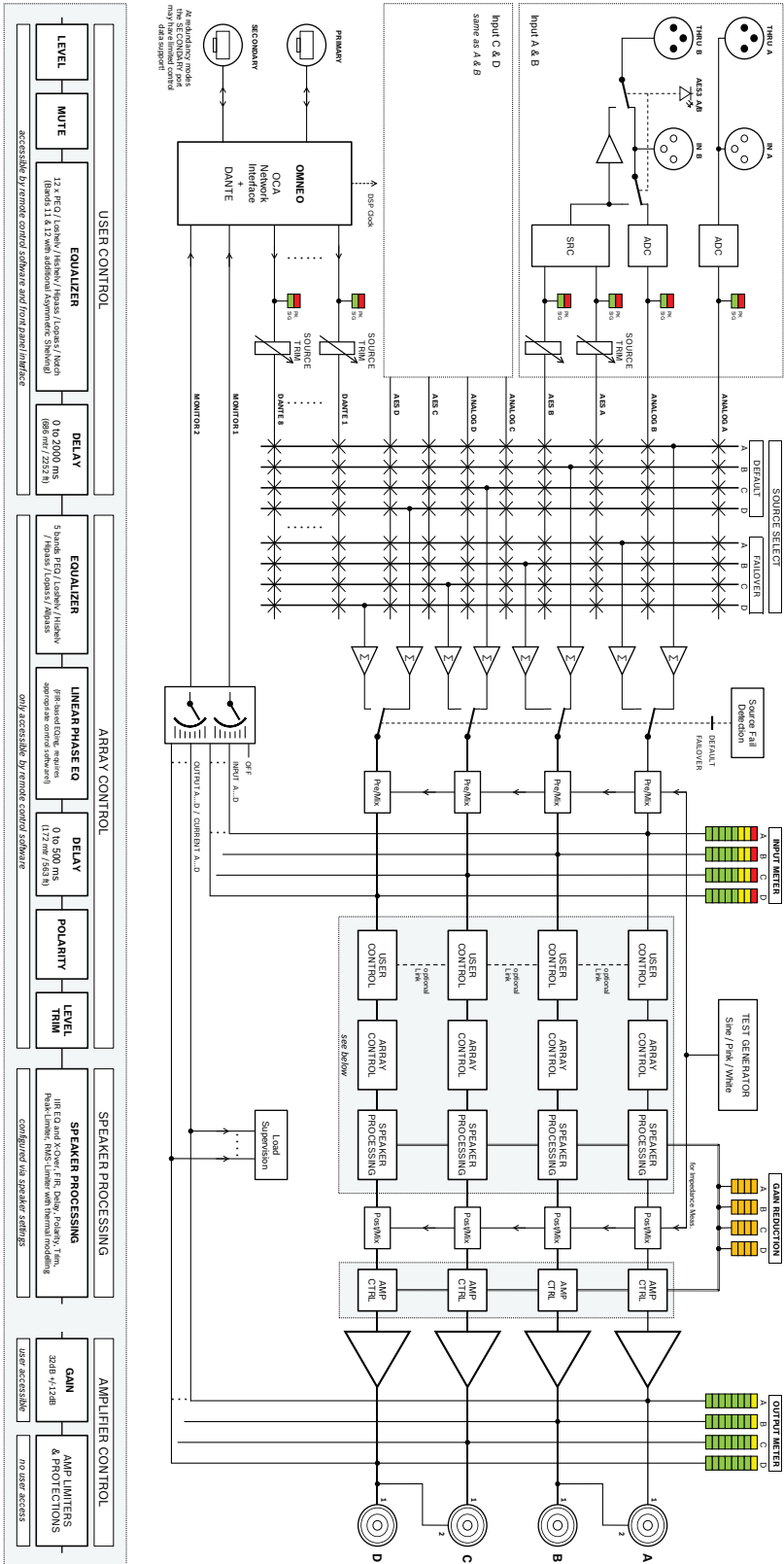
Speaker Limiters	Peak Anticipation Limiter and RMS/TEMP Limiter per channel
Other functions	Source Selection and Mix, Level, Mute, Polarity, Sine and Noise Generator, Level Meters, Impedance Measurement, and Load Monitoring
<b>Memory</b>	
DSP Presets	1 Factory + 20 User
Speaker-Pool Presets	30 speaker settings
<b>Source Supervision and Fallback</b>	AES3 Lock and OMNEO/Dante network supervision, switchover to alternative Source Selection
<b>CONNECTIVITY</b>	
<b>Analog Audio Input/Thru</b>	
Type	4 x 3-pin XLR female/male
Maximum Input Level	+24 dBu
Input Impedance, active balanced	20 kΩ
Reference level equal to digital input	+21 dBu for 0 dBFS
<b>Digital Audio Input/Thru</b>	
Type	2 x 3-pin XLR (alternative use of Analog In/Thru)
Format	AES3 (AES/EBU)
Input Sample Rates	32 to 192 kHz, internal Sample-Rate-Converter
Thru Connector	active buffered, direct bypass if device is unpowered
<b>Network</b>	
Type	2 x Neutrik etherCON/RJ45, redundant PRIMARY/SECONDARY
Format	1000base-T/100base-TX, integrated switch
Network Audio Inputs	8 channels, 48/96 kHz, OMNEO/Dante format
Network Audio Outputs (Monitor)	2 channels, 48/96 kHz, OMNEO/Dante format
<b>Front side Service Port</b>	1 x USB Type A
<b>Mains Input</b>	1 x Neutrik powerCON-HC
<b>Speaker Output</b>	4 x NL4
<b>GENERAL</b>	
<b>User Interface</b>	

