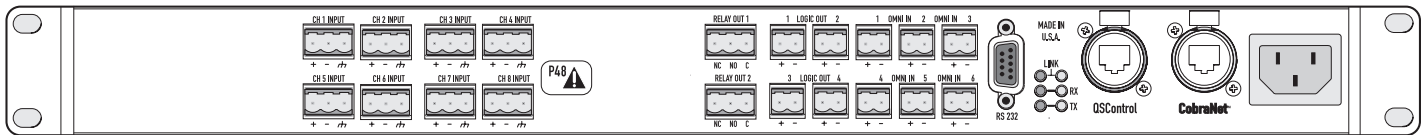
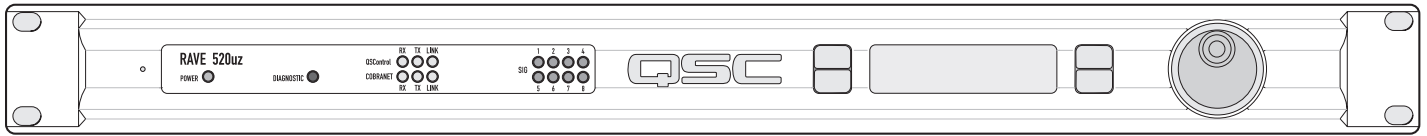




# RAVE 520uz

QSCControl.net™ Digital System



QSCControl.net, QSC's next generation network audio system, achieves the seamless integration of the company's signal transport, control, processing, and monitoring technologies. QSCControl.net brings together QSC's digital, power amplification and loudspeaker products into a unified system that enables the user to administrate it all via a fully integrated graphical user interface. The new generation RAVE devices are designed to operate under the company's QSCControl.net platform.

### RAVE 520uz

The RAVE platform meets the processing and signal transport needs of audio systems over an Ethernet network. The RAVE 520uz units combine two distinct QSC technologies within a single hardware unit. Configurable DSP, and CobraNet™ audio transport are seamlessly integrated into one powerful single RU package.

Through QSCControl.net, QSC's BASIS™ and next-generation RAVE and DSP products can be networked together and controlled from a single software interface. In addition, multiple networked computers can be set up to control and monitor all of the units simultaneously.

### Fixed Latency DSP

Users of most other configurable DSP systems are familiar with a variable latency inherent in the processing configuration. Add more processing blocks and you also add delay, whether you want it or not. QSC's DSP engine is unique in having a short and fixed processing latency through the DSP subsystem. QSC's fixed latency DSP is a configurable DSP that stays fast and predictable from one configuration to the next.

For more information, visit [www.qscontrol.net](http://www.qscontrol.net)

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Inputs		DSP	Outputs
Analog	CobraNet		CobraNet
8 universal mic/line	16 of 32	24 x 24	32

### Features

- Configurable DSP functions and signal paths
- Fixed latency DSP engine
- Ethernet controllable
- CobraNet audio transport with new intuitive GUI
- Two Ethernet ports – CobraNet and control can be run over a single cable or be divided between the two ports. The CobraNet port is 100Base-T. The control port is 10Base-T
- Each unit can store eight design configurations that can be changed on the fly
- Snapshots can recall config or block and/or parameter settings
- THX™ approved for professional cinema applications

### DSP functions include, but are not limited to:

- Matrix mixer – any size, up to 24 x 24
- Automixers – gain sharing
- Routers – any size, up to 24 x 24
- Gain controls – any channel count, up to 24
- Graphic equalizers
- Filters – high-pass, low-pass, all-pass, shelf, parametric, parametric shelf, Butterworth high and low-pass, Linkwitz-Riley high and low-pass, Bessel-Thomson high and low-pass
- Crossovers – Linkwitz-Riley, Butterworth, Bessel-Thomson in-phase, Bessel-Thomson symmetrical, 2-way, 3-way, and 4-way general purpose adjustable
- Compressors, peak limiters, AGCs, gates, dynamics processor
- Duckers – up to 8 channels, up to 60 seconds fade in and fade out times, priority mix
- Pink noise, white noise, sine generators
- Delays
- Macros – user-definable custom blocks with password protection

