DATASHEET

Quantum 1[12] /PULSE

Own the room with the new fly weight Quantum console

OVERVIEW

The DiGiCo Quantum 1[12] / 1[12] PULSE is a 80/96 channel mixing console with 12 physical faders and 1 x 17" LCD high-resolution touchscreens. Building on the Quantum 8, the Quantum 1[12] offers all of the Quantum features plus new design features and enhancements in a smaller format console.

KEY FEATURES

Onboard Dante Ethercon Ports (Primary and Secondary)
80/96 Input Channels with full processing
24/48 Aux/Sub-Group busses with full processing
12 x 8/12 x 12 Matrix with full processing
20/24 Insertable Mustard processing strips
24/32 Nodal processing instances
True Solo function
18 TFT LCD displays
Stadius 32-bit local I/O
Assignable channel layout
User programmable macros
1 User Programmable Macroder
Capable of redundantly mirroring with another Quantum 1 console
Redundant PSUs as standard
Snapshots for seamlessly changing parameters at once
2 DMI Slots to expand the I/O as desired
Integrated 32 Channel UBMADI
Offline software
iPad control

DiGiCo Quantum

Quantum is developed with seventh-generation FPGA devices that further expand audio processing power and ultimately allows DiGiCo to provide its users with an unrivalled amount of additional flexibility.

Quantum. Power. Connectivity. Flexibility

TECHNICAL SPECIFICATIONS

WORKSURFACE

12 x 100mm touch-sensitive, motorised faders
1 x 17" LCD high-brightness, high-resolution touchscreen
18 x Full Colour TFT LCD Displays
1 x ¼" Headphone sockets
1 x 3.5mm Headphone sockets
1 x USB 2.0 slot
Integrated Light Bar
Lightweight Quantum Chassis

OPTIONS

Single Optocore (HMA, OpticalCon or ST)
Upgrade to SingleMode Optocore
Peli Case or Flightcase
Compatible DMI Cards:ADC / AES / AMM / AVB/ Aviom / DAC / Dante / Dante 64@96 / Hydra 2 / KLANG / MADI B / MADI C / ME / Mic / Waves

REAR

On Board Dante Sockets (Primary & Secondary)
2 x Redundant PSUs
16 x XLR Mic/Line Inputs (32-Bit Stadius ADCs)
8 x XLR Line Outputs (32-Bit Stadius DACs)
1 x XLR AES/EBU Input (2 x channels)
1 x XLR AES/EBU Outputs (2 x channels)
4 x MADI BNC I/O @ 48k, 2 interfaces at 96k
1 x MultiMode Optocore Interface (Optional)
2 x DMI Slots (up to 64 I/O per slot)
1 x UB MADI (USB Type B Audio I/O interface for recording and playback of up to 32 channels)
4 x Ethernet ports (switched together)
2 x USB 3.0 slots
2 x GPI Jack (2 inputs)
2 x GPO Jack (2 outputs)
1 x MIDI In/Thru/Out (5 pin DIN)
1 x Word Clock I/O BNC
1 x DisplayPort Output
1 x AES/EBU Sync I/O BNC
1 x Quantum Lighting Bar

TECHNICAL SPECIFICATIONS

SIGNAL PROCESSING

80/96 Input Channels (Mono)
- Main & Alternative input
- Analogue Gain
- Phase Inversion Control
- Gain Tracking
- Digital Trim (-40dB to +40dB)
- Variable Delay (0ms to 1.3s)
- DiGiTube
- HPF/LPF (-24dB/Oct)
- 4 Band Parametric EQ / Dynamic EQ
- DYN 1: Compressor, Multiband Compressor, Desser
- DYN 2: Gate, Duck, External Input Compressor
- EQ/Dyn Order Control
- 2 Insert Points per Channel
- Channel Mute & Hard Mute
- Channel Direct Outputs

24/48 Aux/Sub-Group Busses
- Digital Trim (-20dB to +60dB)
- Variable Delay (0ms to 1.3s)
- DiGiTube
- Merge Input
- Tone Generator
- HPF/LPF (-24dB/Oct)
- 8 Band EQ: 4 Band Parametric EQ and 4 Band Parametric or Dynamic EQ
- DYN 1: Compressor, Multiband Compressor, Desser
- DYN 2: Gate, Duck, External Input Compressor
- EQ/Dyn Order Control
- 2 Insert Points per Channel
- Channel Mute & Hard Mute