Display	320 x 240 pixel, 3.5" color TFT
Front panel indicators	Full color LED illuminated ring
Front panel operating elements	Rotary encoder, Capacitive Touch Screen
Rear panel indicators	2 x LED (AES3 Input mode active, Amp-Find)
Rear panel operating elements	Mains switch
<b>Power Requirements</b>	100 V to 240 V, 50 Hz to 60 Hz AC
<b>Power Consumption</b>	
Rated Power Consumption	2250 W
1/8 Maximum Output Power at 4 $\Omega$	2850 W
Idle Mode (no input signal)	110 W
Standby Mode	< 19 W
<b>Power Supply Topology</b>	Switching Mode Power Supply with digital controlled Power Factor Correction
<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

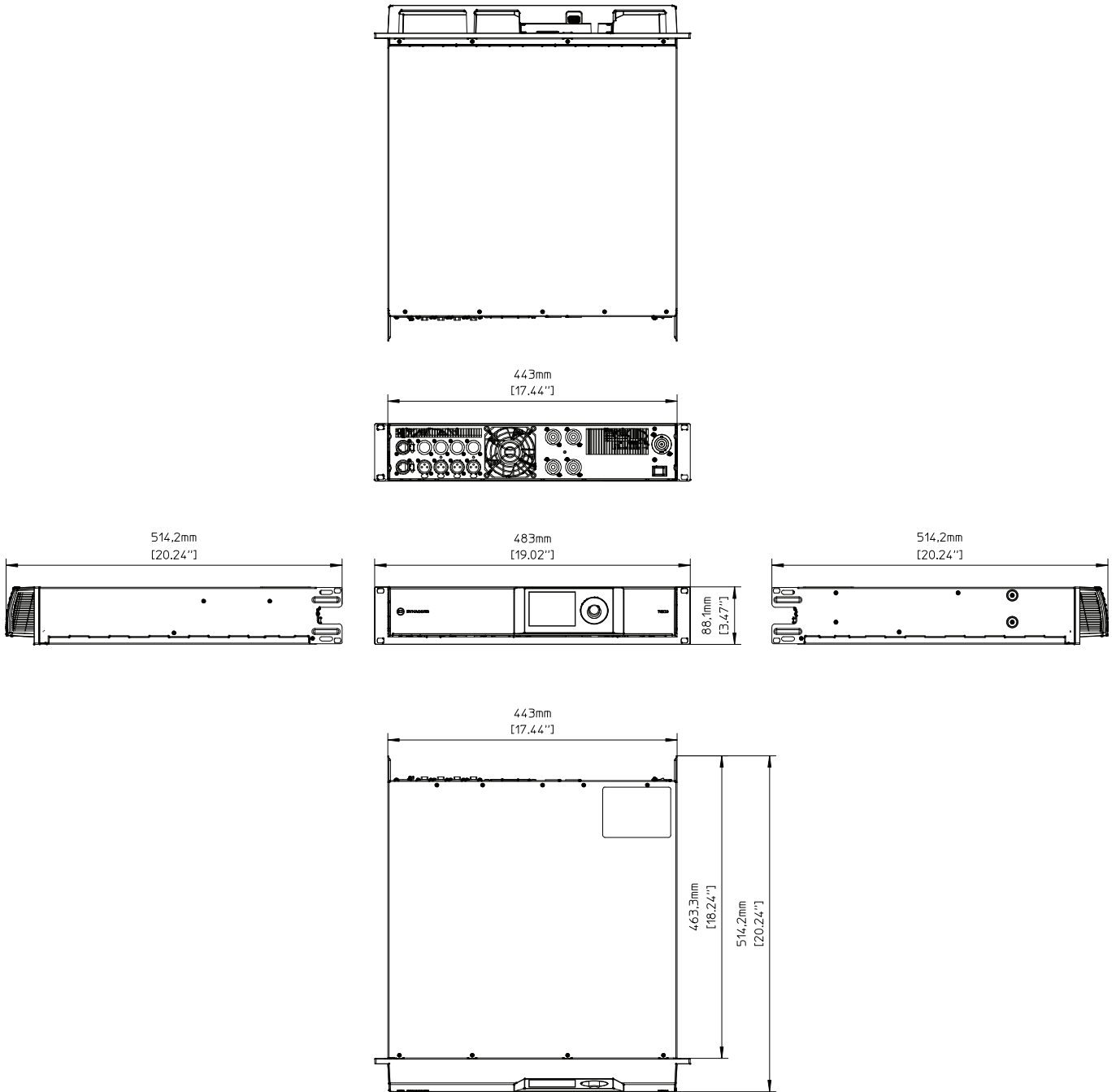
<b>Cooling:</b>	Front-to-rear, temperature controlled fans, supervised
<b>Ambient Temperature Limits</b>	+5 °C to +40 °C (+40 °F to +105 °F)
<b>IEC Protection Class</b>	Class I (grounded)
<b>Electromagnetical Environment</b>	E1, E2, E3
<b>Color</b>	Black
<b>Dimensions</b> (W x H x D), mm	483 x 88.1 x 514.2
<b>Weight</b>	18.3 kg (40.4 lb)
<b>Shipping Weight</b>	20.5 kg (45.2 lb)

Amplifier at rated conditions; all channels driven, 4  $\Omega$  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).



Block diagram



Dimensions: TGX

## Ordering information

**TGX20 DSP power amplifier 4x5000W, live**  
 DSP power amplifier 4x5000W @ 4 ohms, OMNEO, 8 Dante-, 4 AES-3/analog inputs, XLR/NL4 connectors, 100-240V, black  