### PERFORMANCE

#### Dynamic Range (AES-17, -60 dB method, all sensitivities)

Unweighted	> 110 dB
A weighted	> 113 dB

#### Distortion (20 Hz – 20 kHz, all sensitivities)

Gain = 0 – 30 dB	< 0.008% THD+N
Gain > 30 dB	< 0.05% THD+N

#### Crosstalk (20 Hz – 20 kHz)

Inter-channel (maximum)	> 75 dB
Inter-channel (typical)	> 90 dB
Intra-channel (maximum)	> 85 dB
Intra-channel (typical)	> 100 dB

#### Frequency Response

20 Hz – 20 kHz (maximum)	+/- 0.5 dB
20 Hz – 20 kHz (typical)	+/- 0.2 dB

#### Audio Converters

Mute Infinite attenuation

#### Delay

RAVE to Network	Standard CobraNet™ latency	Low latency
Analog input through full DSP chain to CobraNet output	7.104 ms	4.438 ms

### INPUTS/OUTPUTS

#### Program Inputs

Connector type	8 inputs
Type	3-pin "Phoenix style" (a.k.a. "Euro style") detachable terminal blocks
Grounding	Electrically balanced
Pinout	All shield terminals connected to chassis
Input Impedance (nominal, $\Omega$ )	1:+ / 2:- / 3:Chassis Ground
Common-mode Rejection	Balanced: 6k81 / Unbalanced: 13k6
E.I.N. (maximum)	20 Hz – 20 kHz (minimum): > 54 dB / 20 Hz – 20 kHz (typical): > 60 dB
Input Sensitivities (variable)	150 $\Omega$ , 30 dB: -124.5 dBu / 150 $\Omega$ , 60 dB: -125.0 dBu
Phantom Power (per IEC 1938 [1996])	Vrms: 0.9 mV to 15.46 V / dBu: -62.2 to +26 / dBV: -64.4 to +23.7
	+48 V (software selectable)

### CONTROL INPUTS/OUTPUTS

#### Relay Outputs

Connector Type	2 discrete floating relay switch outputs
Configuration	3-pin "Phoenix style" (a.k.a. "Euro style") detachable terminal blocks
Pinout	Electromechanical relay
Switching Capacity (nominal)	1:NC / 2:NO / 3:COM
	1 A, 30 VDC

#### Logic Outputs

Connector Type	4 discrete outputs
Configuration	2-pin "Phoenix style" (a.k.a. "Euro style") detachable terminal blocks
Pinout	Single-ended, TTL compatible
	1:+(Signal) / 2:-(Chassis Ground)

#### Omni Inputs

Connector Type	6 discrete inputs for TTL logic, voltage control or passive resistance
Configuration	2-pin "Phoenix style" (a.k.a. "Euro style") detachable terminal blocks
Pinout	Single-ended, ground referenced
Normal Operating Range	1:+(Signal) / 2:-(Chassis Ground)
Potentiometer Operation ( $\Omega$ )	Reads signals between 0-5 V nominally
Voltage Tolerance	Use 10k for full range
Current Output ( $\Omega$ )	+/- 48 V
	0.5 mA with 10k (for passive resistive controls)

#### RS-232 Port

Female DB9 connector (setup and diagnostics purposes only)

#### QSCControl Port

Neutrik Ethercon RJ45 ruggedized data connector

#### CobraNet Port

Neutrik Ethercon RJ45 ruggedized data connector

#### Indicators

QSCControl Status	Yellow Link, Tx, Rx, front panel / Green Link, Tx, Rx, rear panel
CobraNet Status	Yellow Link, Tx, Rx, front and rear panel
Power	Blue, front panel
Diagnostic	Red, front panel
LCD Data Display	2 line x 16 character, backlit, front panel
Signal Presence	Tri-state (red, green, yellow), front panel