



# Evolution Wireless Digital

## EW-DX EM 4 Dante | Rack Receiver



Rack (19") receiver for use with Evolution Wireless Digital handheld, bodypack and tablestand transmitters.

### FEATURES

- 4 channel rack (19") receiver
- Up to 88 MHz switching bandwidth
- Integrated power supply
- Equidistant Channel Spacing: 146 channels in standard mode; 293 channels in Link Density Mode
- Network enabled for control with Sennheiser Control Cockpit/Wireless Systems Manager/media control system through a number of 3rd party modules
- Configuration and management via mobile app „Sennheiser Smart Assist“
- Clear and easy focused user interface with OLED display
- Ethernet connectivity (IPv4)
- Digital audio output Dante®
- Integrated antenna splitter for the cascade of up to 4 EW-DX EM 4 Dante units
- Secure AES 256 encryption
- All-metal housing

### DELIVERY INCLUDES

- EW-DX EM 4 Dante rack receiver
- 2 rod antennas
- 2 BNC antenna cables (50 Ω) for daisy-chaining
- 3 mains cables (EU, UK or US plug)
- Quick guide
- Safety guide
- Manufacturer declaration sheet

### SPECIFICATIONS

| System                                      |  |   | EW-DX EM 4 Dante (Rack Receiver) |  |
|---|--|---|----------------------------------|--|
| Audio link frequency ranges                 | Q1-9                                     | 470.2 - 550 MHz   | Input voltage                    | 90 - 265 V AC, 47 - 63 Hz  |
|   | R1-9                                     | 520 - 607.8 MHz   | Power consumption                | max. 37 W  |
|   | S1-10                                    | 606.2 - 693.8 MHz   | Transmit power (radiated)        | BLE: max. 10 mW EIRP   |
|   | S2-10                                    | 614.2 - 693.8 MHz   | Audio output power               | 18 dBu max.  |
|   | S4-10                                    | 630 - 693.8 MHz   | Headphone output                 | 2x 70 mW @ 32 Ω  |
|   | U1/5                                     | 823.2 - 831.8 MHz & 863.2 - 864.8 MHz                         | Ethernet                         | <ul style="list-style-type: none"><li>• Digital audio output Dante®, RJ45; 48 kHz, 96 kHz, 24 bit</li><li>• Daisy chain outputs 2 × BNC (50 Ω), 0 dB +/- 0.5 dB amplification relative to antenna inputs</li><li>• Daisy-chained receivers (RF), max. 4 EW-DX EM 4 Dante</li></ul> |
|   | 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   | Dimensions                       | 483 x 44 x 373 mm (19" x 1.73" x 14.66")   |
| Audio frequency response                    | 20 Hz - 20 kHz (-3 dB)                   |   | Weight                           | approx. 4560 g (10.1 lbs) (without antennas and power supply)  |
| 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)                |   |                                  |  |



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### PRODUCT VARIANTS

|                                 |   |                 |
|---------------------------------|---|-----------------|
| <b>EW-DX EM 4 Dante (Q1-9)</b>  | 470.2 - 550 MHz   | Art. no. 509370 |
| <b>EW-DX EM 4 Dante (R1-9)</b>  | 520 - 607.8 MHz   | Art. no. 509371 |
| <b>EW-DX EM 4 Dante (S1-10)</b> | 606.2 - 693.8 MHz   | Art. no. 509372 |
| <b>EW-DX EM 4 Dante (S2-10)</b> | 614.2 - 693.8 MHz   | Art. no. 509375 |
| <b>EW-DX EM 4 Dante (S4-10)</b> | 630 - 693.8 MHz   | Art. no. 509376 |
| <b>EW-DX EM 4 Dante (U1/5)</b>  | 823.2 - 831.8 MHz & 863.2 - 864.8 MHz                         | Art. no. 509377 |
| <b>EW-DX EM 4 Dante (V3-4)</b>  | 925.2 - 937.3 MHz   | Art. no. 509379 |
| <b>EW-DX EM 4 Dante (V5-7)</b>  | 941.7 - 951.8 MHz & 953.05 - 956.05 MHz & 956.65 - 959.65 MHz | Art. no. 509380 |
| <b>EW-DX EM 4 Dante (Y1-3)</b>  | 1785.2 - 1799.8 MHz   | Art. no. 509383 |