 Order number **TGX20**

## Accessories

**PD32-EU Power distro 3x32A, 230V, CEE 32A**  
 Power distribution for 3x 32A and 3x 16A, CEE32A mains connector, 3-phase 230/400V, European region, black  
 Order number **PD32-EU**

**PD30-US Power distro 3x30A, 208V, NEMA L21-30**  
 Power distribution for 3x 30A and 3x 15A, NEMA L21-30 mains connector, 3-phase 208V, North American region, black  
 Order number **PD30-US**

**PCO32A30-US Power cord, powerCon32/NEMA L5-30**

Power cord, powerCON32 to NEMA L5-30 mains connector, 2m, black

Order number **PCO32A30-US**

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**PCO32A16-EU Power cord, powerCon32/CEE7/7**

Power cord, powerCON32 to CEE7/7 (Schuko, 16A) mains connector, 2m, black

Order number **PCO32A16-EU**

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**PCO32A16-UK Power cord, powerCon32/BS1363**

Power cord, powerCON32 to BS1363 (UK-plug) mains connector, 2m, black

Order number **PCO32A16-UK**

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**PCO32A10-AU Power cord, powerCon32/AU3-pin10A**

Power cord, powerCON32 to AU, 3-pin 10A mains connector, 2m, black

Order number **PCO32A10-AU**

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**DC-RMK15 RMK-15**

Rack Mount Kit for amplifiers, Length 15,5"; 1L/1R

Order number **DC-RMK15**

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