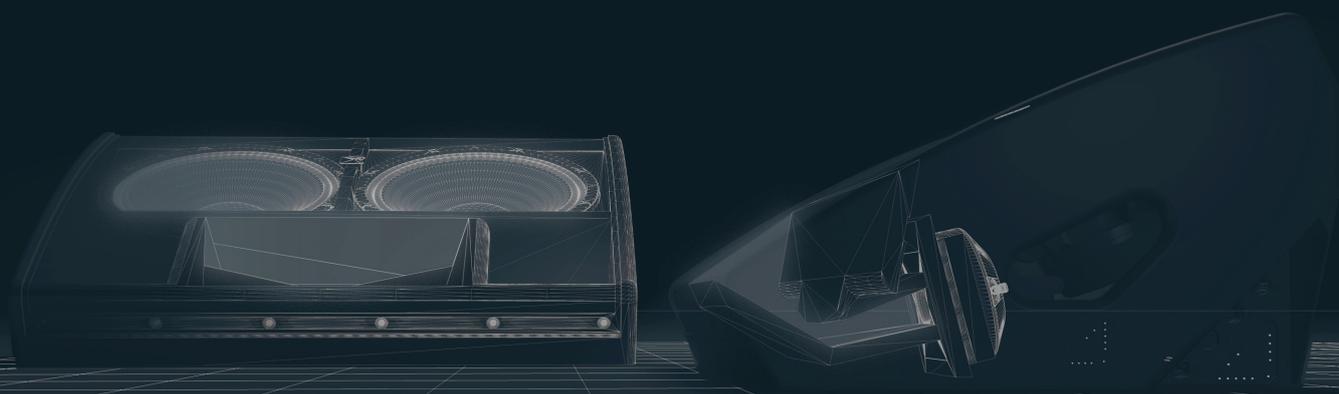


ULTRA LOW-PROFILE STAGE MONITORING SOLUTIONS



iSM



Outline



INTRODUCTION

The Outline iSM-series of professional monitor loudspeakers have been designed to provide a flexible and powerful solution for contemporary on-stage applications. Their unique design is a result of careful consultation and includes several features that provide real-world advantages in terms of both owner efficiency and user operation.

The range includes three models, the iSM 112, the iSM 115 and the iSM 212. All offer light weight and a small footprint compared to their output potential, as well as an asymmetrical, dual-angle design and integral mounting points for installation purposes.

All models are powered by multi-channel internal amplification and can be fully controlled using Outline's proprietary iMode technology via an iPad, iPhone, iPod touch and Mac OS (APP downloadable from Apple Store).



iSM SERIES

KEY DESIGN FEATURES

The form factor of the iSM range has been dictated by the global demand for a stage monitoring solution which provides ample power in the smallest possible space. A key contributor to the achievement of this goal with iSM is the patented **S.P.R.W.G.** (Single Parabolic Reflective Wave Guide), a unique folded-horn design created specifically for the iSM range.

Unlike many products, the HF waveguide is part of the internal wooden construction of the cabinet rather than a separate fibreglass or plastic horn flare, which provides two essential advantages - firstly it makes the cabinet construction extremely robust and non-resonant, and secondly it allows the vertical height of the enclosure to be very small.

Numerous applications - notably broadcast - demand the lowest-possible profile for stage monitors so that camera angles and sight lines can be as uninterrupted as possible. The iSM 115 has a maximum height of 39.5 cm (16 inches), whereas the iSM 112 and 212 models are just 35.5 cm (14 inches) and 32.5 cm (13 inches) high respectively. Given their prodigious output and modest footprint, all three models are absolutely ideal for any application where powerful yet unobtrusive stage monitoring is essential.

The **S.P.R.W.G.** design delivers another vital performance factor in that it creates an extremely tightly-controlled HF dispersion in the horizontal plane. This means that it is easier to position the monitors relative to live microphones, which in turn allows the operator to maximise gain before acoustic feedback and provide minimal overlap between adjoining stage positions with different monitor mixes.

