Sennheiser EW-DX EM 4



Sennheiser announces the availability of the EW-DX EM 4 Dante receiver, which completes the company's Evolution Wireless Digital EW-DX microphone offer. The network-ready, 4-channel receiver (19", 1U) is an ideal choice for anybody specifying or setting up large multichannel systems in live audio, touring, broadcasting, theatre, and system integration applications. The receiver seamlessly integrates into existing workflows and infrastructures, offering versatile connectivity via Dante (including AES 67 support) for audio over IP, balanced XLR-3 audio outputs and unbalanced ¼" jacks.

"With the introduction of EW-DX, we created a new standard for wireless microphones and have built a worthy successor of our evolution wireless G4 series," comments Michael Altemark, Lead Product Manager Wireless, Business Communication. "With the EM 4 Dante, we have further enhanced the standard, and the EW-DX line is complete."

Ulf Sikora, Product Management Pro Audio adds: "The EW-DX EM 4 Dante packs high-quality audio and spectrum-saving equidistant channel spacing into a compact and sleek design that system designers and operators require for large wireless set-ups."

EW-DX is yet another example of Sennheiser's spectrum-friendly product design. As the systems emit no intermodulation products, frequencies can simply be placed at 600 kHz intervals, or 300 kHz intervals in Link Density (LD) Mode, making the job of the frequency manager a lot easier. The switching bandwidth of 88 MHz leaves plenty of room to manoeuvre in a congested spectrum and will, under ideal conditions, accommodate up to 146 channels in standard mode (600 kHz spacing) or up to 293 channels in LD Mode (300 kHz spacing).

Ease of use has been a paramount objective in the design of the receiver, starting with its auto-switching PSU that adapts to local power supply. Up to four EW-DX EM 4 (up to 16 channels) can be daisy-chained directly without the need for any additional devices, as the receiver is fitted with an integrated antenna splitter with

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antenna power and signal loop-through.

For network-based systems, the receiver’s four network ports allow for flexible configuration modes, and the ports are configured accordingly: Control & Dante Primary combined (Single Cable Mode), Control and Dante Primary separate (Split Mode), Control, Dante Primary, and Dante Secondary separate (Redundancy Mode). Ethernet connectivity is IPv4.

Once the receivers have been set up, a quick frequency scan can be initiated via one EW-DX EM 4 Dante. The receiver will auto-deploy free frequencies across all connected receivers, including EW-DX EM 2 and EW-DX EM 2 Dante receivers, saving time and effort. Custom frequency lists can be loaded into the receiver, too.

Transmitters are conveniently sync’ed via BLE from a distance of up to 20 metres – the operator does not have to crouch in front of the rack to link receivers and transmitters. Parameters to be sync’ed can be determined via the receiver menu. The EW-DX receiver also gives you the option to perform a walk test to check signal integrity across the stage or performance area.



For remote control and monitoring, Sennheiser offers network-enabled software like the Wireless Systems Manager or Sennheiser Control Cockpit. Third-party media control systems can be accommodated, too, via the SSC Sennheiser Sound Control

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protocol. For small setups with a maximum of 16 channels, the system can also be handled via the Smart Assist App.

The user interface of the EW-DX EM 4 Dante is well structured with easy access to all functions via jog wheel navigation and control buttons, and an OLED display that helps to read off settings even in less than ideal lighting conditions. In addition to displaying RF levels, a Link Quality Indicator gives information about RF health, and a switchable headphone output on the front panel allows monitoring of the audio signal.

EW-DX uses the proprietary Sennheiser Performance Audio Codec (SePAC), which ensures a latency of just 1.9 ms. “This codec has been developed especially for high-quality audio transmission,” emphasizes Sikora. “The audio quality and clarity you get is much better than with off-the-shelf-codecs.”

All transmitters have an input dynamic range of an incredible 134 dB, which removes the pressure of having to find the correct gain for spontaneous performances or unrehearsed presentations. Besides the EW-DX EM 4 Dante, the EW-DX line comprises two half-19” two-channel receivers with and without Dante outputs, handheld and bodypack transmitters with various mic options, a wireless table stand, remote and wall mount antennas, as well as a variety of table-top and rack-mount charging solutions. “Evolution Wireless Digital EW-DX has been designed with ease of use in mind and offers a comprehensive portfolio to flexibly adapt to almost any digital wireless microphone need,” concludes Sikora.

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SPECIFICATIONS

System		
Audio link frequency ranges	Q1-9	470.2 - 550 MHz
	R1-9	520 - 607.8 MHz
	S1-10	606.2 - 693.8 MHz
	S2-10	614.2 - 693.8 MHz
	S4-10	630 - 693.8 MHz
	U1/5	823.2 - 831.8 MHz & 863.2 - 864.8 MHz
	V3-4	925.2 - 937.3 MHz
	V5-7	941.7 - 951.8 MHz & 953.05 - 956.05 MHz & 956.65 - 959.65 MHz
	Y1-3	1785.2 - 1799.8 MHz
Bluetooth® Low Energy (BLE) frequency range	2402 - 2480 MHz	
Audio frequency response	20 Hz - 20 kHz (-3 dB)	
Audio THD	≤ -60 dB for 1 kHz @ -3 dBfs input level	
Dynamic range	134 dB	
System latency	1.9 ms	
Operating temperature	-10 °C - +55 °C (14 °F - 131 °F)	
Relative humidity	5 - 95 % (non-condensing)	

EW-DX EM 4 Dante (Rack Receiver)	
Input voltage	90 - 265 V AC, 47 - 63 Hz
Power consumption	max. 37 W
Transmit power (radiated)	BLE: max. 10 mW EIRP
Audio output power	18 dBu max.
Headphone output	2x 70 mW @ 32 Ω
Ethernet	• Digital audio output Dante®, RJ-45; 48 kHz, 96 kHz, 24 bit • Daisy chain outputs 2 × BNC (50 Ω), 0 dB +/− 0.5 dB amplification relative to antenna inputs • Daisy-chained receivers (RF), max. 4 EW-DX EM 4 Dante
Dimensions	483 x 44 x 373 mm (19" x 1.73" x 14.66")
Weight	approx. 4560 g (10.1 lbs) (without antennas and power supply)

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