DATASHEET

Quantum 3^{38} / Pulse

Own the room with the new generation of Quantum

OVERVIEW

The DiGiCo Quantum 3^{38} /3^{38} Pulse is a 128/ channel mixing console with 38 physical faders and 3 x 17" LCD high-resolution touchscreens. Building on the Quantum 7, the Quantum 3^{38} offers all of the Quantum features plus new design features and enhancements in a smaller format console.

KEY FEATURES

128/156 Input Channels with full processing
64/72 Aux/Sub-Group busses with full processing
24 x 24 (36 x36 on Theatre Option) Matrix with full processing
36/48 Insertable Mustard processing strips
64/72 Nodal processing instances
True Solo function
70 TFT LCD displays
Ultimate Stadius 32-bit local I/O
Assignable channel layout
User programmable macros
Capable of redundantly mirroring with another Q338 onsole
Redundant PSUs as standard
Snapshots for seamlessly changing many parameters at once
2 DMI Slots to expand the I/O as desired
Integrated UB MADI
Offline software
iPad control
Theatre software option
Mix Minus

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

38 x 100mm touch-sensitive, motorised faders
3 x 17" LCD high-brightness, high-resolution touchscreens
70 x Full Colour TFT LCD Displays
2 x ¼" Headphone sockets
2 x 3.5mm Headphone sockets
1 x USB 2.0 slot
1 x USB 2.0 5V power only slot (for charging)
Keyboard Light Bar
Quantum Hood
Integrated Light Bar
Floating Quantum Chassis

OPTIONS

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

REAR

2 x Redundant PSUs
8 x XLR Mic/Line Inputs (32-Bit Stadius ADCs)
8 x XLR Line Outputs (32-Bit Stadius DACs)
4 x XLR AES/EBU Inputs (8 x channels)
4 x XLR AES/EBU Outputs (8 x channels)
6 x MADI BNC I/O @ 48k, 3 interfaces at 96k
2 x MultiMode Optocore Interface (Optional)
1 x Waves port (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 48 channels)
4 x Ethernet ports (switched together)
3 x USB 2.0 slots
1 x GPI DSub37 (16 inputs)
1 x GPO DSub37 (16 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
1 x RS422 port (9 pin)
1 x Quantum Lighting Bar

TECHNICAL SPECIFICATIONS

SIGNAL PROCESSING

128/156 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

64/72 Aux/Sub-Group Busses
- Phase Inversion Control
- 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

1 LR/LCR/LCRS/5.1 Master Buss (with full processing)

24 input x 24 output Full Processing Matrix

24 Control Groups (CGs)

2 Solo Busses

24 x 32-band GEQs

24 x Internal Stereo FX Processors
- Delays
- Audio Enhancer
- Choruses
- Pitch Shifters
- Reverbs

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

36/48 x 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

64/72 x 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 3^{38}

A&E SPECIFICATION

The DiGiCo Quantum 3[38] shall have 38 faders split into 3 worksurface sections of 12 faders, plus two master faders. Each of the three sections shall have 3 layers of 4 banks. All faders can be assigned to control any of the channel types. The console shall be capable of 128/156 input channels, 64/72 Aux/Sub-group Busses, a LR/LCR/LCRS/5.1 Master Buss, 24 VCA style or mute group style Control Group channels, 2 Solo Busses, and a 24 input x 24 (36x36 on Theatre option) 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 34 different FX. Up to 24 stereo FX can be added, up to 16 may be floating point reverbs plus any combination of delay/chorus/pitch/enhancer effects. An internal set of 24 32-band GEQs shall also be accessible. There shall be an additional processing rack called the Spice Rack, allowing up to 8 mono effects. There shall also be 36/48 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. 64/72 instances of nodal processing shall also be available. These shall allow EQ and dynamics to be applied to the aux node of a channel.

Three 17" (42cm) high-resolution, high-brightness TFT-LCD touch screens shall be provided to show the channel strips. There shall be a physical button to switch the view of the centre screen to show the master view. All three screens shall have their own dedicated hardware channel strip, allowing control over filters, EQ, dynamics and insert points. When viewing channels, each screen shall also have 7 integrated quick select buttons for reassigning the rotary encoders.

Each of the screens shall also have 2 rows of rotary encoders to control various channel parameters. The master section to the right of the centre screen shall have physical controls to allow control over some snapshot functions, control over basic Solo functions and a button to switch the view of the centre screen between the master view and channel views. There shall also be 4 layers of 10 user-assignable LCD macro buttons on the master section of 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 70 full colour TFT displays including one for each fader and 10 macro displays. The front of the console shall have 2 pairs of headphone outputs, each pair having one 3.5mm and one ¼" jack. It shall also have a 5V power only USB connection for charging devices.