All three models are 'self-powered', i.e. are fitted with internal PWM amplification, which yields numerous benefits. In terms of deployment it eliminates the need for bulky amplifier / processor racks, saving stage, storage and transport space. It also means that the individual amplifier modules can be optimised for the impedance, frequency response and performance characteristics of the transducers they power, which results in lower maintenance and a longer working life for all components.

In common with many of our loudspeaker products, the iSM range is also fully compatible with our own iMode technology. iMode is a contemporary digital loudspeaker control platform which combines advanced digital signal processing and TCP/IP protocol to provide comprehensive control capabilities via a range of interface devices.

iMode differs from other systems in that each loudspeaker equipped with it actually features an embedded SOC (system-on-a-chip) and network connectivity.

Using iMode via a suitable hardware control device running our app on standard IP-based communication protocols, users can access real-time control over level, delay and various equalisation filters. It also provides system monitoring including VU-meters, selected preset, clip / limiter status, plus amplifier thermal and protection data. Like many mission-critical control systems, iMode utilises the Linux operating system which provides a robust and widely-compatible platform.

The three iSM models are, like all Outline professional loudspeaker products, engineered entirely at our facility in Brescia, Italy. We use premium-quality, void-free Baltic birch laminate throughout, a material which combines desirable low acoustic resonance properties with the ability to withstand years of hard road use.

All three designs feature integral mounting points for installation purposes and two recessed handles for ease of handling and are finished in a high quality, scratch-resistant waterproof black textured polyurea while the components are protected by an acoustically transparent, vibration-free painted steel mesh.



iSM₁₁₂



PERFORMANCE SPECIFICATIONS

Frequency Response (-10 dB)	68 Hz – 18 kHz
Nominal Dispersion	40° x 60° (H x V)
On-axis angle	65° related to ground
Power Amplifier	Type Class D (digital)
	Input impedance 10 kΩ balanced to ground
	Rated power 1 x 750 W EIAJ on 4 Ω, 1 x 370 W EIAJ on 8 Ω
	Cooling temperature controlled variable speed fan
	Special feature direct preset selection, controllable via iPad app
Maximum SPL Output *	139 dB SPL

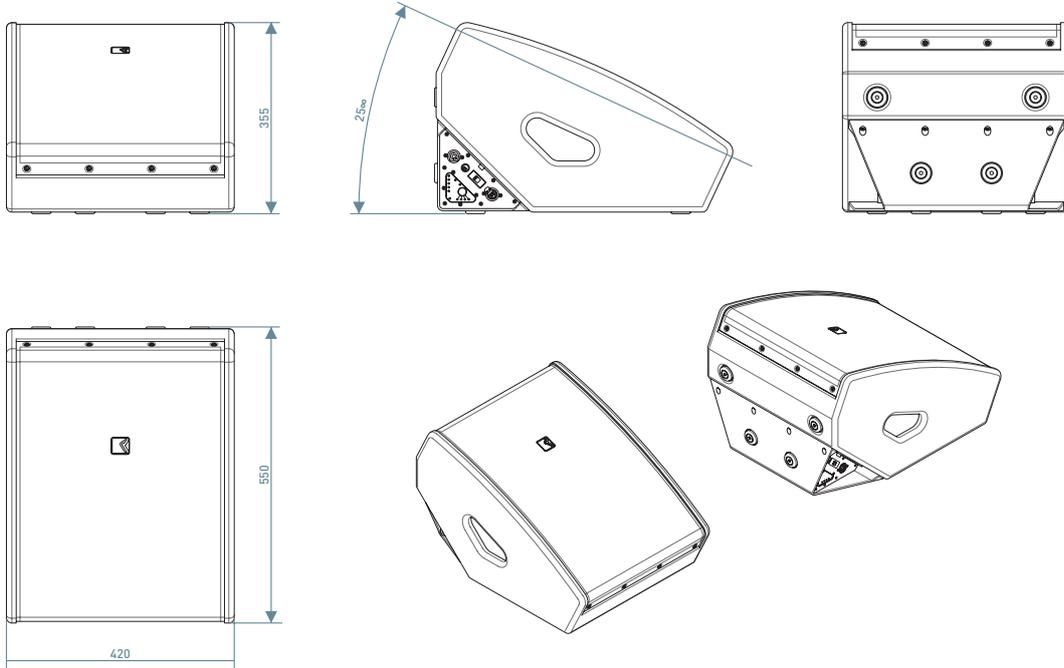
* measured using +10 dB Crest Factor signal @ 1 m, Half-space

