

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 ¹ All channels driven	5200 W	6000 W	5000 W	2500 W
Number of amplifier channels	4			
Maximum Output Voltage	210 V _{peak}			

Maximum Output Current	84 A _{peak}
AMPLIFIER	
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)

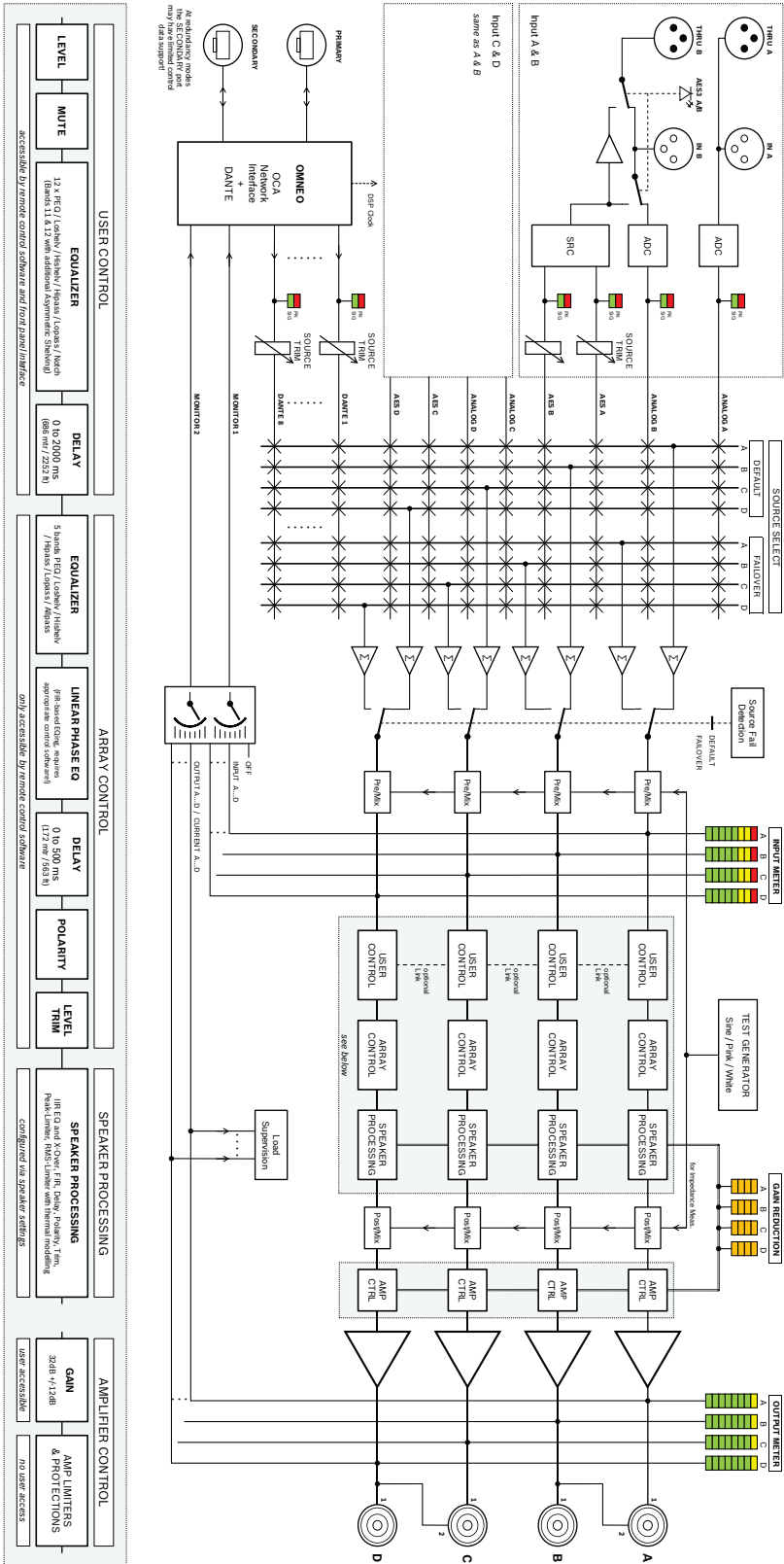
Damping Factor, 20 Hz to 200 Hz, 8 Ω	> 400
Output Stage Topology	Class D, fixed frequency
Signal to Noise Ratio	
A-weighted, analog input	115 dB
A-weighted, digital input	118 dB
Output Noise	
A-weighted, analog input	< -70 dBu
A-weighted, digital input	< -73 dBu
DIGITAL SIGNAL PROCESSING	
Sampling rate	48 kHz/96 kHz, OMNEO/Dante synchronized
Signal Delay/Latency	
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
Dante Network Latency	typ. 1.00 ms
Signal Processing	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
Memory	
DSP Presets	1 Factory + 20 User
Speaker-Pool Presets	30 speaker settings
Source Supervision and Fallback	AES3 Lock and OMNEO/Dante network supervision, switchover to alternative Source Selection
CONNECTIVITY	
Analog Audio Input/Thru	
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
Digital Audio Input/Thru	
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
Network	
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
Front side Service Port	1 x USB Type A
Mains Input	1 x Neutrik powerCON-HC
Speaker Output	4 x NL4
GENERAL	
User Interface	

