ALX-40D

DIGITALLY STEERABLE COLUMN ARRAY



TECHNICAL DATA SHEET

PRODUCT SUMMARY

In the most challenging acoustical environments – whether in vast modern passenger terminals, or traditional houses of worship – AtlasIED Aimline loudspeakers precisely control directivity in the vertical axis, resulting in optimal coverage and the best possible direct-to-reverberant ratio, for enhanced intelligibility. Acoustic output is precisely aimed where it needs to be delivered, to the audience, significantly reducing reflections from hard surfaces.

The AtlasIED ALX-D range comprises digitally steerable, multichannel array loudspeaker systems for the commercial installation market. Designed for applications with problematic acoustics, the combination of advanced steering algorithms, powerful DSP, and efficient amplification gives the system designer a unique set of tools for controlling sound in large, acoustically challenging, highly reverberant spaces.

With IP connectivity and Dante as standard, ALX-D negates the need for cumbersome external interfaces and network bridges normally associated with existing digital beam steering offerings. Each transducer has its own DSP and amplifier channel resulting in the ability to tailor beams in very granular increments and allow acute steering capability. To further optimize venue coverage and performance, the acoustic center can be adjusted over the entirety of the column length, and independent split beams can be deployed if necessary.

Each of the seven ALX-D models are made up of identical modules to create arrays of up to 5 m (16 ft) in length. This avoids the need to ship and receive long columns.

The software is fully integrated allowing real time control, telemetry, and beam steering optimization, all in a single software package. All configuration and addressing functions are fully automatic. Interoperability with AtlasIED GCK advanced notification application software allows the ALX-D series to integrate as part of the AtlasIED GLOBALCOM® ecosystem.

For applications where critical messaging is paramount, we must provide the features required to meet worldwide legislative and safety standards. AtlasIED Aimline Series is designed for use in emergency sound systems, providing the most resolute telemetry and protection of any digital beam-steering product. Very clear and intelligible messages are critical; it is vitally important that the message is clearly understood the first time for both instructional and emergency scenarios in public buildings and transportation hubs.

The diminutive narrow cabinet and discreet mounting hardware will seamlessly blend into the most architecturally sensitive spaces, inside or outside.

KEY FEATURES

- Integrated cutting-edge DSP, network control and amplification
- Architecturally friendly – Compact, slender enclosure
- Superior intelligibility in complex acoustical environments
- Scalable & modular
- Very even SPL distribution over large areas
- Each driver has dedicated amplifier/DSP channels
- IP network (no cumbersome external interfaces)
- Dante, AES/EBU, Analog as standard
- Multibeam capability
- Real-time control with integrated steering and control software
- Instantaneous upload of steering coefficients
- Extremely low latency
- Adjustable acoustic center of beams
- Full diagnostics and reporting
- Interoperability with AtlasIED GCK - Advanced Notification Application Software
- 24 Presets
- Fewer installation/maintenance points than conventional distributed systems
- External control via UDP commands
- Corrosion-free aluminum construction

APPLICATIONS

- Transportation hubs
- Traditional houses of worship
- Museums
- Retail spaces and concourses
- Government buildings
- Lecture theaters
- Conference facilities
- Hotel ballrooms
- Corporate HQ atria

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AUDIO SPECIFICATIONS / PERFORMANCE

	ALX-40D
Configuration	Full Range
Frequency response	100 Hz–18kHz 110 dB @ 30 m
Audio Inputs	2 × Dante® / 2 × analog line / 2 × AES / EBU
Sensitivity	15 dBu RMS for rated output, analog
Low frequency beam control limit	150 Hz
Amplifier	40 × PWM class-D 40 × DSP Channels
Transducers	40 × 4" Neodymium, full range. Coated NRSC fiberglass membrane
Beam steering	Multibeam
Typical throw	295 ft/90 m
Dispersion horizontal	120° (−6 dB @ 1 kHz–8 kHz)
Vertical opening angle	5° to 40° (digitally variable)
Vertical steering	+40° to −40° (digitally variable)
DSP	96 kHz/24 bit 1.8 ms latency
DSP functions	24 presets switchable via GPIO UDP, 10 Band IIR Filter, FIR Filter, dynamic EQ, limiter, gain, delay, status display surveillance, automatically cascading
Control	IP-based network, configurable
External control	UDP commands, 2 × GPIO
Enclosure	Aluminum (powder coated)
Color	RAL 9016 standard (white) All RAL colors available as option
Net Weight	110 lbs (50 kg)
Dimensions	H × W × D: 159.9" × 4.7" × 6.6" (4060 × 119 × 167 mm)
Power supply	94–264 V

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AUDIO SPECIFICATIONS / PERFORMANCE (CONTINUED)

POWER SUPPLY SPECIFICATIONS

POWER CONSUMPTION (STIPA NOISE AS STIMULUS)

FULL POWER, SIGNAL OVER-RIDING INTERNAL LIMITERS

Power consumption (W)	290
Current Draw (A) 115 VAC	2.5
Current Draw (A) 230 VAC	1.25