PHYSICAL

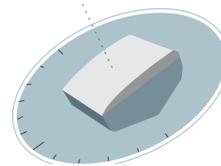
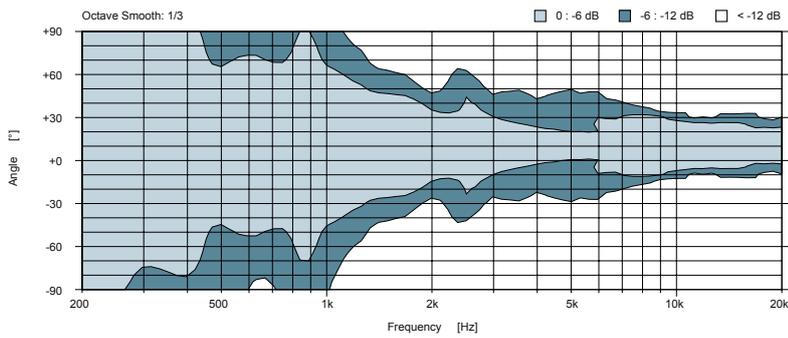
Component Low	1 x 12" NdFeB woofer, vented high-pass box
Component High	2.5" diaphragm compression driver with folded waveguide
Connectors	Audio: 1 XLR + 1 Link Out
	Ethernet: 1 EtherCon + 1 Link Out (RJ 45 Socket)
	Mains: 1 Powercon + 1 Link Out
Cabinet Material	Baltic birch plywood
Cabinet Finish	Black polyurea coating
Grill	Epoxy powder coated
Protective feet	Four on bottom side and four on rear side
Height	355 mm – 14"
Width	420 mm – 16 1/2"
Depth	550 mm – 21 5/8"
Weight	25 kg – 55.1 lb



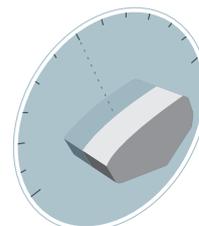
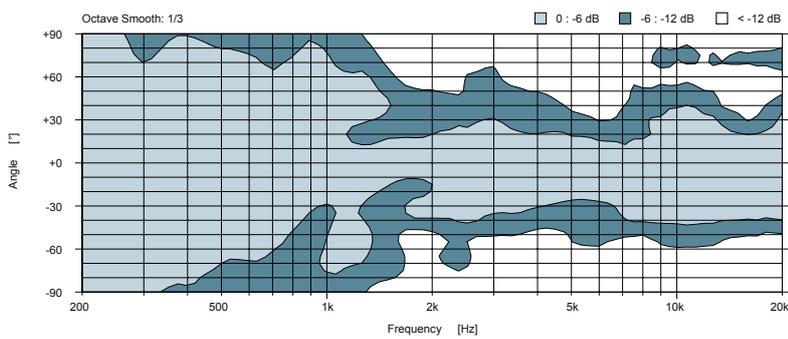
DIMENSIONS



BEAMWIDTH



HORIZONTAL



VERTICAL

iSM₁₁₅



PERFORMANCE SPECIFICATIONS

Frequency Response (-10 dB)	59 Hz – 18 kHz
Nominal Dispersion	40° x 60° (H x V)
On-axis angle	65° related to ground
Power Amplifier	Type Class D (digital)
	Input impedance 10 kΩ balanced to ground
	Rated power 1 x 750 W EIAJ on 4 Ω, 1 x 370 W EIAJ on 8 Ω
	Cooling temperature controlled variable speed fan
	Special feature direct preset selection, controllable via iPad app
Maximum SPL Output *	139 dB SPL

