YAMAHA

DIGITAL MIXING SYSTEM

RIVAGE PM SERIES

Perfecting the Art of Live Sound

Yamaha’s first professional live sound console, the PM200, was released more than 40 years ago. The PM series has provided fertile ground from which numerous significant sound reinforcement milestones have grown ever since. Many of those innovations have become benchmarks that professionals depend on to this day. The RIVAGE PM10 launched a new generation of PM consoles that have already become standards in large-scale live sound applications because of their unequalled sound, operation, functionality, reliability, expandability, and more. Now the RIVAGE PM7 digital mixing system expands the digital mixing options available for an even broader range of applications.
The Yamaha “PM brand” continues to bring true innovation to the developing live sound scene.

A Choice of Systems for Any Application

The RIVAGE PM series offers a choice of systems that can be configured to ideally suit a wide range of applications. A basic RIVAGE PM10 system consists of the DSP-R10 DSP engine where all the signal processing magic actually happens, the CS-R10/CS-R10-S control surface for intuitive hands-on operation, one or more I/O Rack units for input and output connections, and one or more network cards for network connectivity. The flagship RIVAGE PM10 system also allows DSP mirroring for maximum dependability in mission critical applications while providing the capacity needed for large-scale setups.
A RIVAGE PM7 system is a little more compact, with signal processing for mixing and effects built into the central CSD-R7 digital mixing console. Other required components are one or more I/O racks for input and output, and a dedicated interface card for network connectivity. The RIVAGE PM7 system’s CSD-R7 digital mixing console is the same size as the RIVAGE PM10 system CS-R10 control surface and has the same control layout, and with built-in DSP it offers similarly high standards of operation and workflow efficiency in a relatively compact, portable system.

The RIVAGE PM Sound Is the Music Itself

The ideal starting point for creative audio engineering is transparent, uncolored sound. All Yamaha mixers are built on that philosophy, with the goal of allowing engineers to capture the on-stage sound accurately, without coloration, and then add creative touches as required. The merits of Yamaha's unwavering adherence to this concept are evident throughout the RIVAGE PM series.

Input circuitry and processing are critical to achieving the required sonic quality. The output end of the signal chain plays an important role in maintaining that quality too. Yamaha offers two types of high-performance I/O Rack units for RIVAGE PM system input and output, each providing compatibility with a different audio network.

One is the TWINLANe network, using optical cable to simultaneously carry up to 400 audio channels. Combinations of the RPio622 and/or RPio222 I/O racks and HY256-TL or HY256-TL-SMF audio interface cards allow input via Hybrid Microphone Preamplifiers with analog input stages that take the Yamaha "natural sound" concept to new heights, as well as digital sections with immaculate VCM-technology models of Rupert Neve Designs transformer and SILK processing circuitry that offer outstanding musicality and atmosphere.

Then there's the Dante audio network from Audinate, already standard in CL and QL series digital consoles as well as a range of other Yamaha pro audio products.

Dante-equipped Rio3224-D2 and Rio1608-D2 I/O Racks and the HY144-D audio interface card can be combined to provide natural sound input at full RIVAGE PM series quality.

Rupert Neve Quality for All Engineers

(RPio622 & RPio222)

When fitted with RY16-ML-SILK analog input cards the RPio622 and RPio222 I/O racks offer outstanding emulations of the transformer circuitry and SILK processing featured in microphone preamplifiers from Rupert Neve Designs, immaculately modeled using acclaimed Yamaha VCM (Virtual Circuitry Modeling) technology. Many recording engineers value Rupert Neve microphone preamps for their appealing natural compression and saturation. SILK processing can take that seductive sonic foundation to new levels with added power and flair. Sounds that tend to get lost in the mix are given new life and luster with a lush analog-like core. The SILK processing function provided in the RIVAGE PM series Hybrid Microphone Preamplifiers offers two variations: "RED" for sparkling energy, and "BLUE" for solidity and power. There's also a continuously variable "TEXTURE" knob that musically shapes the harmonic components to best suit the source. The benefits of SILK processing are also evident in the way channel EQ and reverb plug-ins affect the sound.

The RIVAGE PM series makes the coveted Rupert Neve preamplifier sound available to a wider range of engineers who can put it to creative use.

Toshifumi Kunimoto
Engineering Manager,
Research & Development Division

Rupert Neve

Dan Dugan Automatic Mixer Built In

Through in-depth collaboration with Dan Dugan Sound Design, renowned Dan Dugan automatic microphone mixing with its advanced algorithms is built into the RIVAGE PM series digital mixing systems. Setup is easy: just insert the processor into up to 64 channels for automatically optimized microphone gain distribution. Gain control is smooth and natural, as though experienced human operators were doing the mix. The system also effectively reduces feedback and comb filter issues.

