

bdSound

Intelligent **Audio** Solutions



MSA – Full VoIP Intercom Station *on a single ARM® Cortex® M7*

MSA is a complete VoIP intercom station in an OEM, not enclosed, 55x55mm form factor, based on a single ARM® Cortex® M7 processor. MSA can be used both for indoor and outdoor application and, thanks to its full featured design and flexibility, can suite different application scenarios.

Small dimensions, endless possibilities

MSA is a full-featured **SIP** intercom unit, with several inputs and outputs.

Based on a cheap **ARM® Cortex® M7** processor, this product is compact, easy to integrate, fully featured and with **amazing audio quality**.

MSA features an integrated **2ch (3W+3W) audio amplifier** and **2 MEMS microphones**. It also embeds an external **MIC IN** and audio **line out**

- Full-duplex Acoustic Echo Canceller
- Wideband audio
- Real-time audio processing (EQ, Compression, Limiter, Gate..)
- Noise Reduction
- Microphones array and beamforming

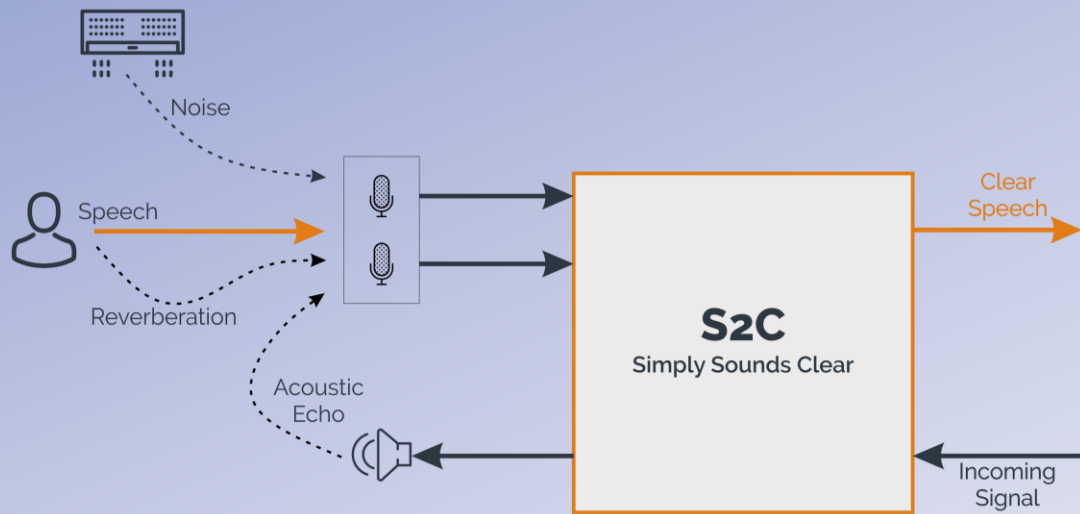
A **16MB flash** allows MSA to play pre-recorded audio and to store the **FW** all the settings which can be user-defined through the companion **GUI**.

The unit can be powered via **POE** or via **+24VDC**. It can handle both digital and analog inputs; it also features an on-board **relay** to control external lights or electric doors.

Take control of your MSA network:

Imagine a **MSA distributed network**, with public addressment and SIP technology working together.

Multiple units management is supported: with the provided **GUI** it's possible to setup each unit connected to the network, restore and update **FW**, **remotely**.



Technical Specifications

Size	55x55x21 [mm] including connectors	Button Input	Up to 7 different buttons recognition
Main features	<ul style="list-style-type: none"> • Integrated VoIP SIP client • Embedded audio processing • Echo Canceller and Noise Reduction 	Sensor input	<ul style="list-style-type: none"> • Selectable trigger for upper and lower threshold trespassing • Programmable polling time
Power supply	PoE or external supply: <ul style="list-style-type: none"> • POE: Class 3 802.3af compliant • EXTERNAL SUPPLY: 24Vdc 	Relay action	Relay activation: <ul style="list-style-type: none"> • monostable programmable ON time • Bistable
Aux Power Out	5Vdc output only – max 200 mA	LED0 / LED1	Led ON; Led OFF; Flashing
Audio Amplifier	Integrated Class D two channel Audio Power Amplifier = 3W per channel	Expansion bus	RS485 or CAN bus expansion socket
Microphone Inputs	Single microphone electret with bias for external microphone	SIP Client	Integrated RFC3261 compliant user agent SIP client
Audio Output	Line Out (0dB) balanced audio output	DTMF on SIP	SIP Info Method
Audio Processing	Acoustic Echo Canceller Noise Reduction Audio Processing (EQ, Filters, etc.) G711, G722, L16 (other codec on demand)	Other features	Broadcast feature with priority Alive test SIP Presence Registration to SIP server