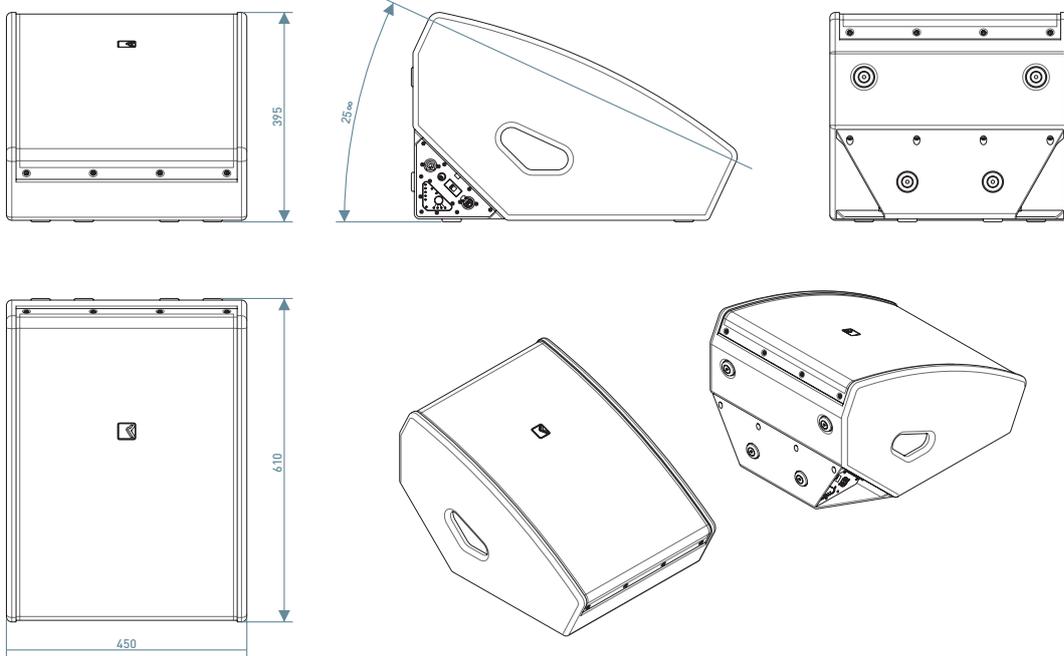
* measured using +10 dB Crest Factor signal @ 1 m, Half-space

PHYSICAL

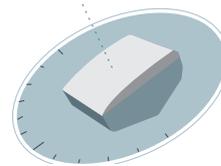
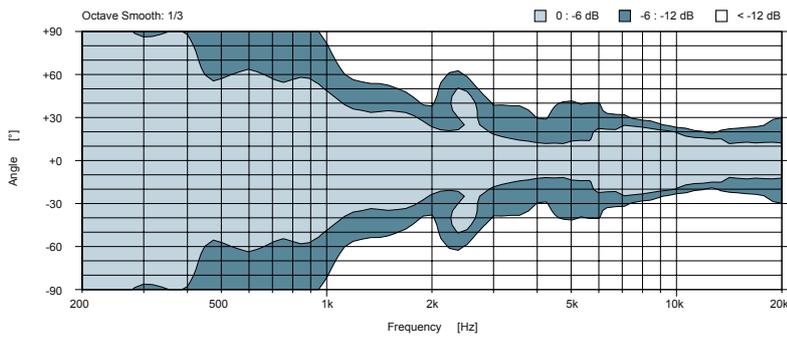
Component Low	1 x 15" NdFeB woofer, vented high-pass box
Component High	2.5" diaphragm compression driver with folded waveguide
Connectors	Audio: 1 XLR + 1 Link Out
	Ethernet: 1 EtherCon + 1 Link Out (RJ 45 Socket)
	Mains: 1 Powercon + 1 Link Out
Cabinet Material	Baltic birch plywood
Cabinet Finish	Black polyurea coating
Grill	Epoxy powder coated
Protective feet	Four on bottom side and four on rear side
Height	395 mm – 15 1/2"
Width	450 mm – 17 3/4"
Depth	610 mm – 24"
Weight	27.5 kg – 60.6 lb



