

# Polycom® Vortex® EF2280

Acoustic echo/noise canceller with automatic microphone/matrix mixer



## Benefits

**Industry leading audio quality** – Design enhancements improve the audio experience for even the most demanding listening environments; support for the broadest range of microphones in the industry

**Hear every word with Polycom's industry-leading acoustic echo and noise cancellation** – Ensures the highest possible audio quality between sites with 20 kHz bandwidth, 270 ms tail length, more than 10 dB of room gain, and a convergence rate of over 40 dB per second on each mic/line channel

**Integrated voice and video solution** – May be linked with additional Vortex Installed Voice products including Vortex EF2201, Vortex EF2210, Vortex EF2211, the Vortex EF2241 and Vortex EF2280; Polycom's SoundStation VTX 1000™ wideband conference phone and Polycom's video conferencing systems including the VSX™ 7000 and 8000 product lines

**Easy setup** – Conference Composer™ and Polycom InstantDesigner™ software make configuration fast and simple

**Easy to operate** – Controllable via Crestron®, AMX® or other room control systems, RS-232, the Vortex EF-IR11 infrared controller, or from the unit's front panel; 16 factory presets and 32 user configurable presets allow quick selection of operating parameters

**Adaptable to user requirements** – User-programmable delays on all outputs, 5-band parametric EQ on all inputs and outputs, intelligent Automatic Gain Control, 256 macros, system diagnostics, and other tools ensure the best performance for all room conditions

## Enjoy clear, understandable conversation in all conferencing applications.

The Vortex EF2280 improves audio quality for conferencing, distance learning, and other installed applications through industry-leading acoustic echo and noise cancellation - with support for up to 8 microphones.

The Vortex EF2280 automatically mixes microphones and other audio sources while cancelling acoustic echoes and annoying background noise. It is typically installed at each site in a multi-site network and is commonly used in applications such as boardrooms, courtrooms, distance learning, sound reinforcement, and room combining. It connects easily to other equipment such as codecs, VCRs, or other A/V products. The unit can be programmed from the front panel, or through Conference Composer™ software (included). Conference Composer's InstantDesigner™ wizard ensures fast, accurate setup for a variety of applications.

A single Vortex EF2280 unit provides automatic mixing of up to eight microphones plus four auxiliary audio sources. If more microphones are needed, additional Vortex EF2280 or Vortex EF2241 units can be linked, up to a total of eight units. Number of Open Microphones (NOM) information can be specified across all channels in the linked units. The microphone channels feature industry-leading acoustic echo cancellation to prevent retransmission of signals to their original locations. A neural network Automatic Gain Control (AGC) reacts only to valid speech patterns, bringing voices within desired levels. AGC controls are user adjustable, as are settings for the five-band parametric EQ offered on all input and output channels and output delay controls.

