

IP PA System

BASIC DEVICE WITH AMPLIFIERS AND INTEGRATED ANNOUNCEMENT DEVICE



front view CuraG3 (preliminary)

The IP PA System with 2 x 250 W amplifiers and integrated announcement device is a compact and scalable PA system of the 3rd generation Cura® product family. It combines all functions of an announcement device and a public address system in one compact device. A 3rd generation PA system can consist of up to 20 devices that work together and are controlled and monitored by the base device.

FUNCTIONAL FEATURES

- » full digital signal processing
- » redundant cabling between the devices with Ethernet patch cables
- » 2 x 250 W output power per device at 100 V
- » galvanically isolated speaker lines in pairs with insulation monitoring and separately monitored A/B line outputs
- » up to 40 amplifiers and 80 monitored line outlets possible
- » additional audio outputs
- » digital in- and outputs
- » Audio functions: delay, parametric equalizer, high/low control, limiter, automatic level adjustment
- » Announcement monitoring at the signal feeds and the amplifier outputs by signal comparison
- » optimized for use in standard rail environments
- » Impedance monitoring for speaker lines to detect short circuits, disconnection and defective loud speakers
- » automatic disconnection of short-circuited line feeders
- » integrated average switching (various methods available depending on the application)
- » Control of announcements via IP network, AF+contacts or customer-specific interfaces
- » Integration of text-to-speech synthesis (multilingual) and VoIP possible on customer specification
- » Background music possible
- » web-based configuration and diagnosis
- » Power supply with 230 VAC and/or 48 VDC
- » maintenance-free design due to fanless operation
- » optional use as part of a voice alarm system in accordance with EN 54-16 with fire department call station

TECHNICAL DATA

GENERAL PROPERTIES

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| Range of application | IP PA System with integrated announcement device and 2 x 250 W amplifiers as part of a PA system |
| Power Supply | 90 – 250 V AC, 47 – 63 Hz and/or +46 – 53 V DC |
| Protection class according to DIN EN 61140 | Protection class I |
| Power consumption | max. 600 W Stand by: ca. 25 W |
| Dimension (L x W x H) | 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 the rear side with optional cable trap plate |
| Degree of protection | IP20 |
| Temperature range | Operation: -5 °C to +55 °C |
| Cooling | passiv, fanless |
| Front side display elements | <p>LED indicators:</p> <ul style="list-style-type: none"> - power supply AC/DC - operation - voice alarm condition <ul style="list-style-type: none"> - failures (intern and extern malfunctions, power supply mal function, amplifier/loud speaker malfunctions) - Audio-bus link 1 and 2 - Ethernet-status link 1 and 2 <p>Piezo buzzer</p> |

TECHNICAL DATA

GENERAL PROPERTIES

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|-------------------------------|---|
| Front side operating elements | Test button Display elements Alarm cancel/reset button Acknowledge fault button Delayed alarm on/off button or customer-specific function |
| Extension slots | 4 module slots: - of these used: 1 x measurement and line cards - 3 slots free for: - 4 x audio-in card - 4 x audio-out card - 8 x/8 x GPIO card with optional monitored input contacts - Card for expanding the parametric equalizer |
| Compliance | CE, RoHS, electrical safety and EMC EN 50121-4 (railway application)), for more see CE Declaration of Conformity Option: EN 54-16 (voice alarm system) |

TECHNICAL DATA

INTERFACES

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|-----------------------|--|
| AF inputs | no onboard retrofittable with 4 x Audio-In card or parametric equalizer card |
| AF output | 2 x audio output (onboard): - electrically symmetrical - output level up to +8 dBu further retrofittable with 4 x audio-out card or parametric equalizer card |
| Switch inputs | 2 x digital inputs (onboard): - potential-free - 0 – 60 V DC input voltage range, threshold value at approx. 15 V DC - Load less than 20 mA at 60 V further retrofittable via 8 x/8 x GPIO card |
| Switch output | 2 x digital outputs (onboard): - potential-free - make / brake contacts configurable - max. 60 V / 1 A DC further retrofittable via 8 x/8 x GPIO card |
| Fault message contact | configurable to onboard switching output |

