

Lab.gruppen D 20:4L 2000 Watt Amplifier with 4 Flexible Output Channels/LAKE Digital Signal Processing

General

Processing / Network	Lake / Dante
Number of amplifier channels	4
Total burst power all channels (share among channels with RPM)	2000 W

Max output power (all channels driven)

2 ohms	500 W
2.67 ohms	500 W
4 ohms	500 W
8 ohms	500 W
16 ohms	425 W
Hi-Z 25 V	500 W
Hi-Z 70 V	500 W
Hi-Z 100 V	250 W

Max output power single channel (all models)

2 ohms	850 W
2.67 ohms	1150 W
4 ohms	1600 W
8 ohms	1100 W
16 ohms	600 W
Hi-Z 25 V	500 W
Hi-Z 70 V	1400 W
Hi-Z 100 V	1000 W

Amplifier output modules (all models, all channels)

Peak output voltage	142 Vpk
Max output Current	30 Apk
Rational Power Management (RPM)	Share "Total burst power" of the product freely among channels. Any channel can scale up to the "single channel max power"
Default voltage limitation (can be lifted with RPM configuration)	100 Vpk
Protection features	Current Average Limiter (CAL), Very High Frequency Protection (VHF), Direct Current Protection (DC), Short Circuit Protection, Current-Clip Limiter, Voltage Clip Limiter, Temperature protection

Amplifier platform

Inter Sample Voltage Peak Limiter (ISVPL)	Configurable Peak voltage threshold and profile
Amplifier gain	Digital configurable amplifier gain 22 - 44 dB
Dynamic range	> 112 dB
Load impedance analysis	Yes
Temperature control	Temperature regulated fans (front-to-rear airflow) and show must go on limitation (ATL, PTL)
Internal Sample Rate / Data path	96 kHz / 32 bit floating point
Product propagation delay AES 96 kHz / analog input	1.61 / 1.68 ms

Lake processing

Loudspeaker processing	Up to 4 modules of Classic/linear-phase/FIR crossover, EQ, delay, LimiterMax™ - peak and RMS limiters
System tuning	Group control with Raised Cosine™ MESA EG™ asymmetric filters

Input redundancy / Matrix	Automatic 4 level input redundancy / 4 input mixers
System integration	Comprehensive 3rd party protocol over UDP Ethernet

Dante Audio Network

Dante I/O	8 x 8
Network topology / redundancy	Flexible topology / Supports daisy-chained and Dual redundant networks
Sample Rates / Transport	48, 96 kHz / Uni + Multicast
Network latency	0.25, 0.5, 1.0, 2.0, 5.0 ms

AES Inputs

Inputs	4 AES inputs
Supported sample rates / resolution	44.1, 48, 88.2, 96, 176.4, 192 kHz / up to 24 bits
Sample rate conversion THD+N 20 Hz - 20 kHz unweighted	0.0000003

Analog Inputs

Inputs	4 high quality inputs with Iso-Float ground isolation
Maximum input / digital reference	+26 dBu / +21 dBu
Sampling rate / Resolution	96 kHz / 24 bit
Input impedance balanced / unbalanced	20 / 10 kOhm
THD+N (typical at 1 kHz unweighted)	0.0000022
THD+N (typical at 20 Hz and 20 kHz unweighted)	0.0000033

Back panel Interface

Analog inputs	4 x Terminal block connectors analog input with +, - and ground
AES inputs	4 x Terminal block connectors analog input with +, - and ground
Output connectors	4 x 2 pole Terminal block connectors rated at 1000 V / 41 A (exceeding amplifier capacity) Can take up to 8 mm ² (8.2 AWG) cables
Ethernet Ports	2 x EtherCon RJ45 Lake Controller, Dante controller and/or DLM (3rd party protocol)
Detachable mains cord	Detachable locking 3-pin IEC rated at 250 V / 16 A

Front-panel user interface

System status indication	3 x tri-color LED. FRAME, TEMP, PSU for device status indication
Channel status indication	3 x tri-color LED per channel. Status indication separated for channel LOAD, AMP, SIGNAL status
Mute	Per channel touch button for MUTE control and tri-color LED for indication
Power	Touch button for ON/STANDBY control and tri-color LED for power state indication
Select	Touch button and LED for bidirectional device software select functionality

Mains Power

Nominal voltage	100 - 240 Volt AC 50 - 60 Hz
Operating voltage	70 - 265 V AC 45 - 66 Hz
Mains wall plug	Selectable on order CEE 7/7 "Schuko" 230 V / 16 A, NEMA 5-15 125 V / 15 A, BS1363-A 250 V / 13 A, IA16A3 250 V / 16 A, AU/NZ 250 V / 10 A, JP 125 V / 15 A, CPCS-CCC 250 V / 10 A

Power supply features

Soft start / Inrush power	Yes
Power factor correction	> 0.98 for mains power > 300 W
Regulated switch mode power supply (R.SMPS)	Yes
Breaker Emulation Limiter (BEL)	No
BEL max current threshold	Fixed 8 A
Power Average Limiter (PAL)	Yes

Under Voltage Limiter (UVL)	Yes
Mains undervoltage and overvoltage protection and mains glitch tolerance	Yes

Dimensions

Rack rail to rear panel	W: 483 mm (19"), H: 44 mm (1 U), D: 425 mm (16.7")
Overall depth front-rear support	D: 463 mm

Weight

Weight	7.9 kg (17.3 lbs)
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Finish

Finish	Black painted steel chassis with grey painted steel front with detachable grille
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Approvals

Approvals	CE, ETL (ANSI/UL, CSA), PSE, RCM, BIS, CCC
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