**The high-quality audio choice to access the power of Polycom unified collaborative communications solutions.**

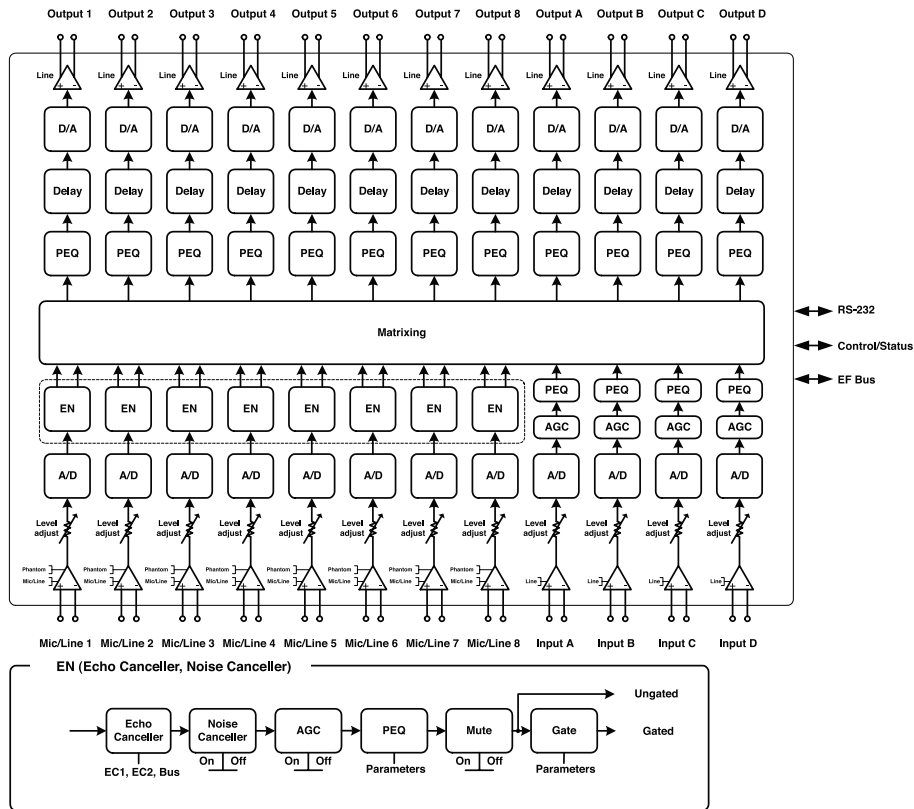
With the greatest breadth and depth of integrated video, voice, and Web solutions, only Polycom delivers the ultimate communications experience. Our market-leading conferencing and collaboration technologies, supported by world-class service, enable people and organizations to maximize their effectiveness and productivity. Add to that the most experience and proven best-practices in the industry, and it's clear why Polycom has become the smart choice for organizations seeking a strategic advantage in a real-time world.



Connect. Any Way You Want.

# Polycom Vortex EF2280 Specifications

## System Block Diagram and Rear Panel



### Dimensions

- 19" (483 mm) W x 9.6" (244 mm) L x 1.75" (45 mm) H (one rack unit)

### Weight

- 4 lbs. (1.8 kg) dry, 5.5 lbs. (2.5 kg) shipping

### Connectors

- RS-232: DB9F
- EF Bus In/Out: RJ45
- Control /Status: DB25F
- Audio: Mini (3.5mm) quick connect terminal blocks

### Power

- External supply (provided)
- Input voltage of 110-240 VAC; 47-63 Hz; power consumption 30 W

### Inputs

- Phantom power: 48 V DC, software selectable
- Analog input Gain: 0 to 30 dB Mic/line inputs in 1 dB steps, software adjustable
- Mic/Line switch gain: 33 dB
- Maximum input amplitude: +19 dBu, 1% THD + N
- Nominal level: 0 dBu (0.775V rms)
- Equivalent input noise: <-124 dBu, 20 - 20,000 Hz
- Input Impedance: 10 kOhms
- Input EMI Filter: Pi filter on all audio inputs

### Outputs

- Output Gain: -100 to 20 dBu in 1 dB steps, software adjustable
- Maximum output amplitude: +23 dBu, 1% THD + N
- Nominal output level: 0 dBu (0.775 V rms)
- Output impedance: 33 Ohm, each leg to ground
- Output EMI Filter: Pi filter on all audio outputs

### System\*

- Frequency response: 20-20,000 Hz, + 0.2 /- 0.3 dB
- Idle channel noise: <-100 dB FS "A" weighted, 20 - 20,000 Hz, 0 dB gain
- Dynamic range: >100 dB FS "A" weighted, 20 - 20,000 Hz, 0 dB gain
- Linearity: 0 dB FS to -110 dB FS +/- 1 dB
- THD+N: <-90 dB FS
- Common Mode Rejection Ratio: <-61 dB, 20 - 20,000 Hz, no weighting
- Cross talk: <-104 dB, 20-20,000 Hz, channel-to-channel
- Latency: Mic/Line inputs to outputs: 13 ms, processing enabled
- Acoustic Echo Cancellation Span: 270 ms
- Total Cancellation: >65 dB
- Convergence Rate: 40 dB/second
- Noise cancellation: 0-15 dB, software selectable
- Operating Temperature: 0° - 40° C
- Control Inputs: Contact closure
- Status Outputs: 5 V, 20 mA each

\*Unless noted, all values are valid for all channels at line level

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