

ELV 4-Zone Decoder Card with Line Supervision

Bridge IP/PA Control to Analog Zones with Supervision



The **ELV ST2212** is a smart 4-zone interface card essential for integrating traditional 100V amplifier/speaker zones into modern controlled PA systems (often IP-based systems using RS485 for local control). It receives control commands via RS485 and manages paging/BGM distribution, volume control override, and crucially, provides speaker line supervision (monitoring for Open and Short circuits) for each of the four zones. Available as a bare PCB (ST2212) or in a 1U rack-mount chassis (ST2212/U).



ST2212

Key Features

- **Speaker Line Supervision:** Actively monitors connected 100V speaker lines, detecting Open-Circuit and Short-Circuit conditions with LED indication per zone.
- **RS485 Communication:** Robust communication protocol allows control from central controllers (like IP2100/8, ST2100/IP) over long distances.
- **Volume Control Override:** Supports 3 or 4-wire connections to volume controls (like A-C30R) enabling emergency override signals.
- **4-Zone Control:** Manages audio distribution and supervision for four independent speaker zones.
- **BGM/Paging Distribution:** Intelligently routes Background Music (BGM) and Paging audio to zones based on control commands, with paging typically overriding BGM.
- **Fault Isolation:** Includes isolation relays to protect amplifiers in case of a detected short circuit on a speaker line.
- **Manual Control:** Features individual zone activation buttons and an All-Call bypass button for local testing or operation.
- **Flexible Form Factor:** Available as a PCB module for integration or pre-mounted in a 1U 19" rack chassis.

Applications

An essential interface in IP or advanced Analog PA systems where centralized control and supervision of individual speaker zones are required. Perfect for distributing audio from central equipment racks to different building areas while monitoring speaker line integrity.

System Compatibility

- **Controllers:** Controlled via RS485 by ELV consoles like IP2100/8 or ST2100/IP.
- **Amplifiers:** Manages the 100V output from amplifiers (e.g., A-XXD series) distributing it to zones.
- **Speakers:** Supervises standard 100V speaker lines connected to its outputs.
- **Volume Controls:** Interfaces with A-C30R for override functionality using 3 or 4-wire connections.

Technical Specifications

Specifications*	ST2212	ST2212/U
Description	4-Zone Decoder Card PCB Module	4-Zone Decoder Card in 1U Rack Mount Chassis
Communication	RS485	
Supervision	Speaker Line OK / Open / Short Circuit Detection	
Indicators	Per-Zone Status LEDs, Zone Activation Buttons	
Audio Handling	Paging Audio Input, Music Audio Input, 4 x Zone Outputs (100V)	
Override	Supports 2/3/4 wire Volume Control override via relays	
Connectors	5mm Pitch Terminal Blocks (Power, Data, Audio In/Out, VC Ctrl's)	
Power Supply	24V DC, 250mA	
Dimensions	210 x 110 x 25 mm	Standard 19" 1U

*Specifications are subject to change without prior notice

Ordering Informations

Model No.	Description
ST2212	4-Zone Decoder Card PCB Module
ST2212/U	4-Zone Decoder Card in 1U Rack Mount Chassis