

Front and rear view of the device

PA Systems | Product family CURA

IP PA System with integrated announcement device and amplifiers – Basic device

The IP PA System with integrated announcement device and two 100 W amplifiers is a compact and scalable PA system of the product line CURA. It combines all features of an announcement device as well as a PA system in one device. One PA system can consist of up to 8 devices, which operate together via audio bus and can be controlled by one single device.

Functional Features

- Full digital signal processing
- 2 x 100 W output power per device at 100 V, electrically isolated with insulation monitoring
- Extensible up to 16 output channels
- Audio in- and outputs
- Digital in- and outputs
- Audio functions: delay, compressor, automatic level adjustment, optional: equalizer
- Monitoring of announcements on 100 V outputs via signal comparison
- Impedance monitoring for speaker lines to detect short circuits, disconnection and defective loud speakers
- Configurable types of redundancy for output amplifiers (mutual take-over, N+1 redundancy or full redundancy)
- Control and monitoring of announcements via IP network or AF + contacts
- Priority management configurable
- Speech synthesis (TTS, multilingual) streaming and VoIP available
- Web-based configuration and diagnosis
- Power supply with 230 VAC and/or 48 VDC
- High availability, maintenance-free
- Qualified for railway application
- Optional use in voice alarm systems according to EN 54-16 with interface to fireman's microphone

Technical Description

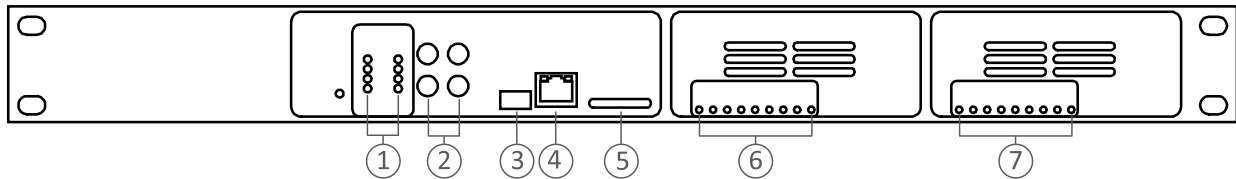
General Properties	
Range of application	IP PA System with integrated announcement device and 2x 100 W amplifiers as part of a PA system on railway stations
Power Supply	200 – 260 V AC / 100 – 130 V AC (selectable), 47 – 63 Hz and / or 46 – 53 V DC
Power consumption	max. 260 W standby: ca. 25 W
Dimensions (LxWxH)	483 x 320 x 44 mm 19 inches, 1 U
Weight	approx. 7 kg
Installation instructions	Installation in racks with 19 inches standard profile
Cable feed	Generally from back side Front side: USB-slot, network, 2nd network connection (optional)
Degree of protection	IP20
Temperature range	Operation: -5 °C ... +55 °C
Cooling	passive, fanless
Front side display elements	LED indicators: <ul style="list-style-type: none"> ▪ voltage supply AC/DC ▪ operation ▪ voice alarm condition ▪ failures (intern and extern malfunctions, power supply malfunction, amplifier/ loud speaker malfunctions) Piezo buzzer
Front side operating elements	inspection of display elements alarm deactivation fault acknowledgement customer-specific functions
Extension slots	3 module slots <ul style="list-style-type: none"> ▪ audio-In module, 4 analog inputs ▪ audio-Out module, 4 analog outputs ▪ module with 8 digital inputs and 8 digital outputs
Compliance	CE, RoHS, electrical safety and EMC EN 50121-4 (railway application) option: EN 54-16 (voice alarm system)