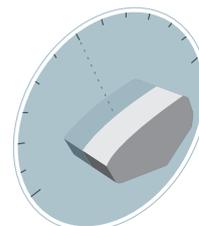
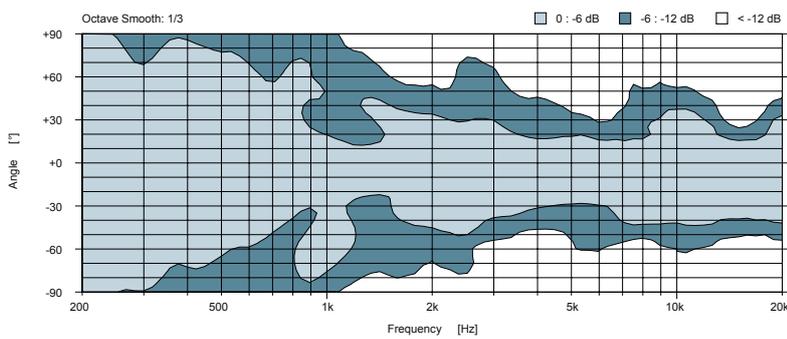
DIMENSIONS



BEAMWIDTH



HORIZONTAL



VERTICAL

iSM 212



PERFORMANCE SPECIFICATIONS

Frequency Response (-10 dB)	64 Hz – 18 kHz
Nominal Dispersion	30° x 50° (H x V)
On-axis angle	65° related to ground
Power Amplifier	Type Class D (digital)
	Input impedance 10 kΩ balanced to ground
	Rated power 1 x 1050 W EIAJ on 8 Ω, 1 x 570 W EIAJ on 16 Ω
	Cooling temperature controlled variable speed fan
	Special feature direct preset selection, controllable via iPad app
Maximum SPL Output *	143 dB SPL

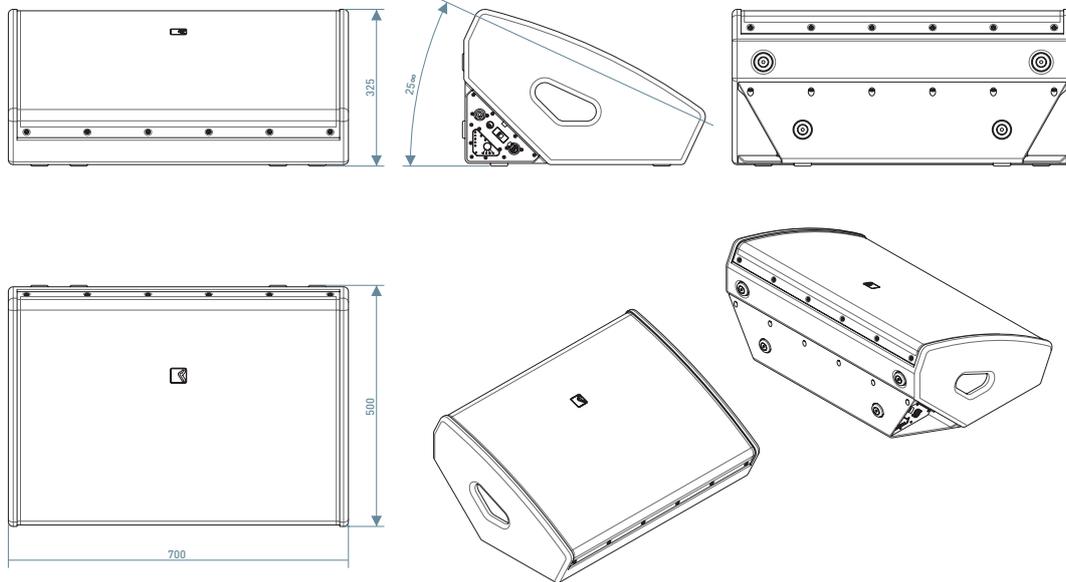
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PHYSICAL