12input x 8output/ **12input x 12output**
Full Processing Matrix

12 Control Groups (CGs)

2 Solo Busses

12 x 32-band GEQs

8 Internal Stereo FX ProcessorsDelays
- Audio Enhancer
- Choruses
- Pitch Shifters
- Reverbs

6 Internal Spice Rack Slots
- 6 band Dynamic Multiband Compressor/Expander
- 6 band Dynamic EQ

20/24 Mustard Processing Strips
- Tube
- Tube Emulation
- HPF/LPF (-24dB/Oct)
- 4 Band EQ: 2 Band Parametric EQ and 2 Band Parametric EQ or All Pass Filters
- DYN 1: Classic RMS/Peak Compressor, Vintage VCA Compressor, Optical Compressor, FET Limiter
- DYN 2: Gate, Ducker

24/32 Nodal Processing 4 Band Parametric EQ / Dynamic EQ
- DYN 1: Compressor, Multiband Compressor, Desser
- DYN 2: Gate, Duck, External Input Compressor

Multiband Compressors available on every channel, Buss and Nodal Processor

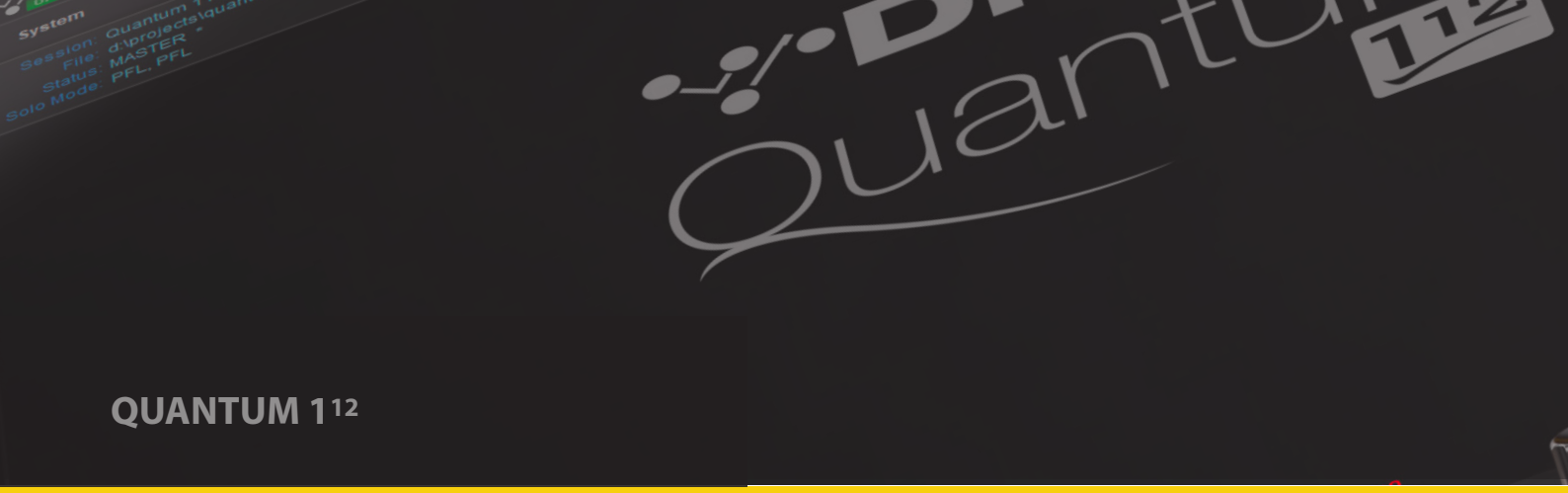
Dynamic EQs available on every channel, Buss and Nodal Processor

DiGiTuBes available on every channel & Buss

Virtual Soundcheck

True Solo function

In a world as competitive for engineers as it is for console owners, you want the best tools you can lay your hands on. You also want a console and audio tools as well thought out for every major application as they are designed for the art and science of sound engineering.