For speech applications, especially non-scripted situations, this allows the operator to concentrate on details other than fader operation for consistently high-quality mixes.

Dan Dugan

Polished Operation Offers Confidence and Comfort

Since the mixing console is the engineer's primary tool, its operability is crucial, particularly in today's rapidly evolving live sound environment. RIVAGE PM series systems feature a unique Hybrid Operation Style that takes the most highly valued aspects of Yamaha digital mixing consoles to a new, highly refined level, giving engineers unprecedented expressive control.
Underpinning the system's extraordinary operability is a full implementation of Yamaha's acclaimed Selected Channel interface on the right side of the prominently raised control surface, allowing all parameters of the currently selected channel to be directly and intuitively controlled. The left side of the panel features two large LCD touch screens that provide logical continuity with the faders below, offering Centralogic style control of a large number of simultaneous channels. In addition to these two interface features, encoder position visibility has been enhanced, as have a number of other details that contribute to significantly improved operability overall. With operation and features designed to comprehensively support today's live sound scene, the RIVAGE PM series allows engineers to focus on the sound and enjoy the creative process.


Overview


Selected Channel


Ergonomics Fader Knobs

Horseshoe-shaped Encoder Rings

EQ/Comp Designed by Rupert Neve, Eventide Ultra Harmonizer, and more

Processing quality has always been a major strength of Yamaha digital consoles. The RIVAGE PM series offers a comprehensive selection of plug-ins, including models of in-demand classics. The RIVAGE PM10 includes 50 plugins, while the RIVAGE PM7 includes 48. Ample processing power allows up to 192 instances of complex plug-ins such as the Portico 5033 or Portico 5043 to be used simultaneously. The easy-operation Rupert Neve Designs Portico 5045 introduced with firmware Version 2.0 effectively suppresses background noise at microphone inputs for enhanced clarity while significantly increasing the feedback margin, making it a valuable tool for live sound in houses of worship, stadiums, halls, and other environments where feedback can be problem.
RIVAGE PM series plugins are carefully chosen, practical effects that can be invaluable for creative processing in real-world live sound applications.


Rupert EQ 773


Rupert EQ 810


Rupert Comp 754


Rupert Comp 830


Portico 5033


Portico 5043


Portico 5045


H3000 Live


Buss Comp 369


MBC4


Dynamic EQ4

Evolving Functionality and Scalability

Because evolving applications continually raise new challenges and needs, Yamaha provides continuing support in the form of firmware updates that keep our digital mixers, RIVAGE PM systems included, up to date and often ahead of the curve.
One of the major benefits offered by digital mixing systems is scene memory. But in order to accommodate individual situations and workflows it must be flexible and customizable. The RIVAGE PM series offers Overlay and Isolate filters as well as Event Lists functionality for significantly enhanced scene memory flexibility.
RIVAGE PM series firmware Version 2.0 adds a number of important features, such as 5.1 surround panning and monitoring for broadcast applications, and two surround buses for efficient international feed production. A broadcast Mix Minus function is provided too, allowing a specified source to be removed from a specified remote feed with just a few steps.
Dual Console and Port to Port functions contribute to broad system configurability, as does the DSP Mirroring functionality of the RIVAGE PM10.


Overlay


Event List


Mix Minus


Surround Monitor

System Components and Software

RIVAGE PM10 Core Components

CS-R10

The control surface with two large touch panel displays and 38 faders enables you to perform general operations on the RIVAGE PM10 system.

- Display: 15" touch panel x 2 ●Faders: 38 (12+12+12+2) ●Selected Channel section: comprehensive channel parameters
- Custom Fader banks: 6 x 2 on each bay ●User Defined keys: 12 x 4 banks ●User Defined knobs: 4 x 4 banks
- Touch and Turn knobs: 2 ●Analog I / O: 8 in / 8 out ●Slot: 2 MY slots ●AES/EBU: 4 in / 4 out (with SRC)
- Ports: GPI (8 in / 8 out), Word Clock Out, MIDI In / Out, 5 USB (1 for 2-track recording), Video Out (DVI-D)
- Power supply: Dual redundant power supply built-in
- Dimensions (WxHxD): 1,549 x 417 x 848mm (61.0" x 16.4" x 33.4") ●Net Weight: 85 kg (187 lbs)

CS-R10-S

The control surface with single large touch panel display and 26 faders enables you to perform general operations on the RIVAGE PM10 system.