1/3 Full Power (-9dB)

Power consumption (W)	210
Current Draw (A) 115 VAC	1.8
Current Draw (A) 230 VAC	0.9

1/8 Full Power (-18dB)

Power consumption (W)	175
Current Draw (A) 115 VAC	1.5
Current Draw (A) 230 VAC	0.75

Idling

Power consumption (W)	160
Current Draw (A) 115 VAC	1.4
Current Draw (A) 230 VAC	0.7

In Rush

Current Draw (A) 115 VAC	3.1
Current Draw (A) 230 VAC	1.55

Power Save Mode

Power consumption (W)	125
Current Draw (A) 115 VAC	1.1
Current Draw (A) 230 VAC	0.55

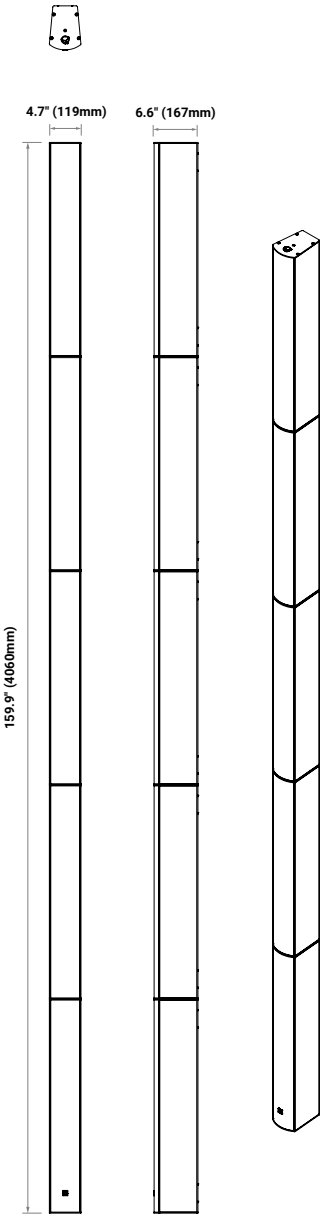
ALX-40D

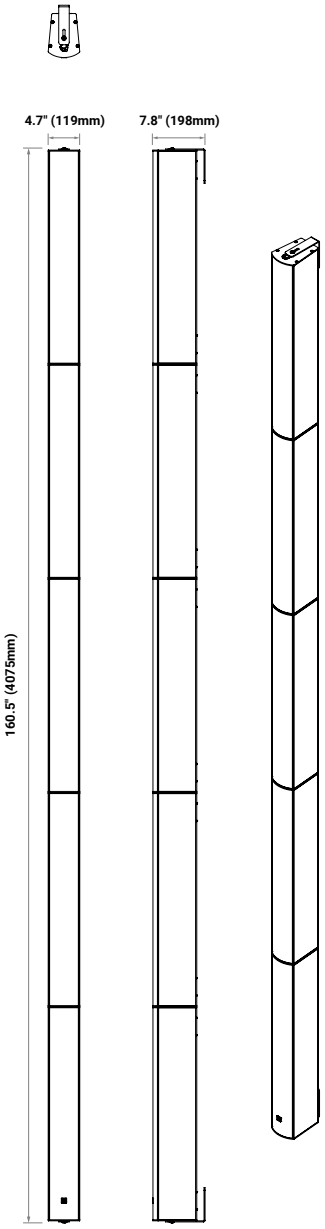
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DIMENSIONAL DRAWINGS





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ARCHITECT AND ENGINEER SPECS

The loudspeaker shall be a modular, steerable, column array system, comprised of forty, 4-inch NRSC coated cone drivers, forty DSP channels, and forty class D amplifier channels.

Audio inputs shall consist of 2 × Dante® / AES67 / 2 × analog line / 2 × AES / EBU.

Horizontal coverage shall be 120°. Vertical coverage shall be variable between 5° and 40° and vertical steering ±40° in 1° increments. Dual beam capability.

Performance specifications shall be as follows: frequency response, 100 Hz–18 kHz ±3dB; low frequency beam control limit @ 150 Hz; maximum SPL, 110 dB @ 30m.

Onboard processing shall include 24 presets switchable via GPIO UDP, 10 Band IIR filters, FIR Filter, dynamic EQ, limiter, gain, delay, status display surveillance, automatically cascading.

Control shall be via a configurable IP-based network. External control via UDP commands and 2 × GPIO.

The loudspeaker shall provide interoperability with AtlasIED GCK advanced notification application software as part of the AtlasIED GLOBALCOM ecosystem.

Power requirements shall be nominal 100, 110, or 230 VAC line current at 50 to 60 Hz. The UL and CE operating voltage range shall be 94–264 VAC.

Loudspeaker components shall be mounted in an extruded aluminum enclosure available in white and custom colors. Dimensions shall be H × W × D: 159.9" × 4.7" × 6.6" (4060 × 119 × 167 mm).

The loudspeaker shall be the ALX-40D.

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