QUANTUM 1 12

CONSOLE AUDIO SPECIFICATIONS

Sample Rate: 48kHz or 96kHz
Processing Delay: 0.5ms Typical (Mic in to Line out, no channel Processing
Internal Processing: Up to 40-bit, Floating Point
A>D & D>A: 32-bit Converter Bit Depth
Frequency Response: +/- 0.2dB (20Hz – 20kHz)
THD+N (Mic In to AES Out): <0.002% @ 1kHz, 0dB gain, -10dBFS out, 22Hz-20kHz
THD+N (AES In to Line Out): <0.002% @ 1kHz, +16dBu out, 22Hz-20kHz
Channel Separation/Crosstalk (Mic In to Line Out): >100dB @ 10kHz
Residual Output Noise: <93dBu Typical (20Hz - 20kHz)
Equivalent Input Noise (EIN): <-127.5dBu A-weighted, 22Hz - 20kHz
Maximum Output Level: +2dBu
Maximum Input Level: +22dBu

A&E SPECIFICATION

The DiGiCo Quantum 1[12] shall have 1 worksurface section of 12 faders with 3 layers of 4 banks. All faders can be assigned to control any of the channel types.

The console shall be capable of 80/96 input channels, 24/48 Aux/Sub-group Busses, an LR/LCR Master Buss, 12 VCA style or mute group style Control Group channels, 2 Solo Busses, and a 12 input x 8 / 12 input x 12 output full processing Matrix. All processing paths shall have full processing including Tube emulation, Dynamic EQ and Multiband Compression. Tube emulation, Dynamic EQ and Multiband Compression shall be available on every channel and Buss on the console. All processing shall be internal and FPGA-Based.

An internal FX rack shall allow users to pick from 8 different FX. Up to 8 stereo FX can be added in any combination of reverb /delay/ chorus/pitch/enhancer effects. An internal set of twelve 32-band GEQs shall also be accessible. There shall be an additional processing rack called the Spice Rack, allowing up to 6 mono effects. There shall also be 20/24 insertable Mustard Processing Strips. The position of these, and of inserts, shall be chosen from pre-processing, pre-EQ/dynamics, mid-EQ/dynamics, pre-fader or post-fader. 24/36 instances of nodal processing shall also be available. These shall allow EQ and dynamics to be applied to the aux node of a channel.

One 17" (42cm) high-resolution, high-brightness TFT-LCD touch screen shall be provided to show the channel strips. There shall be a physical button to switch the view of the screen to show the master or channel view. There shall also be a physical encoder on the worksurface to control the master level so that it can be accessed at all times. The screen shall have its own dedicated hardware channel strip, allowing control over filters, EQ, dynamics and insert points. When viewing channels, the screen shall also have 7 integrated quick select buttons for reassigning the rotary encoders.

The screen shall also have 1 row of rotary encoders to control various channel parameters. There shall also be 16 user-assignable macro buttons on the worksurface. The user shall also be able to program macros that can be triggered with fader movements, GPI, MIDI and keyboard functions. This master section shall also have a USB port. The console shall also have 18 full colour TFT displays including one for each fader and the master section. The bottom left of the console shall have 1 pair of headphone outputs, one 3.5mm and one ¼" jack. The top right of the rear of the console shall have 1 pair of headphone outputs, one 3.5mm and one ¼" jack.

The rear panel shall have built in Primary and Secondary Dante Ports on Ethercon connectors. 16 Mic/Line inputs and 8 line outputs, both of which shall be 'Stadius' 32 bit pre amps and DACs. It shall also have 1 AES/EBU input (2 channels) and 1AES/EBU outputs (2 channels), 4 sets of MADI I/O, giving up to 4 MADI interfaces or up to 2 redundant MADI interfaces at 48kHz or 2 interfaces at 96kHz, 2 DMI slots and inbuilt UB MADI (USB Type B audio I/O interface for recording and playback of up to 32 channels).