- Display: 15" touch panel x 1 ●Faders: 26 (12+12+2) ●Selected Channel section: comprehensive channel parameters
- Custom Fader banks: 6 x 2 on each bay ●User Defined keys: 12 x 4 banks ●User Defined knobs: 4 x 4 banks
- Touch and Turn knobs: 1 ●Analog I / O: 8 in / 8 out ●Slot: 2 MY slots ●AES / EBU: 4 in / 4 out (with SRC)
- Ports: GPI (8 in / 8 out), Word Clock Out, MIDI In / Out, 5 USB (1 for 2-track recording), Video Out (DVI-D)
- Power supply: dual redundant power supply built-in
- Dimensions (WxHxD): 1,128 x 417 x 848mm (44.4" x 16.4" x 33.4") ● Net Weight: 67 kg (147.7 lbs)

DSP-R10

The DSP-R10 is a powerful DSP engine that serves as the core for signal processing and system control required for the RIVAGE PM10 system.

- Superior capability of processing digital audio signals of up to 144 input, 72 MIX, 36 MATRIX, and two STEREO channels.
- Four HY card slots that are capable of transmitting / receiving up to 256 ins / outs of digital audio signals / control signals.
- Two Mini-YGDAI slots to support various audio formats. ●Dual redundant power supply built-in
- Dimensions (WxHxD): 480 x 232 x 490.8mm (18.9" x 9.1" x 19.3") (5U rack size) ●Net Weight: 20 kg (44 lbs)

RIVAGE PM7 Core Component

CSD-R7

The CSD-R7 is a digital mixing console that serves as the core for signal processing and system control, and enables you to perform general operations on the RIVAGE PM7 system.

- Superior capability of processing digital audio signals of up to 120 input, 60 MIX, 24 MATRIX, and two STEREO channels.
- Three HY card slots that are capable of transmitting / receiving up to 256 ins / outs of digital audio signals / control signals.
- Display: 15" touch panel x 2 Faders: 38 (12+12+12+2) ●Selected Channel section: comprehensive channel parameters
- Custom Fader banks: 6 x 2 on each bay ●User Defined keys: 12 x 4 banks ●User Defined knobs: 4 x 4 banks
- Touch and Turn knobs: 2 ●Analog I / O: 8 in / 8 out ●Slot: 3 HY slots, 2 MY slots ●AES/EBU: 4 in / 4 out (with SRC)
- Ports: TC In, GPI (8 in / 8 out), Word Clock In / Out, MIDI In / Out, 5 USB (1 for 2-track recording), Video Out (DVI-D)
- Power supply: Dual redundant power supply built-in
- Dimensions (WxHxD): 1,549 x 417 x 848mm (61.0" x 16.4" x 33.4") ●Net Weight: 94 kg (207 lbs)

I/O Rack

RPio622

The RPio622 is an audio interface that enables you to flexibly configure and expand I/Os for the RIVAGE PM system as required by your application or the scale of your system.

- Six RY card slots that enable you to expand analog inputs and outputs, and / or digital inputs and outputs.
- Two HY card slots that are capable of transmitting/receiving up to 256 ins / outs of digital audio signals/control signals.
- HY card slot 1 features 256 ins/outs, and HY card slot 2 features 128 ins / outs.
- Two mini-YGDAI slots to support various audio formats. ●Dual redundant power supply built-in
- Dimensions (WxHxD): 480 x 455 x 489.7mm (18.9" x 17.9" x 19.3") (10U rack size) ●Net Weight: 30 kg (66 lbs)

RPio222

The RPio222 is an audio interface that enables you to flexibly configure and expand I/Os for the RIVAGE PM system as required by your application or the scale of your system.

- Two RY card slots that enable you to expand analog inputs and outputs, and / or digital inputs and outputs.
- Two HY card slots that are capable of transmitting/receiving up to 256 ins / outs of digital audio signals / control signals.
- HY card slot 1 features 256 ins / outs, and HY card slot 2 features 128 ins / outs.
- Two mini-YGDAI slots to support various audio formats. ●Dual redundant power supply built-in
- Dimensions (WxHxD): 480 x 232 x 491mm (18.9" x 9.1" x 19.3") (5U rack size) ●Net Weight: 19 kg (41.9 lbs)

Rio3224-D2

The Rio3224-D2 is a high-performance I/O Rack unit with built-in Dante audio networking. Designed and manufactured to achieve outstanding sonic transparency in keeping with Yamaha's "natural sound" philosophy.

- 32-channel mic / line input ●16-channel analog outputs ● AES/EBU 8-channel digital outputs.
- Dual redundant power supply built-in
- Character / icon display allowing confirmation of Dante settings and edit/check gain, high-pass filters, and phantom power settings
- Dimensions (WxHxD): 480 x 220 x 367.5mm (18.9" x 8.7" x 14.5") ●Net Weight: 13.5 kg (29.8 lbs)

Rio1608-D2

The Rio1608-D2 is a high-performance I/O Rack unit with built-in Dante audio networking. Designed and manufactured to achieve outstanding sonic transparency in keeping with Yamaha's "natural sound" philosophy.

