Fully featured, mid-size Audio Post Console

Control Surface

QUANTUM provides a very fast, tactile mixing environment for demanding applications. It is suitable for large Audio/ Video projects using HD picture with up to 192 Audio tracks.
The console is available in both 12 and 24 fader configurations, and is equipped with large, easy to reach touch screens. The 12-fader option comes in a 1.2 metre wide compact console frame, while the 24-fader option is 1.7 metres wide.

Both configurations include a centre section built around 43 of Fairlight's unique, patented Picture Key Technology. These keys can change label and function instantly, repurposing sections of the control surface.

A large display surrounded by 28 buttons and 6 rotary encoders complement the picture keys, and provide access to track selects and processing functions like EQ and Dynamics.

The centre section also features the main control-room and studio monitoring, talkback, Joystick for panning, user- definable keys and has space for a mouse.

The result: Unlimited functional scope within a compact, intuitive and ergonomic workspace.

A large, touch-enabled TFT screen mounted above the centre section panel displays the editing timeline. It can be re-tasked to other functions such as a full-screen view of the output from the on-board Video track.

The channel section includes 12 fader strips, each including a 100mm motorized fader, selection, automation, solo and mute controls.

The top of each fader strip holds two touch-sensitive rotary controls. In normal mode, they address the parameters associated with each strip e.g. 12 sets of Pan and Trim. Selecting channel mode changes their function, and allows you to access all of a single channel's controls at once. Functions, mode and values of the rotary controls are displayed on a high-res colour display. The display also shows metering and relevant graphs, e.g. EQ curve. An overview of your entire mixer is provided at the top of the channel section, showing key information about all channels that are active in your project.

Mixing and Processing

QUANTUM is capable of efficiently handling large projects supporting up to 192 tracks feeding a 230 channel mix into 72 bus elements. Bus elements can be combined into standard buses from mono to 7.1, plus custom format buses of any size.

All channels and buses are fully equipped with 6 bands of EQ plus compressor, gate/ expander and limiter. Additional processing is available using VST plugins, supporting up to 6 plugs per channel. Mixing and processing are comprehensively automated, with a variety of touch modes, intuitive automation status indicators, curve drawing and offline editing.

Monitoring
The dual-path monitoring system allows source selection from all buses and up to 16 user-defined external sources (each up to 7.1) with no additional hardware requirement. The control-room and studio sections each have access to 9 speaker-sets (each up to 7.1).
On-Board Video

System Integration
A choice of I/O options allows QUANTUM to fit smoothly into your facility's infrastructure.
On the IT side QUANTUM interfaces to most industry standard servers and asset management systems. To support today's complex workflows efficiently, QUANTUM reads and writes a wide range of media and EDL file formats. Alongside Audio tracks, Quantum provides up to 2 Video tracks in SD and HD. All common formats are supported.

Quantum Specification

Control Surface - general:

- Stand-alone console
- Primary operating surface raked 8 degrees to horizontal.
- Available in 12 or 24 fader configurations
- Optional modular system for attaching speakers and additional monitors
- Fully Integral operating screens

Centre Section:

- 43 picture keys, showing 44 x 44 pixel colour graphics, 24 bit colour
- 24 Single-color LED keys (white)
- 4 Bicolour LED keys (blue/yellow)
- 6 touch sensitive rotary encoders, with dual-function modes.
- Hi-res jog wheel
- 270mm x 81mm Pad graphics area, 24 bit colour
- 20" TFT touch-enabled screen, nominally for editing functions, but can be re-purposed.

Control Room Monitor Section:

- Potentiometer for level control. Switches for Mute and Dim.
- Individual Speaker mute, trim, phase control via centre section
- Automatic up/downmix from source signal to speaker destination.
- 16 external sources (each up to 7.1).
- 9 speaker sets (each up to 7.1).

Studio Monitor Section:

- Potentiometer for level control. Switch for Mute.
- Automatic up/downmix from source signal to speaker destination.
- 16 external sources (each up to 7.1).
- 2 speaker sets (stereo)

Talkback Section

- Momentary/Latching Talk switch
- Talkback routable to any combination of sub and aux busses.

User Switch Section

- 5 large user-definable switches.
- Each switch features dual-colour led with brightness and flash control
- All switches are available to be user defined in the iCan environment.

Channel Strips:

- 100 mm motorised, touch-sensitive fader
- Mute switch
- Solo switch (AFL/PFL/IN-PLACE/Solo Safe)
- Call switch.

- Automation switch (punch in/out + status)
- Two touch sensitive rotary encoders with full-colour visual feedback of value, function and automation status.
- 55mm Peak-reading meters, mono to 7.1 wide
- Unicode capable naming strip.

Mixer Screen.

- Simultaneous overview of 40 signals path, including
  - Metering
  - Pan position
  - Bus assignments
  - EQ Graph
  - Dynamics Graph
  - Plugins

Colour:

- Matt Jet Black

Connectivity:

- 100 Ethernet (to connect to host)
- Dual DVI for main TFTs
- Dual USB for touch screens
- 2 x USB 2.0 (optional mouse and keyboard)

Power

- 230/110 volt mains. 160 Watts

Dimensions and weight:

- Width: 113 cm (12-fader), 162 cm (24 fader)
- Depth (front to back): 98 cm.
- Height: 72 cm at fader, 103 cm at top of screen
- Weight: 110 kg (12 fader), 162 kg (24 fader)

Technology:

- iCan infrastructure.
- FPGA-based soft-core local processing.
- Ethernet internal communications structure
- Built-in embedded Linux PC

Sync and I/O

- Single-lane PCIe CC-1 engine
- Sub-millisecond latency.
- Based on choice of SX-8, SX-12V, SX-20, MADI:
  - Analog Mic and Line inputs
  - Analog line outputs
  - SP/DIF digital in and out

- ○ Wordclock in and out
- ○ Tri-level sync in
- ○ MTC, LTC in and out
- ○ 9-Pin control

Audio Tracks:

- Up to 192 playback tracks
- Up to 96 record tracks
- Non-destructive Clip sizing, level, fade, and EQ processing
- Additional processing via rendered plugins.
- Sample rate conversion

Video tracks:

- Up to 2 video guide tracks
- Playback and Capture via 3rd-party video cards
- Non-destructive Clip sizing and fade.

Signal Processing

- Mixing up to 230 channels into 74 bus elements.
- Source channels and destination busses are combined in formats up to 7.1
- Rotate, Divergence and Spread image controls.
- Bus-to-main mixing.
- Up to 8 sub-busses, 12 Auxes, 24 multitrack busses, and AFL/PFL busses.
- 4 bands of EQ + 2 filters on all channels and busses.
- Gate/Expander, Compressor, Limiter on all channels and busses.

Metering:

- Digital Peak meters on all channels and busses.
- RMS metering on main bus
- LKFS metering on main bus.

Software sub-modules:

- Audiobase SoundFX library
- ADR package
- Reconform package
- Media import and Export modules.
- Patching Control

Media and EDL formats supported:

- All common audio media formats, including WAV, MP3
- All common, open, EDL formats, including OMF, AES31, AAF.
- All common Video formats, including DNxHD.