It shall also have MIDI In, Thru and Out, 2 Jacks GPI and 2 Jacks GPO, external Wordclock I/O, BNC AES sync I/O, 4 switched ethernet ports, 2 USB ports, a DisplayPort, and 2 redundant power supplies.

There shall be an Optocore option, providing a single loop which give 504 additional audio paths at 48kHz and 96kHz. The Optocore connector type shall be chosen from HMA, OpticalCon or ST. The Optocore Mode shall be chosen from MultiMode or SingleMode.

The dimensions of the Quantum 1[12] shall be: 440 (w) x 575 (d) x 324 (h) mm
The weight of the Quantum 1[12] shall be: 14.7kg
The DiGiCo Quantum 1[12] shall be supplied with a dust cover.

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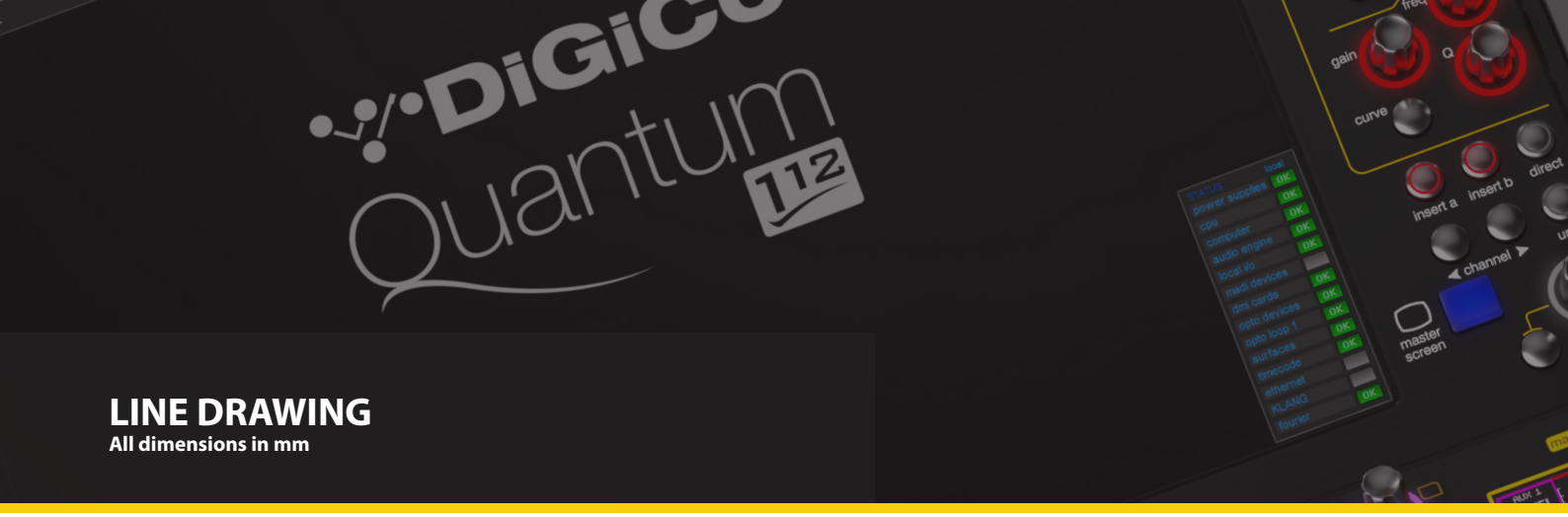
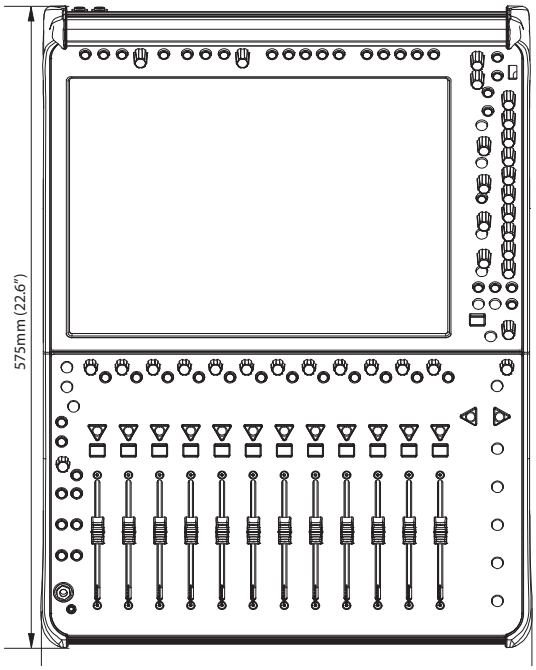
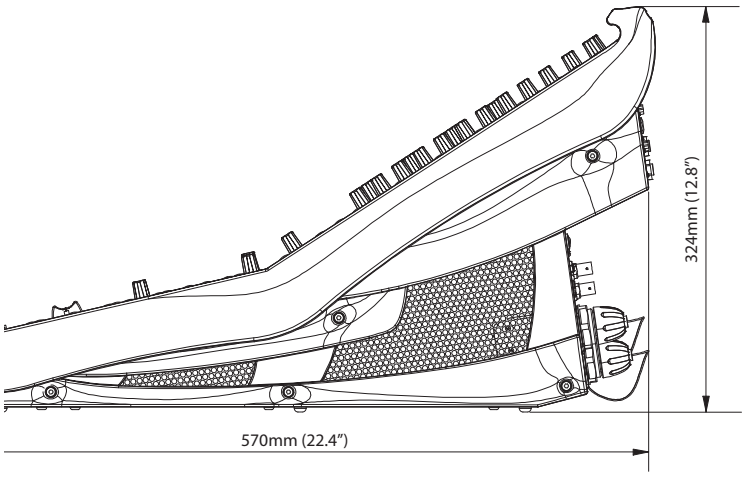
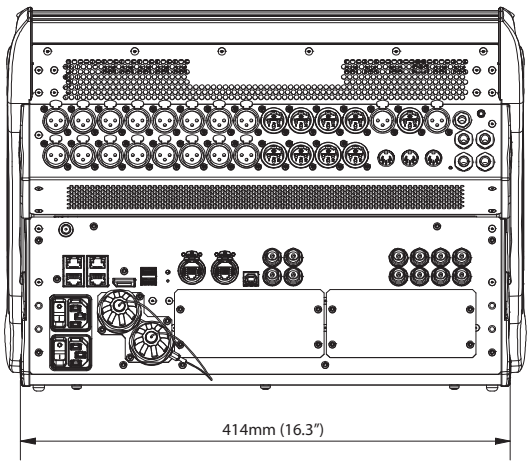