- 16-channel mic / line input ●8-channel analog outputs ●Dual redundant power supply built-in
- Character / icon display allowing confirmation of Dante settings and edit/check gain, high-pass filters, and phantom power settings
- Dimensions (WxHxD): 480 x 132 x 367.5mm (18.9" x 5.2" x 14.5") ●Net Weight: 9.6 kg (21.2 lbs)

System Components and Software

Audio Interface Card

RY16-ML-SILK

for RPio622 / RPio222

The RY16-ML-SILK is a 16-channel mic / line input card that supports a 96 kHz sampling rate. It features a new revolutionary analog mic preamp combined with Silk processing from Rupert Neve Designs, which allows you to freely control depth and perspective through modeling in the digital domain. Each input connector can supply phantom power (+48V DC).

- 16-channel mic / line inputs
- SILK digital processing technology that has been co-developed by Rupert Neve Designs and Yamaha
- Dimensions (WxHxD): 405 x 42 x 258mm (16" x 1.7" x 10.2") ●Net Weight: 1.6 kg (3.5 lbs)

RY16-DA

for RPio622 / RPio222

The RY16-DA is a 16-channel analog output card that supports a 96 kHz sampling rate. You can use the switches on the board to set maximum output level to +15dBu, +18dBu, or +24dBu. The factory setting is +24dBu.

- 16-channel analog outputs
- Dimensions (WxHxD): 405 x 42 x 258mm (16" x 1.7" x 10.2") ●Net Weight: 1.5 kg (3.3 lbs)

RY16-AE

for RPio622 / RPio222

The RY16-AE is a 16-channel digital I/O card that supports the AES/EBU format. Sampling rate converters (SRC) are provided for each of the 16 input channels and 16 output channels.

- AES/EBU 16-channel digital I / Os. ●Sampling rate converter for both inputs and outputs.
- Dimensions (WxHxD): 405 x 42 x 258mm (16" x 1.7" x 10.2") ●Net Weight: 1.4 kg (3.1 lbs)

HY256-TL

for DSP-R10 / CSD-R7 / RPio622 / RPio222

The HY256-TL is a digital I / O card for HY card slots, and compatible with Yamaha's TWINLANe audio network protocol. The card supports multi-mode fiber connections for reliable operation.

- Can send / receive uncompressed digital audio signals of 32-bit 96 kHz quality, with a maximum of 256 inputs / 256 outputs.
- Redundant connections are supported with ring topology. ●Ind+C58icators show communication status useful for troubleshooting.
- Recommended cable: Neutrik opticalCON DUO multi-mode fiber
- Dimensions (WxHxD): 125 x 37 x 207mm (4.9" x 1.5" x 8.2") ●Net Weight: 0.25 kg (0.6 lbs)

HY256-TL-SMF

for DSP-R10 / CSD-R7 / RPio622 / RPio222

The HY256-TL-SMF is a digital I / O card for HY card slots, and compatible with Yamaha's TWINLANe audio network protocol. The card supports single-mode fiber connections for reliable operation over long distances.

- Can send / receive uncompressed digital audio signals of 32-bit 96 kHz quality, with a maximum of 256 inputs / 256 outputs.
- Redundant connections are supported with ring topology. ●Indicators show communication status useful for troubleshooting.
- Recommended cable: Neutrik opticalCON DUO single-mode fiber
- Dimensions (WxHxD): 125 x 37 x 207mm (4.9" x 1.5" x 8.2") ●Net Weight: 0.35 kg (0.8 lbs)

HY144-D

for DSP-R10 / CSD-R7 / RPio622 / RPio222

The HY144-D is a digital I / O card for HY card slots, and is compatible with the Dante digital audio network over Gigabit Ethernet connections.

- Can send and receive uncompressed digital audio signals of 32-bit 96 kHz quality, with a maximum of 144 inputs / 144 outputs.
- Redundant connections are supported with primary and secondary connectors. Daisy chain connections are also supported.
- Indicators show communication status useful for troubleshooting.
- Dimensions (WxHxD): 125 x 37 x 207mm (4.9" x 1.5" x 8.2") ●Net Weight: 0.25 kg (0.6 lbs)

I/O Rack

Ri8-D

- 8-channel mic / line inputs

Ro8-D

- 8-channel analog outputs

RMio64-D

The RMio64-D Dante / MADI conversion I / O rack supports a wide range of broadcast and live sound applications with extraordinary flexibility, and without getting in the way.

