

Digital Snakes

By **Bill Evans**

The days of hauling tons of copper around to get the audio signal from the stage to the console are rapidly fading. This short chart will give you an idea of what is out there that will let you carry a good reel of Cat5 cable instead of a giant multi-core snake. One important note: Some of these are stand-alone products and some are part of console systems. Mackie, Midas, DiGiCo and A&H are all part of their digital console systems. Also, at least one big one was left out because they make a technology, not a product. Audinate's Dante system is something that manufacturers can (and have) incorporated into their gear — a list that includes Yamaha with Dante cards for several of their mixers and Lab.gruppen, which has the Dante technology built into several of its power amps. Confused yet? **FOH**



RSS by Roland digital snakes – the S-0815, left, and S-1608, right.



Aviom Pro64 series gear, including, from top, the RCI remote control interface, the 6416m mic input module and the MCS mic control surface.



Yamaha SB168-ES



LightViper Series 32



ApheX Systems 828M Anaconda, front and back view



Whirlwind E Snake 2

Model	Form Factor	Sends Returns	I/o	Cable		Latency	Max run	Data format	Audio, data and other control on same line?	MSRP
ApheX Systems 828M Anaconda apheX.com	Rack mount	64 x 64	ADAT, Ethernet, Coax (MADI)	Multi-mode or single mode fiber		<50 microseconds	1.25 miles	Proprietary	Yes	\$5,100 for 32 x 8 AES i/o
Allen & Heath iLive T snake ilive-digital.com	Built into console	63 x 32	XLR 1/4	Cat5		MixRack analog input to surface analog output is 1.1 ms	400 feet	Proprietary (ACE)	No	From \$16,998 including console surface and stage rack
Aviom Pro64 aviom.com	Standalone, plug-in card, rack mount, built into console, stage box	Modular, in groups of 16	Mic, line AES 3, Yamaha	Cat5, Cat6, Fiber		<0.8 msec	400 feet	A-NET, proprietary	Yes	\$22,500
DiGiCo digico.biz	Console system with remote racks	Up to 512 inputs and outputs at 96KHz	Analog, AES, Ethersound, Aviom, Optocore, MADI	MADI BNC and Optocore		N/A	N/A	MADI and/or Optocore	Yes	\$7,000
LightViper Series 32 - 1832 lightviper.com	Stage box/rack mount/MY card	32 x 8 per block	Analog in / analog & digital out	Fiber		In to out one way - 630 microseconds	2km multi mode, 20km single mose	TDM (time division multiplexing)	Yes	\$5,900
LightViper Series 32 - 4832 lightviper.com	Rack mount/MY cards	32 x 8	AES3 digital in / analog & digital out	Fiber		20 microseconds	2km multi-mode, 20km single mode	TDM (time division multiplexing)	Yes	\$5,700
LightViper Series 32 - 1808 lightviper.com	Rack mount	8 x 8	AES3 digital or line level analog in / AES3 AND analog line level out	fiber		Analog in to analog out - 630 microseconds. Digital in to digital out - 20 microseconds.	2km multi-mode; 20km single mode	TDM (Time Division Multiplexing)	Yes	\$4,500 w/ install fiber; \$7,700 w/ TAC4 fiber
Link DGlink linkusa-inc.com	Standalone, rack mount, stage box	64 x 64	XLR and/or multipin	Cat6		EtherSound 125µs plus 1.4µs per additional network node	100 meters	EtherSound, AES, Dante	Yes	\$12,603 (32 x 16 config)
Mackie DS3232 mackie.com	Rack Mount	32 x 32	XLR	Cat5		0.5 ms additional @ 96kHz	300 feet	U-Net	Yes	\$5,599
RSS by Roland S-4000 32x8 System rolandssystemsgroup.com	Rack mount, modular plug-in cards for configurability	32 x 8	Analog (XLR) or Digital (AES/EBU)	Cat5		0.375 msec (<1.2 msec round trip including A/D and D/A)	100 meters (2km using RSS S-OPT optical converter)	Proprietary (Roland Ethernet Audio Communication)	Yes	\$7,995
RSS by Roland S-1608 System rolandssystemsgroup.com	Rack mount	16 x 8	Analog (XLR)	Cat5		0.375 ms (<1.2 ms round trip including A/D and D/A)	100 meters (2km using RSS S-OPT optical converter)	Proprietary (Roland Ethernet Audio Communication)	Yes	\$3,595
Soundcraft Vi Series soundcraft.com	Stage box	64 x 32	Analog XLR, AES-3, Aviom, CobraNet	Cat5 Standard, Fiber Option		1.8 ms at 48K	300 feet Cat5, 2K Multi-Mode fiber, 15k single mode fiber	MADI	No	\$74,000 for Vi4 Console System
Whirlwind E Snake/E Snake 2 whirlwindusa.com	Rack mount/plug in cards	8 to whatever you need	Phoenix connectors	Cat5e		Protocol dependent	328 ft	CobraNet, EtherSound, Dante	Yes	\$4,000 to \$15,000
Whirlwind C series whirlwindusa.com	Rack mount	8 channels per unit	XLR	Cat5e		Variable	328ft	CobraNet	Yes	\$12,000
Yamaha SB168-ES yamahaca.com	Stage box	16 x 8	EtherSound 24 bit 100 BASE-TX	Cat5e		N/A	100 meters depending on cable used	EtherSound	Yes	\$4,499 (3U-size stage box 16x8)