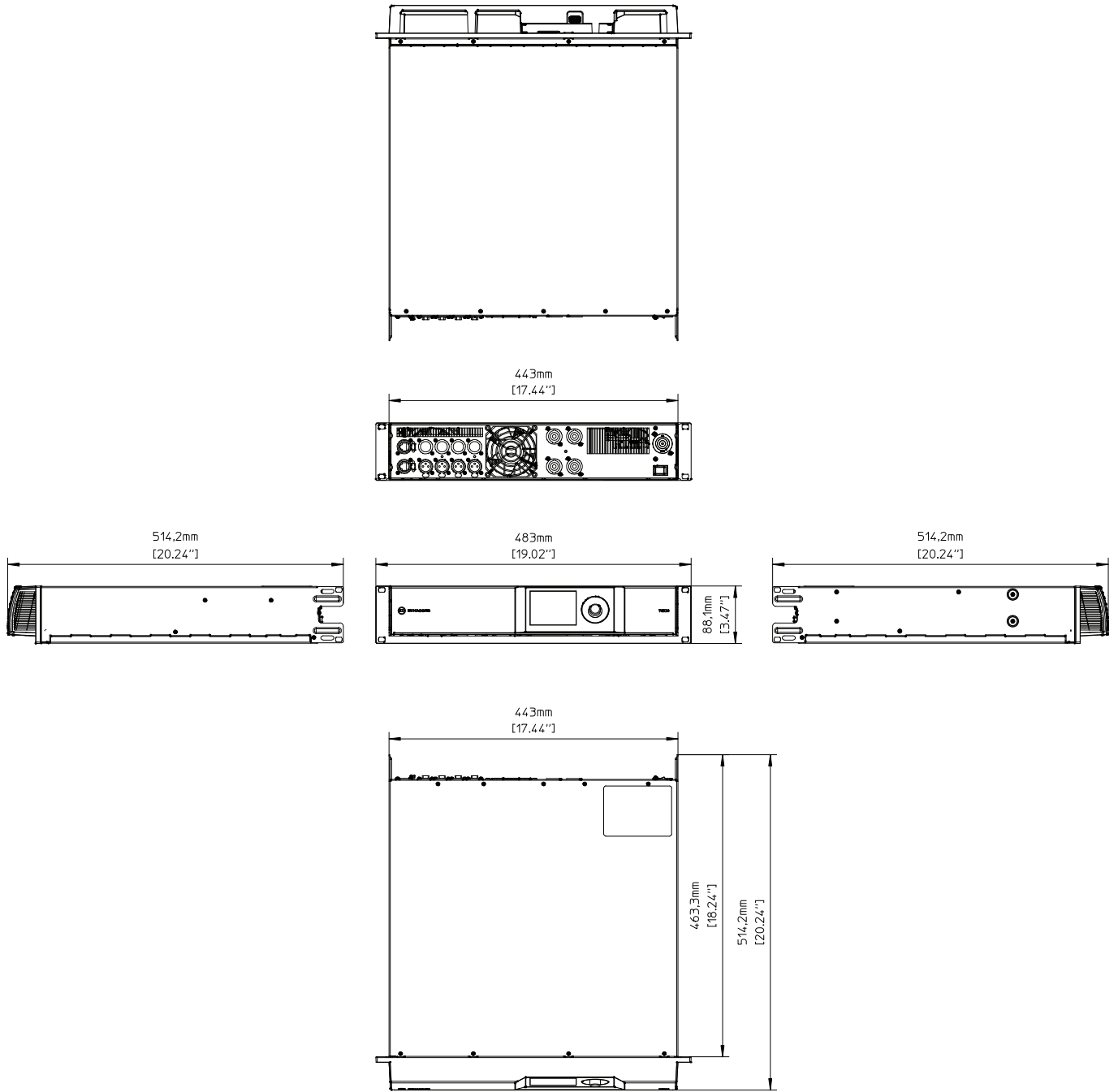
Display	320 x 240 pixel, 3.5" color TFT
Front panel indicators	Full color LED illuminated ring
Front panel operating elements	Rotary encoder, Capacitive Touch Screen
Rear panel indicators	2 x LED (AES3 Input mode active, Amp-Find)
Rear panel operating elements	Mains switch
Power Requirements	100 V to 240 V, 50 Hz to 60 Hz AC
Power Consumption	
Rated Power Consumption	2250 W
1/8 Maximum Output Power at 4 Ω	2850 W
Idle Mode (no input signal)	110 W
Standby Mode	< 19 W
Power Supply Topology	Switching Mode Power Supply with digital controlled Power Factor Correction
Protections	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
Cooling:	Front-to-rear, temperature controlled fans, supervised
Ambient Temperature Limits	+5 °C to +40 °C (+40 °F to +105 °F)
IEC Protection Class	Class I (grounded)
Electromagnetical Environment	E1, E2, E3
Color	Black
Dimensions (W x H x D), mm	483 x 88.1 x 514.2
Weight	18.3 kg (40.4 lb)
Shipping Weight	20.5 kg (45.2 lb)

Amplifier at rated conditions; all channels driven, 4 Ω loads, analog input, 32 dB gain, 48 kHz sample rate, unless otherwise specified.

[†]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 L6-30

Power cord, powerCON32 to NEMA L6-30 mains connector, 2m, black
Order number **PCO32A30-US**

PCO32A16-EU Power cord, powerCon32/CEE7/7

Power cord, powerCON32 to CEE7/7 (Schuko, 16A) mains connector, 2m, black
Order number **PCO32A16-EU**

PCO32A16-UK Power cord, powerCon32/BS1363

Power cord, powerCON32 to BS1363 (UK-plug) mains connector, 2m, black
Order number **PCO32A16-UK**

PCO32A10-AU Power cord, powerCon32/AU3-pin10A

Power cord, powerCON32 to AU, 3-pin 10A mains connector, 2m, black
Order number **PCO32A10-AU**

DC-RMK15 RMK-15

Rack Mount Kit for amplifiers, Length 15,5"; 1L/1R
Order number **DC-RMK15**

Germany:

Bosch Sicherheitssysteme GmbH
Robert-Bosch-Ring 5
85630 Grasbrunn
Germany

Bosch Security Systems, Inc.
130 Perinton Parkway
Fairport, NY 14450
USA

www.dynacord.com