RSio64-D

The RSio64-D is an audio interface that can convert between Dante and Mini-YGDAI formats for up to 64 inputs and 64 outputs.

L2 Switch

SWP1-16MMF

- etherCON Connectors: 4 front / 8 rear ●RJ45 Connectors: 4 rear ●opticalCON Connectors: 1 front
- Optional optical module slot: 1 front

SWP1-8MMF

- etherCON Connectors: 4 front / 4 rear ●opticalCON Connectors: 1 front ●Optional optical module slot: 1 front

SWP1-8

- etherCON Connectors: 4 front / 4 rear ●Optional optical module slot: 2 front

Software

RIVAGE PM StageMix

RIVAGE PM StageMix provides remote control of RIVAGE PM series functions via a simple, intuitive graphical interface from anywhere within wireless range. The software has been specifically designed to allow engineers to adjust monitor mixes from the performers' positions on stage, directly controlling mix parameters via the iPad rather than having to rely on verbal directions to a second engineer.

RIVAGE PM Editor

The RIVAGE PM Editor is a standalone application for computers running Windows or Mac operating systems, for both extended online operation and offline setup and editing.

Yamaha Console File Converter

The Yamaha Console File Converter is an application that allows data to be shared between a number of Yamaha digital mixing consoles. You can share data between RIVAGE PM series, CL / QL series, PM5D, M7CL, and LS9 consoles, so data from one show doesn't have to be completely reprogrammed from scratch for the next, even if different consoles are used.

