



# PRODUCT SPECIFICATION

## Trinity Black



**Trinity Black** is the latest generation of the industry's first robotically controlled line source. Stunning SPL and clarity can be precisely controlled with variable coverage in both the vertical and horizontal planes, offering system operators maximum flexibility in making coverage adjustments after the array is flown. Onboard inclinometers and network-based Auto-Array within PK .dynamics software enable each module to recognize its position and angle within the system, improving accuracy, efficiency of deployment, and safety. Intelligibility is dramatically improved by remotely directing the system's energy away from reflective surfaces as coverage is adjusted in real-time to meet the architectural design of any venue.

Horn-loaded 12" transducers manage low-frequency response. The mid-frequency band is supported by four 6.5" midrange transducers affixed to the patented Coherent Midrange Integrator (CMI). Two dual-diaphragm high-frequency transducers, coupled directly to an integrated planar waveguide, significantly reduce distortion across the high frequency band. A 6,000 W Class D amplifier maximizes headroom while maintaining crystal clear audio and exceptional output.

The CMI waveguide seamlessly combines mid and high frequencies, working in tandem with precisely spaced low-frequency apertures for smooth and controlled directivity. It allows for variable adjustability from 60°-120° both symmetrically and asymmetrically so that designers and technicians can remotely shape the radial directivity of individual modules within the array to enhance overall system performance.

Flown straight, the array's directivity is then configured remotely using industrial linear actuators with a duty cycle of up to 109 years. Vertical angles are variable with 0.1° accuracy. Finally, a combination of FIR and IIR filters is applied to ensure smooth frequency response throughout the listening area.

### Output Capability

Frequency Response.....40 Hz-20 kHz  
Peak SPL.....151.4 dB

### Acoustic Properties

Horizontal Directivity.....60°-120° Robotic Directivity  
Horizontal Resolution.....5° Symmetric & Asymmetric  
Vertical Adjustment.....0-5.5° Robotic Directivity  
Vertical Resolution.....0.1° Increments

### Robotic Actuators

Horizontal Thrust.....750 N  
Vertical Thrust.....10,000 N  
IP rating.....IP69K (static), IP66 (dynamic)  
Duty cycle.....80,000 Actuations (109 years)

### Transducers

Low-Frequency.....2 x 12" Neodymium Horn Loaded  
Mid-Frequency.....4 x 6.5" on Coherent Midrange Integrator  
Waveguide

High-Frequency /  
Very High-Frequency...2 x 4" Dual Diaphragm Planar Wave

### Amplification

Amplifier.....4 Channel Class D  
Amplifier Power.....6,000 W  
Operating Voltage.....Auto-Switching 100-240 V, 50-60 Hz  
Power Consumption...660 W  
Network.....UDP over Ethernet

### Input/Output Connections

Input Selection.....Analog/AES  
Audio/Network.....Multipin Amphenol – IP65  
Power.....powerCON TRUE1 – IP65

### Physical Properties

Weight.....117.7 kg/259 lb.  
(W x H x D).....1,394 x 355 x 584 mm  
54.88 x 13.98 x 22.99 in  
Max Line Length.....24 Modules  
Environmental.....IP54  
Rain Protection.....Weather Resistant Amplifier Plate &  
IP65 Connectors  
Module Construction...Void Free, High Grade Baltic birch  
Rigging Construction...6061-T6 Aluminum  
External Coating.....EXL Polyurea  
Grill.....Powder Coated Aluminum