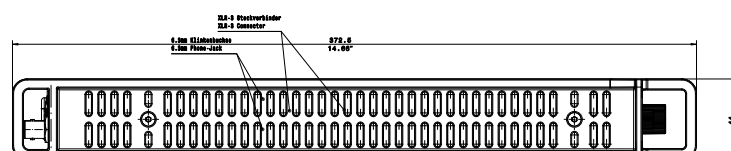
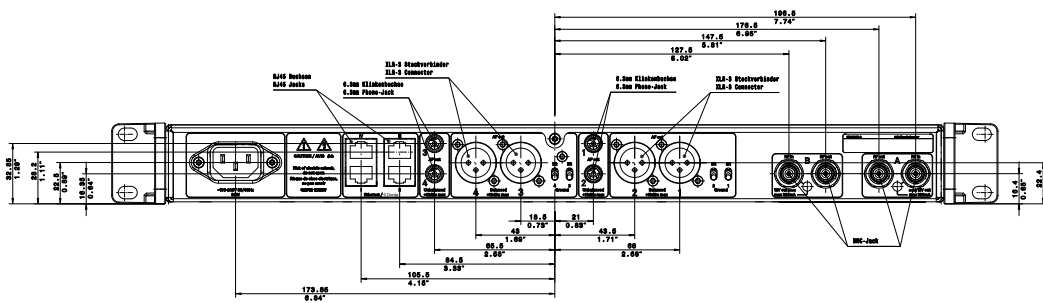
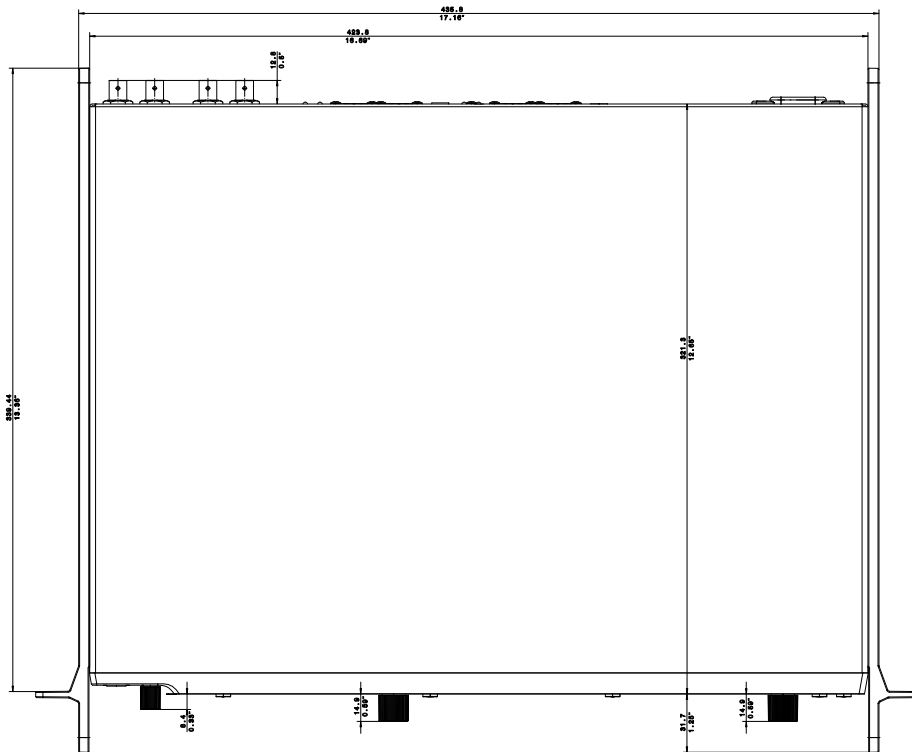
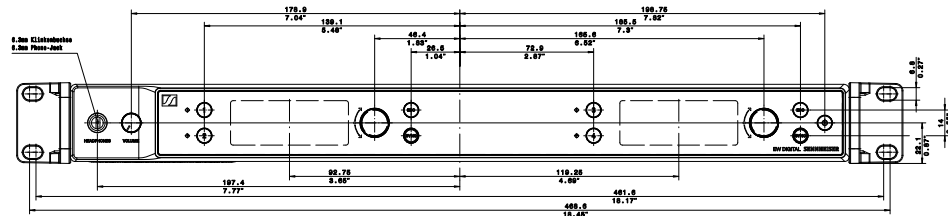
### ACCESSORIES