Functional Specifications

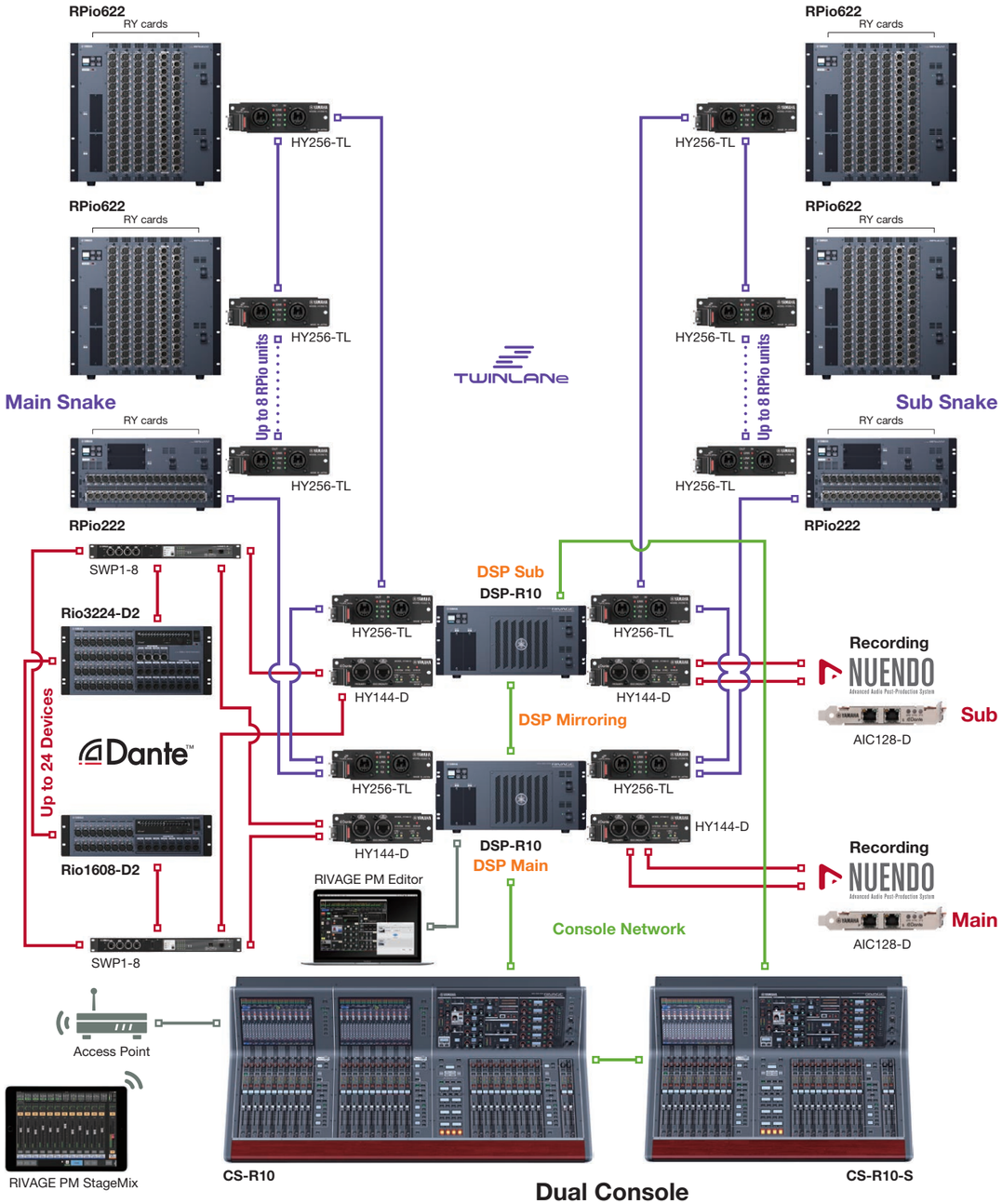
			RIVAGE PM10 (excluding I/O RACK)	RIVAGE PM7 (excluding I/O RACK)
Mixing Capacity	Input Mixing Channels		144mono	120mono
	Mix Buses		72	60
	Matrices		36 (Input to Matrix supported)	24 (Input to Matrix supported)
	Stereo Buses		2	2
	Mono Buses		1	1
	Cue Bus		2	2
Local Connectors	Analog Input	XLR	8	8
	Analog Output	XLR	8	8
	Expansion Slots	HY Slots	4 (DSP-R10)	3 (CSD-R7)
		MY Slots	CS-R10 & CS-R10-S: 2 DSP-R10: 2	2 (CSD-R7)
	Digital In	AES / EBU	4	4
	Digital Out	AES / EBU	4	4
	GPI	IN (D-Sub)	8 (CS-R10 & CS-R10-S) / 8 (DSP-R10)	8 (CSD-R7)
		Out (D-Sub)	8 (CS-R10 & CS-R10-S) / 8 (DSP-R10)	8 (CSD-R7)
	Word Clock I/O		Only Out (CS-R10 & CS-R10-S) In / Out (DSP-R10)	In / Out (CSD-R7)
	MIDI I/O		In / Out (CS-R10 & CS-R10-S) In / Out (DSP-R10)	In / Out (CSD-R7)
	USB	File	4	4
		2 Track Rec / Play	1	1
	External Redundant PSU		Built-in dual power supply	Built-in dual power supply
	Meter Bridge		On screen	On screen
	Ethernet		Yes	Yes
	Lamp		CS-R10: 4 CS-R10-S: 3	4 (CSD-R7)
	Talkback In		Yes	Yes
	Video Out		Yes	Yes
	TC In		Yes (DSP-R10)	Yes (CSD-R7)
	Fault Output		Yes (DSP-R10)	No
	Phones		2	1
	AC Inlet		CS-R10 & CS-R10-S: 2 (V-Lock Type) DSP-R10: 2 (V-Lock Type)	2 (CSD-R7, V-Lock Type)
Scene Memory	Number of Scenes		1000	1000
	Recall Safe		Yes	Yes
	Focus Recall		Yes	Yes
	Fade Time		Yes (0s ~ 60s)	Yes (0s ~ 60s)
	Preview		Yes (V2.0 or later)	Yes
	Selective Load / Save		Yes (V1.5 or later)	Yes
	Global Paste		Yes (V1.2 or later)	Yes
	Event List		Yes (V2.0 or later with timecode trigger)	Yes
	Overlay		Yes (V1.2 or later)	Yes
	Isolate		Yes	Yes
	Tactile Control Keys		Yes	Yes
Input Channel Functions	Gain Compensation		Yes	Yes
	Silk		Yes (with RPio)	Yes (with RPio)
	Digital Gain		Yes (-96dB ~ +24dB)	Yes (-96dB ~ +24dB)
	ATT		No	No
	HPF		20Hz~2000Hz, -6/-12/-18/-24dB/oct Selectable	20Hz~2000Hz, -6/-12/-18/-24dB/oct Selectable
	PEQ		4 Band Full PEQ (4 algorithms, RTA overlay support)	4 Band Full PEQ (4 algorithms, RTA overlay support)
	Dynamics 1		Legacy Comp / Comp260 / Gate / De-Esser / Expander / Ducking	Legacy Comp / Comp260 / Gate / De-Esser / Expander / Ducking
	Dynamics 2		Legacy Comp / Comp260 / Gate / De-Esser / Expander / Ducking	Legacy Comp / Comp260 / Gate / De-Esser / Expander / Ducking
	Input Delay		Yes (0ms ~ 1000ms)	Yes (0ms ~ 1000ms)
	Pan		Center Nominal	Center Nominal
	DCA Group		24 (Output DCA support)	24 (Output DCA support)
	DCA Rollout		Yes	Yes
	MUTE Group		12	12
	Number of Inserts		4 slots on each 2 insert point	4 slots on each 2 insert point
	Direct Out		Yes	Yes