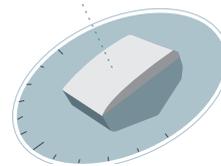
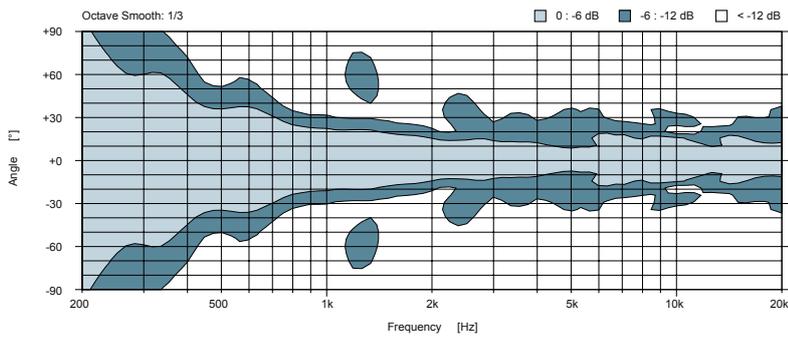
Component Low	2 x 12" NdFeB woofer, vented high-pass box
Component High	3" diaphragm compression driver with folded waveguide
Connectors	Audio: 1 XLR + 1 Link Out
	Ethernet: 1 EtherCon + 1 Link Out (RJ 45 Socket)
	Mains: 1 Powercon + 1 Link Out
Cabinet Material	Baltic birch plywood
Cabinet Finish	Black polyurea coating
Grill	Epoxy powder coated
Protective feet	Four on bottom side and four on rear side
Height	325 mm – 12 3/4"
Width	700 mm – 27 1/2"
Depth	500 mm – 19 3/4"
Weight	32 kg – 70.5 lb



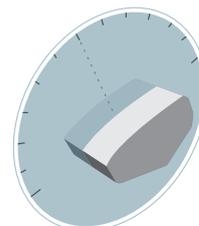
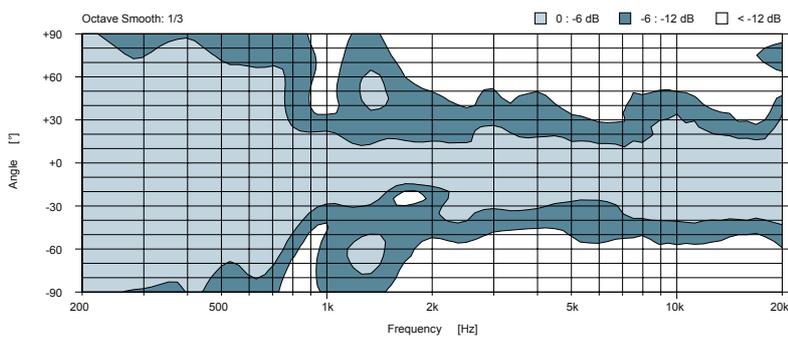
DIMENSIONS