Technical Description

Interfaces	
AF inputs	<p>2x audio input (onboard):</p> <ul style="list-style-type: none"> electrically symmetrical input sensitivity: 50 mV to 10 V, controlled electronically Input impedance selectable 600 Ω / 10 kΩ, e1x switchable 24 V phantom supply plug-in terminal <p>4x audio input (extension module):</p> <ul style="list-style-type: none"> features like audio inputs of the mainboard
AF output	<p>2x audio output (onboard):</p> <ul style="list-style-type: none"> electrically symmetrical output level: 0 dBu <p>4x audio output (extension module):</p> <ul style="list-style-type: none"> features like audio inputs of the mainboard output level: +8 dBu
digital inputs	<p>2x digital inputs (onboard):</p> <ul style="list-style-type: none"> potential-free 0 V – 60 V input voltage range, threshold value: 12 V load < 20 mA at 60 V <p>8x digital inputs (onboard):</p> <ul style="list-style-type: none"> features like digital inputs of the mainboard
digital outputs	<p>2x digital outputs (onboard):</p> <ul style="list-style-type: none"> potential-free make / brake contacts configurable, max. 60 V/1 A DC <p>8x digital outputs (onboard):</p> <ul style="list-style-type: none"> features like digital inputs of the mainboard
Fault message contact	see digital outputs
Announcement device	
CPU	<p>Freescle i.MX6, 1 GHz, ARM Cortex-A9</p> <p>On customer request: Freescle i.MX6, 4x1 GHz, ARM Cortex-A9</p>
Memory	<p>512 MB RAM, 512 MB Flash, expandable with (micro) SD/SDHC/SDXC card on the front</p> <p>On customer request: 2 GB RAM + 2 GB Flash</p>
LAN	<p>1x RJ 45 (10/100/1000 MBit/s)</p> <p>On customer request: 2x RJ 45 (10/100/1000 MBit/s)</p>
Service interface	microUSB 2.0, front side
Network protocols	<p>Network: static/DHCP configuration, DNS, NTP</p> <p>Announcement assignments: JSON-RPC</p> <p>Live announcements: VoIP/SIP</p> <p>On customer request: other (customer-specific) network protocols</p>
Number of simultaneous announcements	max. 8

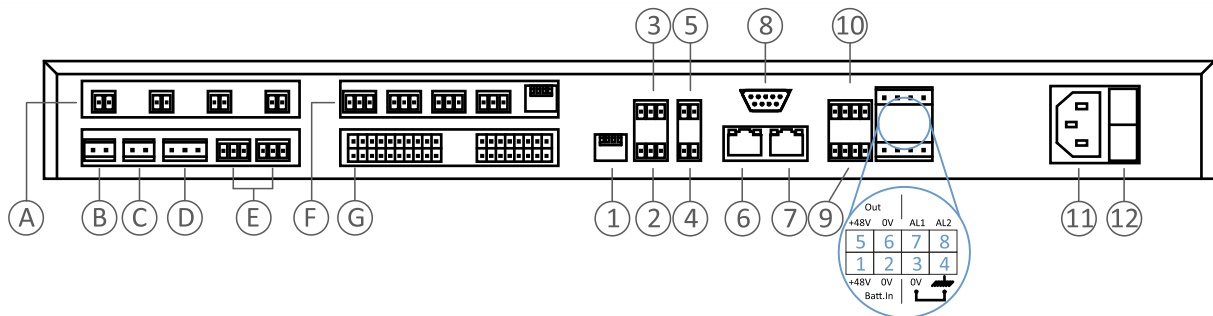
Technical Description

Amplifier	
Amount, class	2, Class D
Output power	100 W at 100 V
Distortion factor	< 1 % at nominal capacity
Galvanic isolation	Yes
Front side display elements	Voltage supply, defect on speaker line, short to ground, amplifier overload, amplifier error, input level, channel assignment



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|--------------------------------|----------------------------------|----------------------------------|
| 1 General status display | 4 Network connection | 7 Status display for amplifier 2 |
| 2 Control panel | 5 SD card slot | |
| 3 microUSB, maintenance access | 6 Status display for amplifier 1 | |

Figure 1 Connection designation of the front view



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|--|---------------------------------|---|
| A Slot 4 (X1-X4) | 1 Characteristic AF In1, AF In2 | 9 Dig. In 1+2 |
| B Slot 2 (X1) 100 V output amplifier 1 | 2 AF In1 | 10 Dig. Out 1+2 |
| C Slot 2 (X2) 100 V output amplifier 2 | 3 AF In2 | 11 230 V AC voltage |
| D Slot 2 (X3) accident input | 4 AF Out 1 | 12 Power switch |
| E Slot 4 (X4-X5) | 5 AF Out 2 | 1/2 DC power supply +48 V |
| F Slot 3 (X1-X4, S1) | 6 Audio bus In | 3/4 Potential equalization, ground connection |
| G Slot 1 (X1, X2) | 7 Audio bus Out | 5/6 DC voltage output +48 V, max. 200 mA |
| | 8 reserved | 7/8 Collective error alarm contact |

Figure 2 Connection designation of the rear view

Order No.

42.41001-0009 Cura – ASG+2Ampl.100W+Ext CURA PA System with 2x100W amplifiers, expandable (Type CURA 22)

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Warning: The colours shown do not necessarily correspond to the original colours!

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