		RIVAGE PM10 (excluding I/O RACK)	RIVAGE PM7 (excluding I/O RACK)
Output Channel Functions	PEQ	8 Band Full PEQ	8 Band Full PEQ
	GEQ	Plug-in	Plug-in
	Dynamics 1	Legacy Comp / Comp260 / Gate / De-Esser / Expander / Ducking	Legacy Comp / Comp260 / Gate / De-Esser / Expander / Ducking
	Output Channel Delay	Yes (0ms ~ 1000ms)	Yes (0ms ~ 1000ms)
	MUTE Group	12	12
	Number of Inserts	4 slots on each 2 insert point	4 slots on each 2 insert point
Plug-in	Number of Slots	384	384
	Number of Effect Programs	50	48 (VSS4HD and NonLin2 are not supported)
GEQ Rack	Number of GEQ Racks	48	48
	Mountable Device	31BandGEQ / Flex15GEQ / 8Band PEQ (RTA overlay support)	31BandGEQ / Flex15GEQ / 8Band PEQ (RTA overlay support)
TWINLANe	Number of I / O Channels	256 in / 256 out (with HY256-TL)	256 in / 256 out (with HY256-TL)
Dante	Number of I / O Channels	144 in / 144 out (with HY144-D)	144 in / 144 out (with HY144-D)
Recording	USB Memory Recording	Yes	Yes
	DVS Recording	Yes (with HY144-D)	Yes (with HY144-D)
Broadcast Functions	5.1 Surround Panning	Yes (V2.0 or later)	Yes
	Surround Monitor	Yes (V2.0 or later)	Yes
	Mix Minus	Yes (V2.0 or later)	Yes
	L-Mono / R-Mono / LR-Mono	No	No
Monitor	Solo Mode	Yes	Yes
	Oscillator	Sine Wave 1ch / Sine Wave 2ch / Pink Noise / Burst Noise	Sine Wave 1ch / Sine Wave 2ch / Pink Noise / Burst Noise
Other Functions	Port to Port	Yes (V1.5 or later)	Yes
	Dual Console	Yes (V2.0 or later)	Yes
	DSP Mirroring	Yes (V2.0 or later)	No
	Timecode Reader/Display	Yes (V2.0 or later)	Yes
	Timecode Chase (Event List)	Yes (V2.0 or later)	Yes
	GPI/MIDI	Yes	Yes
	RTA	Yes	Yes
	Output Port Delay	Yes (0ms ~ 1000ms)	Yes (0ms ~ 1000ms)
	Cascade	Yes (Future Update)	No
User Interface	Display	CS-R10: 15 inch Touch Panel x 2 CS-R10-S: 15 inch Touch Panel x 1	15 inch Touch Panel x 2
	Centralogic Section	Yes	Yes
	Faders	CS-R10: 12 + 12 + 12 + 2 CS-R10-S: 12 + 12+ 2	12 + 12 + 12 + 2
	Selected Channel Encoders	All Parameters	All Parameters
	Channel Encoder	Yes	Yes
	Channel Name / Color Display	Yes	Yes
	Custom Fader Banks	Yes (6 x 2 on each bay)	Yes (6 x 2 on each bay)
	User Defined Keys	12 (x 4 banks)	12 (x 4 banks)
	User Defined Knobs	4 (x 4 banks)	4 (x 4 banks)
	Touch and Turn Knob	Yes	Yes
	Monitor Level Knob	Yes (2: A and B)	Yes (2: A and B)
	Wooden Arm Rest	Yes	Yes
Software	Editor	RIVAGE PM Editor	RIVAGE PM Editor
	StageMix	RIVAGE PM StageMix (V2.0 or later)	RIVAGE PM StageMix
	MonitorMix	TBD	TBD
	Nuendo Live: Control integration	Yes (Future Update)	Yes (Future Update)
	Console File Converter	Yes	Yes

