



## AFM-20DSP-AEC

20-Port Audio Matrix with DSP, AEC and Interchangeable Inputs & Outputs

| HDMI | Speakers | Ethernet - RJ-45  
| 4K/60 UHD (4:2:0)



AFM-20DSP-AEC, a member of the Kramer XSPerience family of DSP products, is an advanced, professional audio matrix switcher with 20 analog ports that can be configured as inputs or outputs according to preset I/O configurations. AFM-20DSP-AEC includes multi-channel DSP, AEC (Acoustic Echo Cancellation), mini USB, built-in 2x60W @ 8Ω and 1x120W @ 70V / 100V power amplifier, 4x4 Dante interface, HDMI embedding and de-embedding, USB, and S/PDIF. The comprehensive and user-friendly graphic interface makes configuring every detail of your audio system intuitive and easy

### FEATURES

**Advanced Audio Matrix Switcher** - Professional, studio grade signal conversion technology, Including the latest generation 32-bit advanced Digital Analog Converter architecture to achieve excellent dynamic performance and improved tolerance to clock jitter. Maintains the quality of the original audio signal with selectable sampling rates up to 96 kHz. Flat frequency response, unmatched sonic performance, excellent signal to noise ratio, and extraordinarily low distortion levels

**Wide Range of I/O Formats** - Includes 20 analog ports, 4x4 Dante interface, HDMI input and output, USB plug & play audio port, and S/PDIF input and output

**Teleconference Optimized** - Features AEC (Acoustic Echo Cancellation), that prevents the microphone from picking up the far-end echoed speech, so you only share the audio spoken directly into the microphone. An advanced AEC module is included for the 12 X 8 I/O matrix configuration. The AEC module includes a microphone automixer

**Multi-Channel Processing** - Provides DSP (Digital Sound Processing) that enables simultaneous processing of all input and output signals

**Built-in Power Amplifier** - 2x60W @ 8- and 1x120W @ 70V / 100V power amplifier

**Maximum Flexibility** - Customize the analog port configuration: use the default 12 x 8 I/O matrix configuration or select from one of the many other preset I/O configurations. Route any input to any output, even between different formats (for example, route an analog input to an S/PDIF output). Control volume and DSP per port. Route any of the ports to the power amplifier

**Teleconference Optimized** - Features AEC (Acoustic Echo Cancellation), that prevents the microphone from picking up the far-end echoed speech, so you only hear the audio spoken directly into the microphone

**Simple and Powerful Maestro Room Automation** - Intuitive user interface enables you to fully automate your meeting room elements. Configure lights, shades, devices and more to be activated by an extensive range of triggers, including input/output connectivity, routing, and button pressing. By minimizing user intervention, Maestro room automation saves meeting prep time and minimizes human error before presentations

**Intuitive and Comprehensive Configuration and Control** - Via a powerful, user-friendly graphic interface, set volume (gain and attenuation) and DSP per input; execute routing and select line in, mic in, phantom power or line out on each port; configure master level and more. Control signal routing, volume and other basic settings using API commands via RS-232 communication transmitted by a PC, touch screen system or other serial controller

**Audio De-embedding** - De-embeds the audio signal from the HDMI input for routing to any of the outputs or for routing to the loop output

**Programmable** - Supports up to 10 global presets per I/O configuration plus 10 mixer snapshot presets

**Easy, Cost-Effective Maintenance** - LED indicators for main power, line in/out, mic in, clipping, power amp, Dante sync, and HDMI, enable easy local maintenance and troubleshooting. Local firmware upgrade via the USB type-A port ensures lasting, field-proven deployment

**Easy Installation** - 19" enclosure for rack mounting a unit in a 1U rack space with included rack ears and universal 100-240V AC power connection



## TECHNICAL SPECIFICATIONS

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Analog Audio	20 Balanced Mono Audio: On 3-pin terminal blocks
Outputs	1 USB: On a female mini USB connector
	1 HDMI: On a female HDMI connector
	1 S/PDIF: On an RCA connector
	120W Amplifier: On a 4-pin large terminal block
Ports	1 S/PDIF: On an RCA connector
	RS-232 On a 3-pin terminal block connector
Inputs	Ethernet On an RJ-45 female connector
	1 HDMI: On a female HDMI connector
	1 S/PDIF: On an RCA connector
Line/Mic Level Input	1 USB: On a female mini USB connector
	Impedance Unbalanced: 7.6k $\Omega$
	Impedance Balanced: 3.8k $\Omega$
	Impedance Microphone: 3.8k $\Omega$
	Nominal level Unbalanced: 0dBV (0.77Vrms)
	Nominal level Balanced +6.8dBu (1.54Vrms)
	Maximum level (Balanced): +8dBu (2Vrms)
	Sensitivity Unbalanced: Full power @ 0dBV (0.77Vrms)
Sensitivity Balanced: Full power @ +6dBu (1.54Vrms)	
Line Level Output	Phantom Power: 48 VDC on/off per input
	Impedance Unbalanced 50 $\Omega$
	Impedance Balanced 50 $\Omega$
	Frequency Response: 20Hz – 20kHz @ +/-1dB
	S/N Ratio: >100 dB, 20Hz – 20kHz, at unity gain (unweighted)
Line Level Input	Audio THD + Noise <0.01%, 20 Hz – 20 kHz, at unity gain
	Crosstalk: <-85 dB, 20Hz to 20kHz
User Interface	Front Panel LEDs: 1 status, 20 analog audio ports, 4 Dante I/O, HDMI embed, HDMI de-embed, 2 S/PDIF I/O, USB I/O, and 2 amplifier chann
Control RS-232	Baud Rate: 115200
	Data Bits: 8
	Stop Bits: 1
Environmental Conditions	Operating Temperature: 0° to +40°C (32° to 104°F)
	Storage Temperature: -40° to +70°C (-40° to 158°F)
	Humidity: 10% to 90%, RHL non-condensing

Supported Web Browsers

Windows 7, Windows 10, MAC 10.11: Chrome

Power

Consumption: 190VA

Source: 100-240V AC 50/60Hz

Regulatory Compliance (Standards Compliance)

Safety: CE

Environmental RoHs, WEEE

Enclosure

Size: 19" 1U

Type: Aluminum

Cooling: Fans

Accessories

Included Power cord

General

Net Dimensions (W, D, H): 43.6cm x 23.7cm x 4.4cm (17.2" x 9.3" x 1.7")

Shipping Dimensions (W, D, H): 52.5cm x 33cm x 10.7cm (20.7" x 13" x 4.2")

Net Weight: 1.6kg (3.5lbs)

Shipping Weight: 2.7kg (5.9lbs) approx

Product Dimensions 43.64cm x 23.72cm x 4.36cm (17.18" x 9.34" x 1.72" ) W, D, H

Product Weight 2.2kg (4.8lbs) approx

Shipping Dimensions 52.50cm x 33.00cm x 10.70cm (20.67" x 12.99" x 4.21" ) W, D, H

Shipping Weight 3.0kg (6.6lbs) approx