The rear panel shall have 8 Mic/Line inputs and 8 line outputs, both of which shall be 'Ultimate Stadius' 32 bit pre amps and DACs. It shall also have 4 AES/EBU inputs (8 channels) and 4 AES/EBU outputs (8 channels), 6 sets of MADI I/O, giving up to 6 MADI interfaces or up to 3 redundant MADI interfaces at 48kHz or 3 interfaces at 96kHz, 2 DMI slots and inbuilt UB MADI (USB Type B audio I/O interface for recording and playback of up to 48 channels). It shall also have MIDI In, Thru and Out, 1 DSub37 GPI and 1 DSub37 GPO (16 inputs and 16 outputs), external Wordclock I/O, AES sync, 4 switched ethernet ports, 3 USB ports, a DisplayPort, an RS422 port and 2 redundant power supplies.

There shall be an Optocore option, providing either single or dual loop. Each loop shall 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. There shall also be a Waves Soundgrid option providing 64 inputs and 64 outputs to the SoundGrid Network at 48kHz and 96kHz.

There shall be a Theatre Software option that shall provide Auto Update, Aliases, Players, Advanced CG programming tools and Matrix nodal delays.

AUDIO SPECIFICATIONS

Sample Rate: 48kHz or 96kHz
Processing Delay: 1ms Typical (channel, SD Rack input through L-R buss to stage output @ 96kHz)
Internal Processing: Up to 40-bit, Floating Point
A>D & D>A: 32-bit Converter Bit Depth
Frequency Response: +/- 0.15dB (20Hz – 20kHz)
THD: <0.002% @ Unity Gain,: 0dB Input @ 1kHz
Channel Separation: Better Than 120dB: (40Hz-15kHz)
Residual Output Noise: <100 dBu Typical (20Hz - 20kHz)
Microphone Input: Better Than -128dB: Equivalent Noise
Maximum Output Level: +22dBu
Maximum Input Level: +22dBu

The dimensions of the Quantum 3[38] shall be: 1595 (w) x 805 (d) x 482 (h) mm
The weight of the Quantum 3[38] shall be: 70kg
The DiGiCo Quantum 3[38] shall be supplied with a dust cover.

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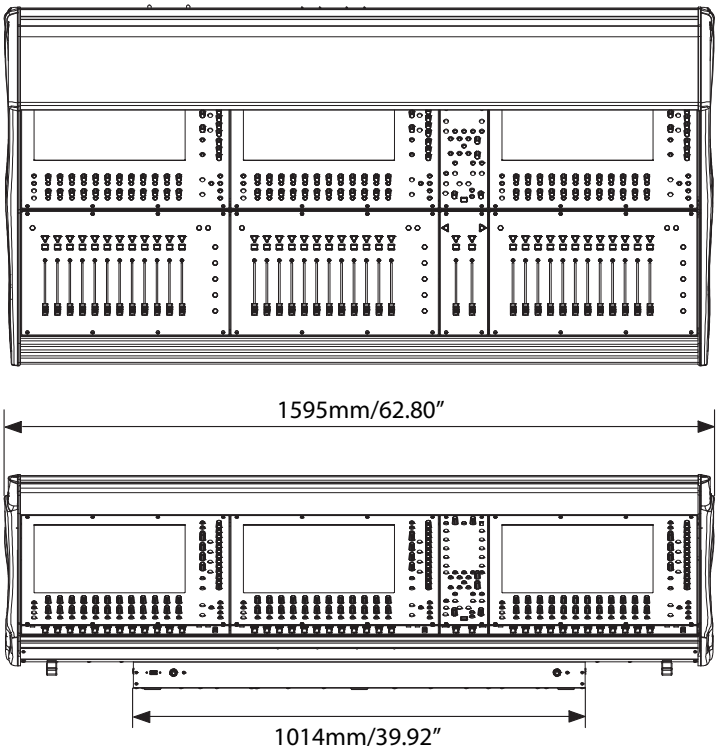
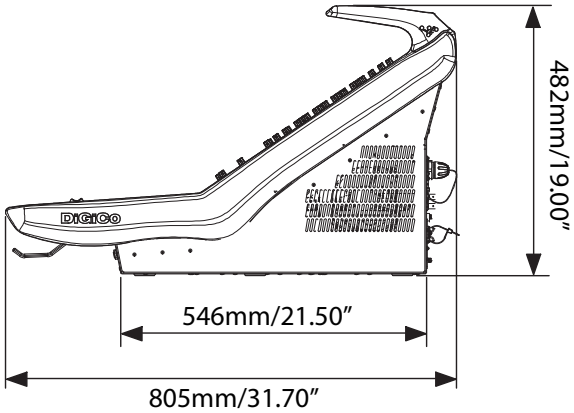
LINE DRAWING

All dimensions in mm





PHYSICAL

Dimensions: 1595mm (w) x 805mm (d) x 482mm (h)
Weight: 70kg (198kg with optional flightcase)
Flightcase: 1717mm (w) x 642mm (d) x 1144mm (h) (Optional)
Power Requirements: 100-240V, 50-60Hz, 340VA
Redundancy: Internal PSUs x 2
Product Codes: X-Q338-WS or X-Q338-WS-F

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