System Components and Configuration

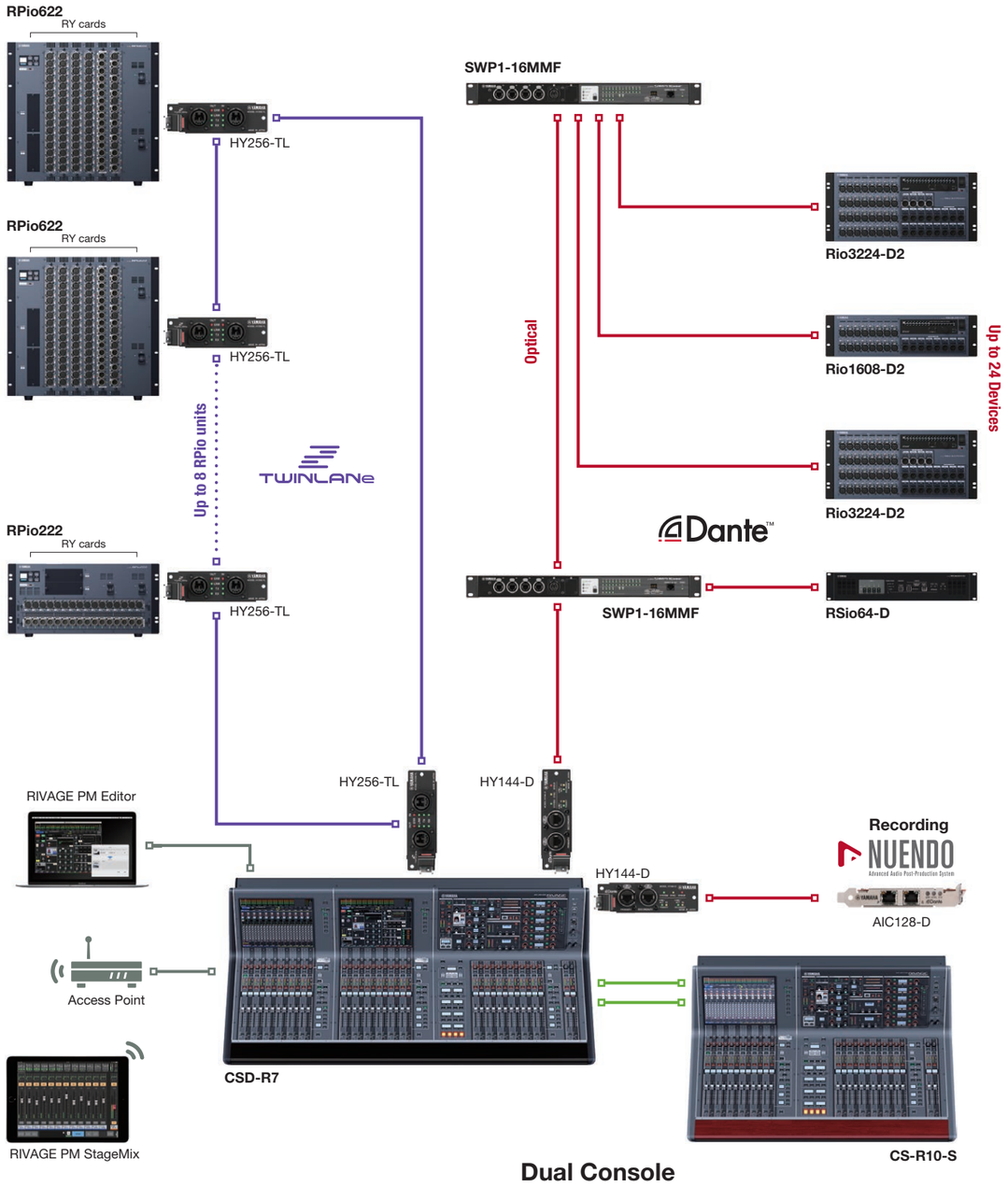
System Example 1: RIVAGE PM10

In this RIVAGE PM10 system two TWINLANe cards are installed in the DSP-R10 DSP Engine to allow connection of two TWINLANe rings. Each ring can accommodate up to eight RPio622 and/or RPio222 I/O Rack units, providing ample capacity for large-scale applications. A Dante network can coexist with the TWINLANe network as required. The RIVAGE PM10 supports DSP Mirroring with two DSP-R10 DSP Engine units. If a problem occurs in the main DSP-R10 the second DSP-R10 can take over for continued operation.



System Example 2: RIVAGE PM7

In a RIVAGE PM7 system the CSD-R7 Digital Mixing Console can be fitted with a TWINLANe or Dante-capable HY card for use with RPio622/RPio222 or Rio3224-D2/Rio1608-D2 I/O racks, respectively. Up to eight RPio622/RPio222 units can be connected to the TWINLANe card, or up to 24 Dante devices, including Rio3224-D2/Rio1608-D2 units, can be connected via a Dante network. TWINLANe and Dante networks can coexist in a RIVAGE PM7 system. The CS-R10-S Control Surface originally designed for use with the RIVAGE PM10 can also be connected to a RIVAGE PM7 system to serve as a sidecar for fader expansion and/or multi-operator control.



Yamaha RIVAGE PM Feature Vlog

The RIVAGE PM world is vast and evolving, so we have created a YouTube channel to provide information and details that can't be covered in a brochure.

Official Yamaha Pro Audio Instagram Account

The Yamaha Pro Audio Instagram page showcases the leading Yamaha technologies that continue to support sound engineers and music lovers worldwide.

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