System Controllers

By BillEvans

At the risk of sounding like the old guy scolding the kids with the whole "When I was your age, we had to walk five miles to school. In the snow. Uphill. Both ways." Well, some of us remember the time, not so long ago, when drive rack was not a product name. It was the name of the big rack that housed all of your system control, from crossovers to EQ to delay. But as everything except the truss that holds up the line array is digital these days (and we sometimes even wonder about that), cheap DSP means that what used to take a rack full of gear can now be done by a single unit in one or two rack spaces. You need to control those cool amps and the speakers you just flew? Here are some of your options for total system domination.

Martin Audio DX2

Carvin XD88

Ashly Protea 4.8SP

TC Electronic XO24

Rane RPM 26z

Peavey VSX 48

dbx DriveRack 260

Sabine Navigator NAV4800

Model	I/O	Processing	Features	Interface	Size	Price
Ashly Protea 4.8SP	4 inputs- 8 outputs assignable to any input	48 kHz	Balanced XLR Audio Connections, 12, 18, 24 and 48dB/Octave Slopes Parametric EQ: 1/64th to 4 Octave Range 682ms Input and Output Delay, crossover, Parametric EQ, Delay, Limiter Functions	Front Panel, USB, RS-232	19.0"W x 3.5"H x 8.5"D, 13lbs	$1,575
Carvin XD88	8 in, 8 out	24 bit,	Real Time Analyzer, Pink Noise Generator, delay (456 ms), 30 band graphic, Bessel, Butterworth, Linkowitz-Riley, 6-48db octave filters	64x240 front panel and USB PC interface	2U: 19"W x 3.5"H x 8"D	$799
dbx DriveRack 260	2 XLR Inputs, 1XLR RTA Mic Input and 6 XLR Outputs	48 kHz	Feedback Elimination 2.7 Seconds of Alignment and Zone Delay Auto Gain Control Pink Noise Generator and fulltime RTA Setup Wizard with JBL speaker and Crown Power Amplifier Tunings, Graphic and Parametric EQ	Full Graphic LCD Display; dbx DriveWare™ GUI control (RS232), optional wall panel controllers	1.75"H x 19"W x 7.75"D	$1,299.95
dbx DriveRack 4800	4 XLR analog and AES/EBU Inputs, 1XLR RTA Mic Input, 8 XLR analog and AES/EBU Outputs	96 kHz	Full Bandpass Filter, Crossover and Routing Configurations with Bessel, Butterworth, and Linkwitz-Riley filters 31-Band Graphic and 9-band Parametric EQ on every input 6-band Parametric EQ on every output	Full color QVGA display; DriveWare™ GUI control - HiQnet networking control; and optional wall panel controllers	3.5"H x19"W x 12.15"D	5299.95
EAW UX8800 Digital Signal Processor	Input: XLR female (4X, elec balanced) Output: XLR male (8x, elec balanced)	50 Mflop, 32 bit, 48 kHz Sharc Latency 3.13 ms	Two operational modes. •System Processor - All signal processing is user-adjustable. Loudspeaker Processor - Preset signal processing for EAW loudspeakers with EAW Focusing to optimize performance. Digital inputs to reduce A/D & D/A stages. Filter parameters are compatible with EAW's modeling.	Front panel U-Net – EAW-designed signal and control networking between UX8800s and other U-Net enabled products. EAWPilot software for computer control.	1.72" x 17.32" x 13.3"; 10 lbs	
Lake LM 26	2 in / 6 out	N/R	Raised Cosine Equalization, Linear phase and classic crossovers, limitermax peak and RMS limiters, max available delay of 2 seconds, analog with Iso-Float ground isolation, digital AES3 4in / 8 out, gigabit dual redundant Dante by Audinate audio networking	Lake controller software	19"W x 1U H x 11.5"D	
Martin Audio DX1.5	2 input 6 output analog or AES digital	96 kHz	Flexible routing matrix. 9 full bandwidth parametric bands on every outpu. Bessel, Butterworth and Linkwitz-Riley crossover filters. Gain delay and limiter functions.	2 x 24 character LCD display	19"W x 1.75"H (1U) x 12"D	$4,000