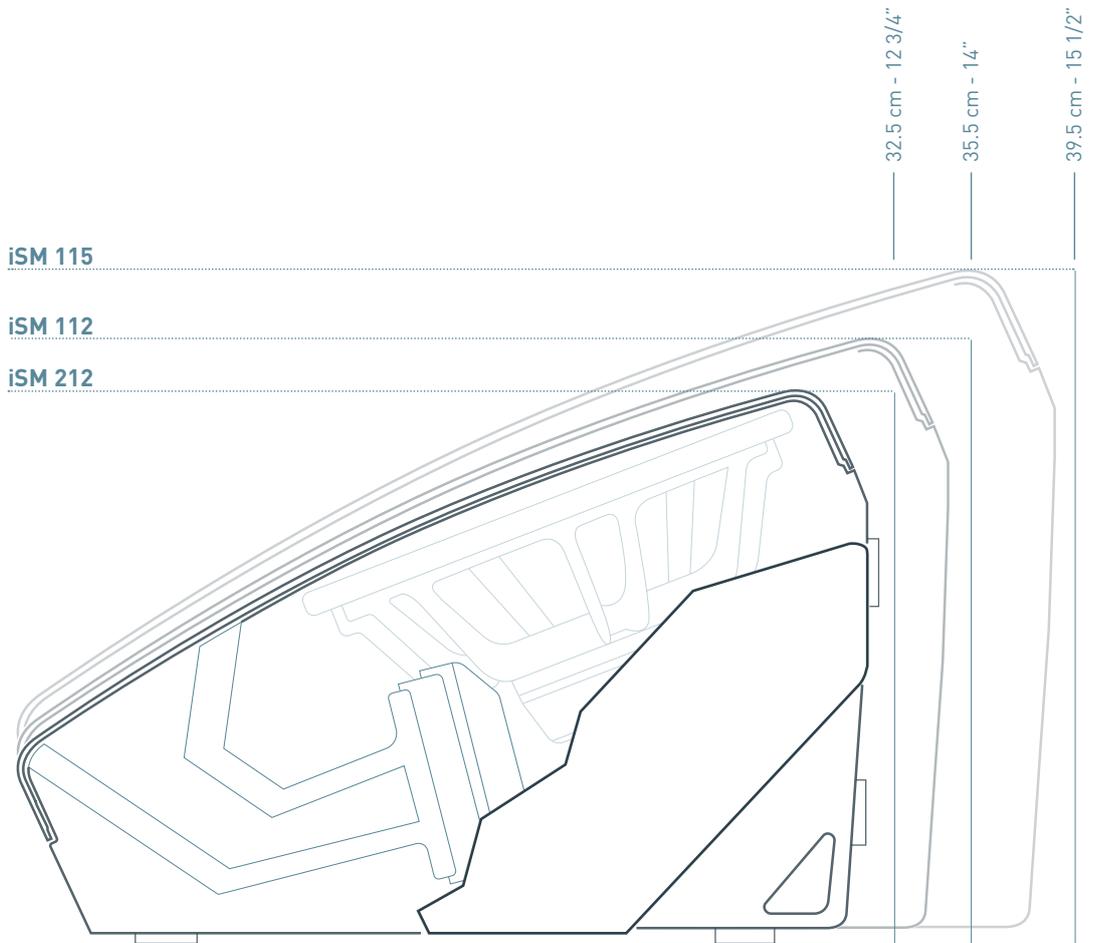
BEAMWIDTH



HORIZONTAL



VERTICAL



ACCESSORIES

Wheeled flight case for storage and easy portability of 2 iSM 112 / 115 / 212 enclosures



CODES:
FC-2ISM112M - FC-2ISM115M - FC-2ISM212M

EVERYTHING UNDER CONTROL WITH iPad, iPhone, iPod TOUCH AND MacOS DEVICES

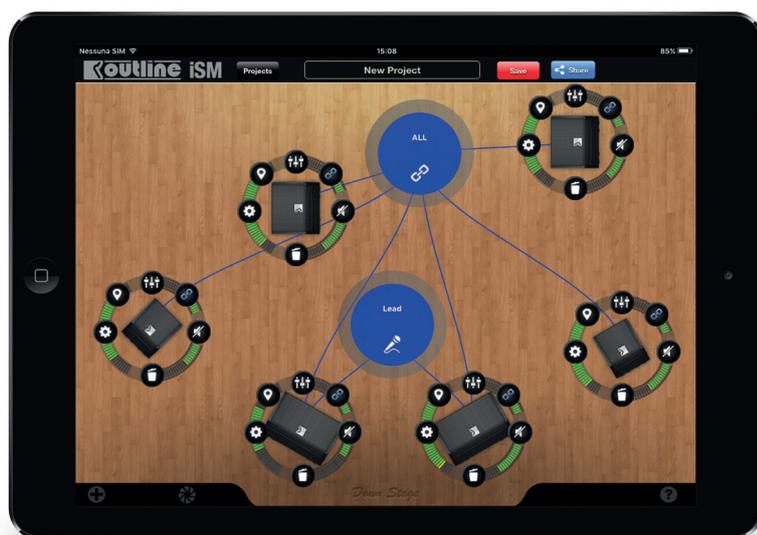
Every Outline's enclosure equipped with Outline's proprietary iMode technology can be controlled using an iPad, iPhone, iPod touch and Mac OS (APP downloadable from Apple Store).