TECHNICAL DATA

ANNOUNCEMENT DEVICE

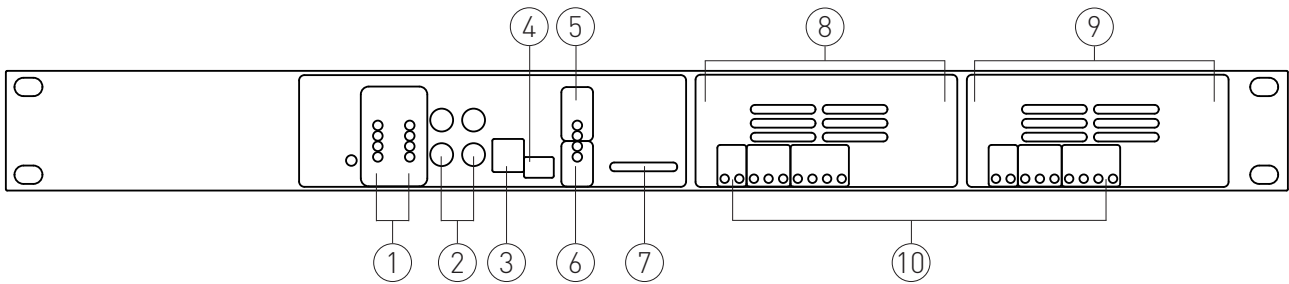
| | |
|--|---|
| CPU equipment | NXP i.MX8MP, 4 x 1.6 GHz, ARM Cortex-A53 |
| Memory | 2 GiB RAM 8 GB eMMC onboard on customer order: 4 GiB RAM, 32 GB eMMC expandable via SDHC/SDXC card, front side |
| LAN | 2 x RJ45 (10/100/1000 MBit/s), rear side on customer order: 1 x RJ45 (10/100/1000 MBit/s) |
| Service interface | miniUSB 2.0 A/B, front side |
| Network protocols | Network: static/DHCP configuration, DNS, NTP Announcement assignments: JSON-RPC and customized processes Live announcements: VoIP/SIP and customized processes Monitoring: SNMPv2 and customized processes on customer order: Other (customer-specific) network protocols |
| Number of simultaneous and different announcements | max. 12 |

AMPLIFIER

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|-----------------------------|---|
| Amount, class | 2 amplifiers, class D |
| Output power | 250 W per amplifier at 100 V |
| Distortion factor | < = 1% at nominal capacity |
| Monitored output lines | 4 (2 x amplifier with A/B line outputs) |
| Galvanic isolation | one galvanic group per amplifier, the amplifiers are galvanically isolated from each other and from all other circuits |
| Front side display elements | Voltage supply, defect on speaker line, short to ground, amplifier overload, amplifier error, input level, channel assignment |

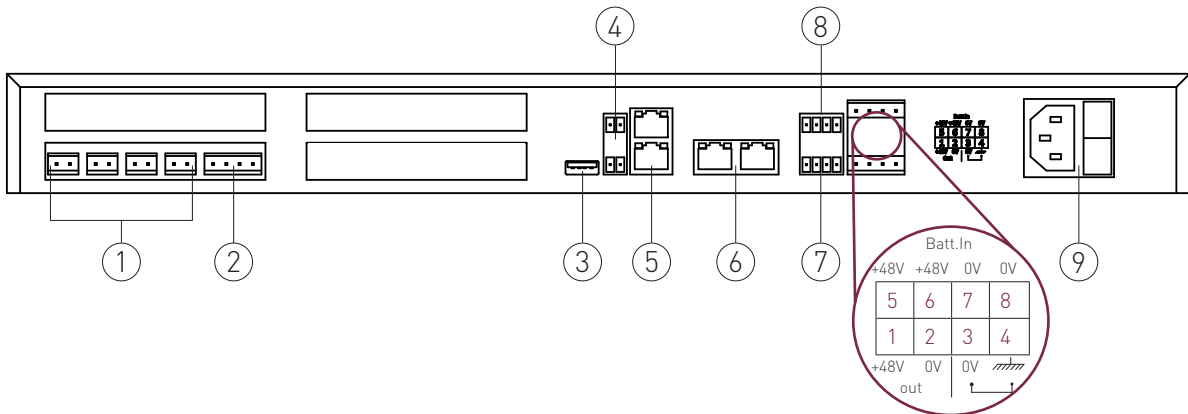
TECHNICAL DATA

Figure 1 Connection designation of the front view



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|------------------------------|-------------------|-------------------------------|
| 1 Status display | 5 AudioBus status | 8 Amplifier 1 |
| 2 Operatingfield | 6 Ethernet status | 9 Amplifier 2 |
| 3 Address selector | 7 SD card | 10 Amplifier status indicator |
| 4 miniUSB maintenance access | | |

Figure 2 Connection designation of the rear view



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|-----------------------|------------------------|------------------------------|---|
| 1 100 V Speaker lines | 5 Ethernet connections | 9 230 V input + power switch | 1/2 +48 V DC auxiliary voltage output (max. 200 mA) |
| 2 Accident input | 6 AudioBus connections | | 3/4 Potential equalisation, earth connection |
| 3 USB connection | 7 Switching inputs | | 5-8 +48 V DC input |
| 4 AF outputs | 8 Switching outputs | | |

ARTICLE NO.

| | |
|--|--|
| 3611.000-01124 (CuraG3 – ASG+2Ampl.250W+Ext) | CuraG3 PA system with 2 x 250 W amplifier, expandable (Type Cura42B) |
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