|                                 |  |                 |                 |
|---------------------------------|--|-----------------|-----------------|
| <b>EW-D ASA (Q-R-S)</b>         | Active Antenna Splitter  | 470 - 694 MHz   | Art. no. 508879 |
| <b>EW-D ASA (T-U-V-W)</b>       | Active Antenna Splitter  | 694 - 1075 MHz  | Art. no. 508880 |
| <b>EW-D ASA (X-Y)</b>           | Active Antenna Splitter  | 1350 - 1805 MHz | Art. no. 508881 |
| <b>EW-D ASA CN/ANZ (Q-R-S)</b>  | Active Antenna Splitter  | 470 - 694 MHz   | Art. no. 508998 |
|                                 |  |                 |                 |
| <b>EW-D AB (Q)</b>              | Antenna Booster  | 470 - 550 MHz   | Art. no. 508873 |
| <b>EW-D AB (R)</b>              | Antenna Booster  | 520 - 608 MHz   | Art. no. 508874 |
| <b>EW-D AB (S)</b>              | Antenna Booster  | 606 - 694 MHz   | Art. no. 508875 |
| <b>EW-D AB (U)</b>              | Antenna Booster  | 823 - 865 MHz   | Art. no. 508876 |
| <b>EW-D AB (V)</b>              | Antenna Booster  | 902 - 960 MHz   | Art. no. 508877 |
| <b>EW-D AB (Y)</b>              | Antenna Booster  | 1785 - 1805 MHz | Art. no. 508878 |
|                                 |  |                 |                 |
| <b>ADP UHF (470 - 1075 MHz)</b> | Passive directional antenna                                    | 470 - 1075 MHz  | Art. no. 508863 |
| <b>AWM UHF I</b>                | Active directional antenna                                     | 470 – 698 MHz   | Art. no. 508865 |
| <b>AWM UHF II</b>               | Active directional antenna                                     | 823 – 1075 MHz  | Art. no. 508866 |
| <b>AWM 1G8</b>                  | Active directional antenna                                     | 1795 -1805 MHz  | Art. no. 508867 |
|                                 |  |                 |                 |
| <b>BA 70</b>                    | Rechargeable battery pack for SK and SKM                       |                 | Art. no. 508860 |
| <b>L 70 USB</b>                 | Charger for BA 70 rechargeable battery pack                    |                 | Art. no. 508861 |
| <b>EW-D CHARGING SET</b>        | Set of L 70 USB charger and 2 BA 70 rechargeable battery packs |                 | Art. no. 508862 |
| <b>CHG 70N-C</b>                | Network-enabled charger for SK, SKM and BA 70                  |                 | Art. no. 700332 |
| <b>CHG 70N-C + PSU KIT</b>      | CHG 70N-C charger with NT 12-35 CS power supply unit           |                 | Art. no. 700333 |



# Evolution Wireless Digital EW-DX EM 4 Dante | Rack Receiver

## DIMENSIONS





# Evolution Wireless Digital

## EW-DX EM 4 Dante | Rack Receiver

### ARCHITECT'S SPECIFICATION

#### EW-DX EM 4 Dante rack receiver

The stationary four-channel receiver with switching diversity technology shall be for use with up to four companion transmitters as part of a digital wireless RF transmission system.