LINE DRAWING

All dimensions in mm







PHYSICAL

Dimensions: 440mm (w) x 575mm (d) x 324mm (h)
Weight: 14.70kg (23kg with Custom Peli Case)
Peli Air Case : 7.7kg mm 676mm (w) x 525mm (d) x 378mm (h)
Power Requirements: 100-240V, 50-60Hz
Redundancy: Internal PSUs x 2
Product Code: X-Q112-WS

DiGiCo HQ
No.5 The Distillery, Silverglade Business Park Leatherhead Road,
Chessington, Surrey, KT9 2QL, United Kingdom
info@digiconsoles.com

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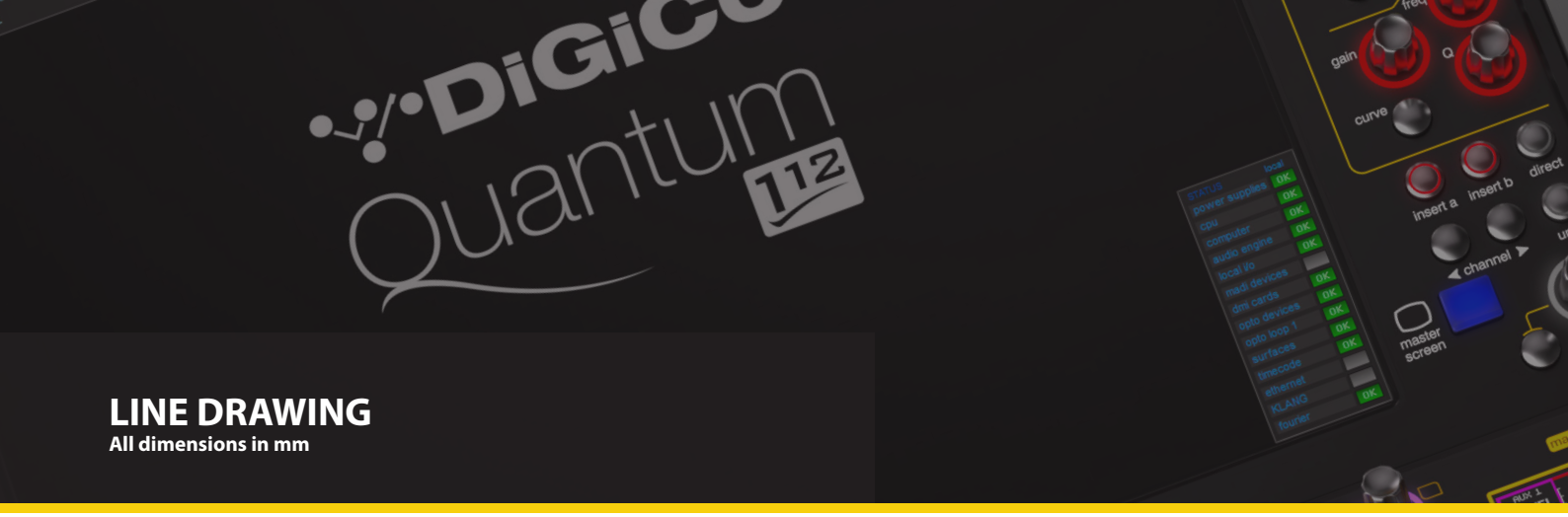
DiGiCo
www.digico.biz



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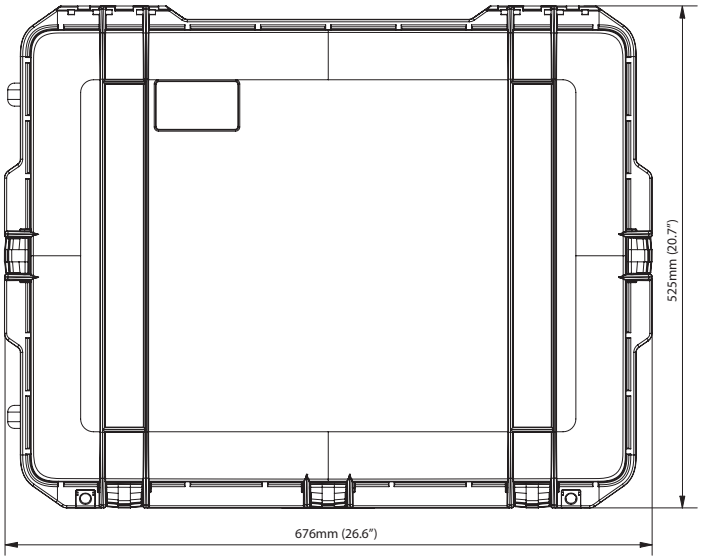

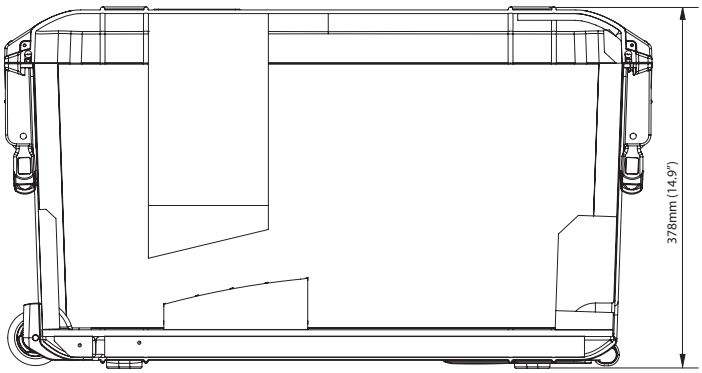

DiGiCo HQ
No.5 The Distillery, Silverglade Business Park Leatherhead Road,
Chessington, Surrey, KT9 2QL, United Kingdom
info@digiconsoles.com

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DiGiCo
www.digico.biz