Martin Audio DX2	4 input 8output analog or AES digital		Parametric, low and high shelf EQ_ Bessel, Butterworth and Linkwitz-Riley crossover filters. Gain, delay and limiter functions. Fully configurable routing matrix.	Analog or AES digital inputs	19"W x 1.75"H (1U) x 12"D	$5,650
Meyer Sound Galileo	Two versions: 408: 4 inputs & 8 outputs. 616: 6 inputs & 16 outputs	1. DSP-based processing. 2. All internal processing performed at 96 kHz, 32-bit floating point resolution.	Fixed latency across all output channels regardless of processing applied. Digital implementation of popular Meyer Sound processing features, including air absorption compensation filters and equalization from the CP-10, VX-1, and LD-3. Presets for setups of Meyer Sound line array and point-source systems from small to very large. Array compensation for Meyer Sound line array products. TruShaping EQ and Composite EQ filtering provide an innovative approach to system equalization that yields appropriate correction with the least impact on phase response.	Ethernet connection for remote control from laptop computers and wireless tablets via Compass control software. Front-panel operation for stand-alone control.		Ask manufacturer
Nexo NX242	2 analog XLR input, 4 analog XLR output, 4 channel analog sense feedback from amplifier output for driver protection functions	24 bit, 48 bit accumulator, 100MIPS	Dedicated speaker processor for Nexo loudspeaker systems. Preset configurations for common Nexo speaker / subwoofer combinations. Active sensing feedback of amplifier outputs for protection based on voltage, frequency, and duration of signal delivered to drivers	RS232 for firmware updates, expansion slot to allow for addtion of ES4 card. (Ethersound expansion card)	1RU, 9"D, 8.8 lbs.	$3,500
Nexo NX242-ES4	2 analog XLR and 4 Ethersound digital inputs, 4 analog XLR output, 4 channel analog sense feedback from amplifier output for driver protection functions	24 bit, 48 bit accumulator, 100MIPS, ES4 card provides additional 100MIPS processor	Dedicated speaker processor for Nexo loudspeaker systems. Preset configurations for common Nexo speaker / subwoofer combinations. Active sensing feedback of amplifier outputs for protection based on voltage, frequency, and duration of signal delivered to drivers. ES4 card provides additional processing capbility for wider range of product setups	RS232 for firmware updates, EtherSound In and Out for remote control and monitoring and digital input via Ethersound digital audio network	1RU, 9"D, 8.8 lbs.	$5,800
Peavey VSX 26	2 in 6 out XLR inputs and outputs, AES-EBU digital input	48 kHz sample rate, 24-bit 256X over -sampled Delta-Sigma AD, DA	+24 dBu inputs and outputs Phantom power +48 volt Built-in signal generator (white, pink, sine) Easy preset and system updates via Internet Fully adjustable crossover points . Features per input: 27-band Graphic EQ Autograph® algorithm for automatic EQ settings, Compressor/Limiter, Delay (340 ms) Features per output: Crossover/ Bandpass filter (Butterworth, Bessel, Linkwitz-Riley), Parametric EQ (5-band, HP, LP Notch, Horn EQ, All-Pass), Compressor/Limiter, Delay with polarity inversion	LCD screen and USB A & B ports for memory storage and computer interface (PC and Mac)	1 RU	$449.99
Peavey VSX 48	5 in 8 out XLR inputs and outputs, AES-EBU digital input	48 kHz sample rate, 24-bit 256X over -sampled Delta-Sigma AD, DA			1 RU	$599.99