The receiver shall operate within the following UHF frequency ranges, with a switching bandwidth of up to 88 MHz: 470.2 – 550 MHz, 520 – 607.8, 606.2 – 693.8 MHz, 614.2 – 693.8 MHz, 630 – 693.8 MHz, 823.2 – 831.8 MHz, 863.2 – 846.8 MHz, 925.2 – 937.3 MHz, 941.7 – 951.8 MHz, 953.05 – 956.05 MHz, 956.65 – 959.65 MHz, 1785.2 – 1799.8 MHz. Different frequency variants shall be available depending on country-specific regulations.

The receiver shall feature Bluetooth® Low Energy (BLE) at a frequency range between 2402 and 2480 MHz for remote controlling the devices via a control App for iOS and Android.

The receiver shall feature an automatic frequency setup function with spectrum scan functionality in order to establish an equidistant frequency grid with 146 channels in standard mode and 293 channels in Link Density Mode.

The audio frequency response shall be between 20 Hz and 20 kHz (-3 dB). Audio total harmonic distortion (THD) shall be ≤ -60 dB for 1 kHz @ -3 dBfs input level. Dynamic range shall be 134 dB. System latency shall be 1.9 ms.

The receiver shall be menu-driven with an OLED display showing the current frequency, channel number, metering of RF level, metering of AF level, lock status, muting function, antenna switching diversity, app connection, gain, audio output level, menu and battery status for each of the two associated transmitters. An auto-lock feature shall be provided to prevent settings from being accidentally altered.

The following settings shall be configurable by function buttons and an encoder for each channel in the menu: frequency, channel name, gain, trim, AF output, low cut, AES 256 encryption, test tone, network settings, integrated antenna booster settings, display brightness, device name, auto setup settings for automatic frequency setup.

For each of the four channels the receiver shall feature a balanced XLR-3M audio output with a maximum output of +18 dBu along with an unbalanced 6.3 mm (¼") audio output with a maximum output of +12 dBu.

For secure transmission the receiver shall feature AES 256 encryption.

The receiver shall provide a walktest mode for monitoring the RF and AF signal status in the location over time.

Two BNC-type input sockets shall be provided for connecting the antennas. The receiver shall be usable with active and passive wide range UHF antennas for the entire supported RF spectrum.

Two additional BNC-type output sockets shall be provided for cascading the RF signal to one additional receiver.

A headphone output with headphone volume control shall be provided and shall utilize a 6.3 mm stereo jack socket.

The receiver shall have Ethernet ports (RJ45) for remote network-based monitoring and control using the Sennheiser Control Cockpit software or the Sennheiser Wireless Systems Manager software.

An automated configuration for the devices and management of system settings shall be available via „Sennheiser Smart Assist“.

The receiver shall operate on 90 to 265 V AC, 47 to 63 Hz via included mains cable. The power consumption shall be max. 37 W.

The receiver shall feature a digital audio output through a Dante® interface, which includes up to four RJ45 ports (Primary and Secondary).

The audio network shall be output separately on all ports or daisy-chained for redundancy or serial connections.

To ensure flexible adaptation to existing network infrastructure, the receiver shall offer various network modes, such as Single Cable, Split, and Redundancy Mode.

The receiver shall have a rugged metal housing; dimensions shall be approximately 483 x 44 x 373 mm (19" x 1.73" x 14.66"). Weight shall be approximately 4560 g (10.1 lbs) without antennas and power supply. Operating temperature shall range from -10 °C to +55 °C (+14 °F to +131 °F).

The receiver shall be the Sennheiser EW-DX EM 4 Dante.