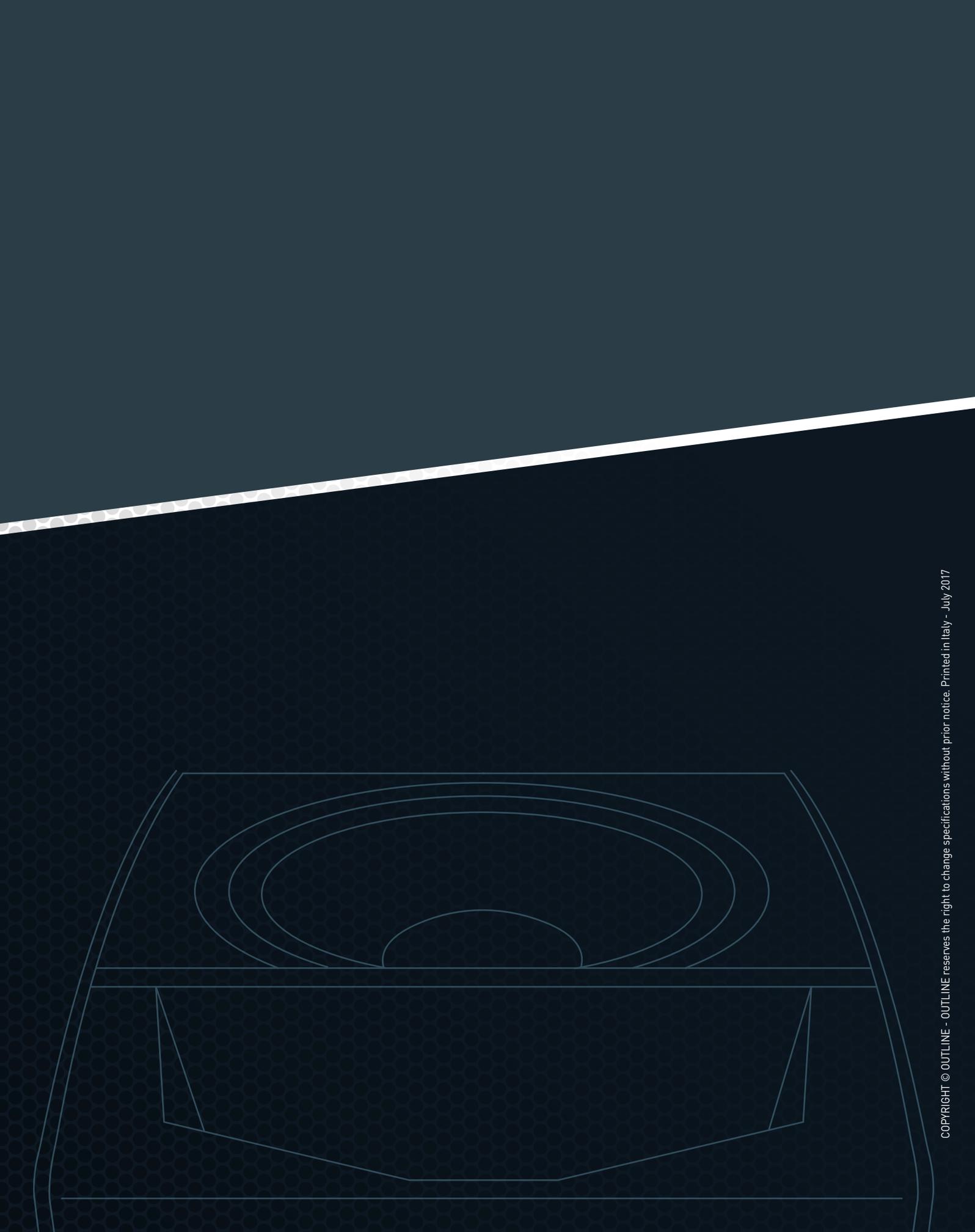
iMode is a truly "intelligent" digital loudspeaker multi-control platform which combines advanced digital signal processing and TCP/IP protocol to provide comprehensive control capabilities and a huge choice of interface devices.

iMODE AT A GLANCE

Outline loudspeaker systems equipped with iMode technology:

- > are "all-in-one" – everything is on-board. EQ, compressors, crossovers, matrices, DSP or any other outboard units are not required. This means greatly simplified system transport, storage and cabling, resulting in a considerable reduction in costs.
- > are limitless: it is possible to control a single enclosure or a group.
- > iMode offers an extremely advanced WFIR processing (unique to Outline) on the input channel, a double dynamic processor (peak/RMS) and up to 2 seconds delay for each channel.
- > iMode runs on Linux, so is very flexible, open to future evolution and able to interact with tomorrow's "intelligent" devices.





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