QSC Q-Sys Core 1000, 3000, 4000; I/O Frame	I/O Frame supports 16 audio channels in 4-channel increments, Mic/Line Input, AES In/Out, Line Out, DataPort Output	Intel Xeon processors in Cores provide up to 64x64 in Core 1000, 128x128 in Core 3000, and 512x512 in Core 4000	Centralized architecture, drag-n-drop design interface, low-latency network audio between devices, extensive processing resources, simple redundancy implementation.	PC Design software, User Control Interfaces can be deployed on network PC	Cores = 5.25" (3RU) x 19" x 15" I/O Frame = 1.75" (1RU) x 19" x 15"	Cores = $15,000, $28,500, $50,000; I/O Frame = $2,000
Rane RPM 26z	2 Analog Line Level Inputs/AES3 Input/ 6 Analog Outputs	24 Bit-Converters/48-Bit Internal Processor	100% User Programmable Using Dragnet Software	Ethernet	1.75"H x 19"W x 8.25"D	$1,199
Rane RPM 44	4 Balanced analog I/O Plus AES3 Stereo Digital I/O				3.5"H x 19"W x 8.5"D	$2,249
Rane RPM 88	8 Balanced analog I/O Plus AES3 Stereo Digital I/O				3.5"H x 19"W x 8.5"D	$3,649
Sabine Navigator	2x4, 3x6, 4x8, 8x8	48Khz and 96KHz (on 4x8 and 8x8 models)	Full Matrix/Mixer/Router, 16 bands of Parametric EQ per channel, 8 bands of FBX™ feedback extermination, Delays, Crossovers, Compression/Limiting	Front panel control, Windows GUI control and control via 3rd party control systems	1RU	$1050 - $2125
TC Electronic XO24	3 pin XLR	24 bit conversion, conversion delay 1.38ms, dynamic range Typ. >102dB, THD Typ.<-90dB, freq response: 20Hz - 20kHz.	Intuitive user interface, 4 band parametric EQ input for room compensations, route any input to any output, 2, 3 & 4 way crossover on all outs, independent speaker alignment, user presets.	2 x 16 character balc lit LCD	19" x 1.75" x 8"	
Turbosound LMS-D26	2 x 6, electronically balanced XLR	24-bit, 96kHz processing. >111dB dynamic range	Full loudspeaker processing and management. Worldwide switching power supply (85v to 240v AC).	BV-Net Control = 2x RJ-45	1U (.75" x 19" x 10", 5.9lbs)	$2,699
Yamaha DME24n	24 channels. 1 MY-card slot. 8 analog mic/line built-in.	32-bit, 96kHz	Same as above.	GPI, RS232/422, USB, MIDI, TCP/IP control	18.9" x 4" x 16.2", 2U. 17.64 lbs.	$3,849
Yamaha DME64n	64 channels. 4 rear panel expansion slots supports up to 8 analog inputs each. Using A/D or D/A cards, up to 16 channels of digital I/O in AES/EBU, ADAT, TASCAM, CobraNet, Ethersound, DANTE, Optocore, or RockNet format. Cascade 8 DME64n units for up to 512 digital inputs and 512 digital outputs, or 128 analog inputs and 128 analog outputs. Direct connect to Yamaha PM5D.		Programmable DSP engine. Processing capability that allows complex systems to be built around a single DME unit using DSP components (Matrix mixers, EQs, Routers, Crossovers, Delay, Surround Sound, Multi-effects) and fine tuned for optimum performance in concert halls, multi-purpose halls, event spaces, institutions, and a wide range of other applications. CobraNet and EtherNet connectivity.		18.9" x 5.7" x 16.2", 3U. 20.94 lbs.	$6,799
Yamaha DME Satellite Series:	All three units below feature 16 in/16 out CobraNet or ES Interface	48/96kHz	Same as above, plus integrated audio networking for Ethersound or CobraNet, allowing up to 64 audio channels to be transferred over a single Cat-5 Ethernet cable	8 GPI in, 8 GIP out, RS232, TCP/IP control	18.9" x 1.7" x 14.12" 1 U. 9.7 lbs.	
Yamaha DME 4io	4 analog mic line inputs/4 outputs					
Yamaha DME 8i	8 analog mic line inputs					
Yamaha DME 8o	8 analog outputs					$2,699 CobraNet, $3,599 ES