

oratis

Intercom Solution

New All subscribers now
with Dante interface



First Class Communication

The **oratis** Intercom System provides an ideal communication platform for TV production and theatre, including a fully summing audio matrix with up to 4096 inputs and outputs.

- + Scalable System
- + Universally applicable
- + Ready to use
- + Intuitive, network-enabled configuration software
- + Highest reliability
- + Scalable redundancy
- + Maximum cost efficiency
- + Secure long-term investment
- + Future-proof thanks to Audio over IP technology
- + Leading edge technology on the market
- + German quality product

member of the
SALZBRENNER STAGETEC
MEDIAGROUP

DELEC
MADE BY EXPERTS

The *oratis* digital platform

An extensive range of Matrix Cards is available for configuring an *oratis* intercom system – the application determines the choice.

The Matrix Frames offer high packing density. Each Matrix Frame is capable of summing up to 256 channels to each output. This allows for almost unlimited listening sums or large conferences.

Combining multiple Matrix Frames results in systems with up to 4 096 ports that can all be active simultaneously. Networking of the Matrix Frames is achieved with fibre-optic cabling using Gigabit Ethernet layer-2 protocol. This protocol allows for direct connections between Matrix Frames, whilst also enabling remote frames to be connected using managed Gigabit

Ethernet switches. Modular Mainframes MF4 of the *oratis* series and communication units of the *oratis compact* series are combinable.

The *oratis* R4000 network node connects individual *oratis* Matrix Frames to a star-shaped network. The R4000 allows full cross-linking of all communication and audio channels.

Within a production area each Matrix Frame can be seen as an autonomous system.

When networked with the R4000 router, this sub-segment can communicate with the frames of the other production islands. Thus, modern distributed systems can be designed, for both local and global use.

GPIO devices are connected to the *oratis* system via Ethernet. This enables them to be installed exactly where they are required.



Matrix-Frame MF4

Matrix Frame Features

- Fully summing audio matrix with 24 bit / 48 kHz audio quality
- 32-bit TDM bus for up to 256 signals
- Hot-swap capable Matrix Cards, Matrix Frames and power supplies
- Expandable during operation
- Fully redundant clock distribution
- External word clock input
- Expandable by networking multiple Matrix Frames
- SNMP supported



Router R4000

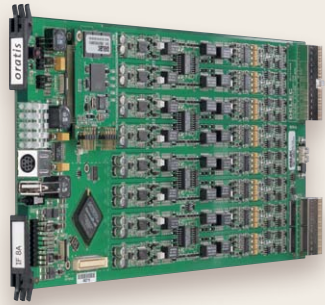
Features Router

- 8 Segments for up to 4 Matrix Frames each
- Expandable by cascading - up to 4 096 ports
- Routing capacity for 1 024 fully summing ports
- Highest reliability thanks to master-slave redundancy



Name	Rack Units	max. Number of Slots	max. Number of Ports	Other
MF4	4	15	<ul style="list-style-type: none"> • Max. 256 Ports • 120 Ports for Subscriber Panels 	<ul style="list-style-type: none"> • 4 - 128 per Card Slot, • Digital Signal Processing • Redundant Power Supply
R4000	2	8 Segments	<ul style="list-style-type: none"> • 1 024 Ports • 4 096 Ports by cascading four R4000 	<ul style="list-style-type: none"> • Digital Signal Processing • 128 Ports per segment, non-blocking • Redundant power supply • Redundant clock distribution

Matrix Cards and GPIO32



Matrix Card

Matrix Cards Features

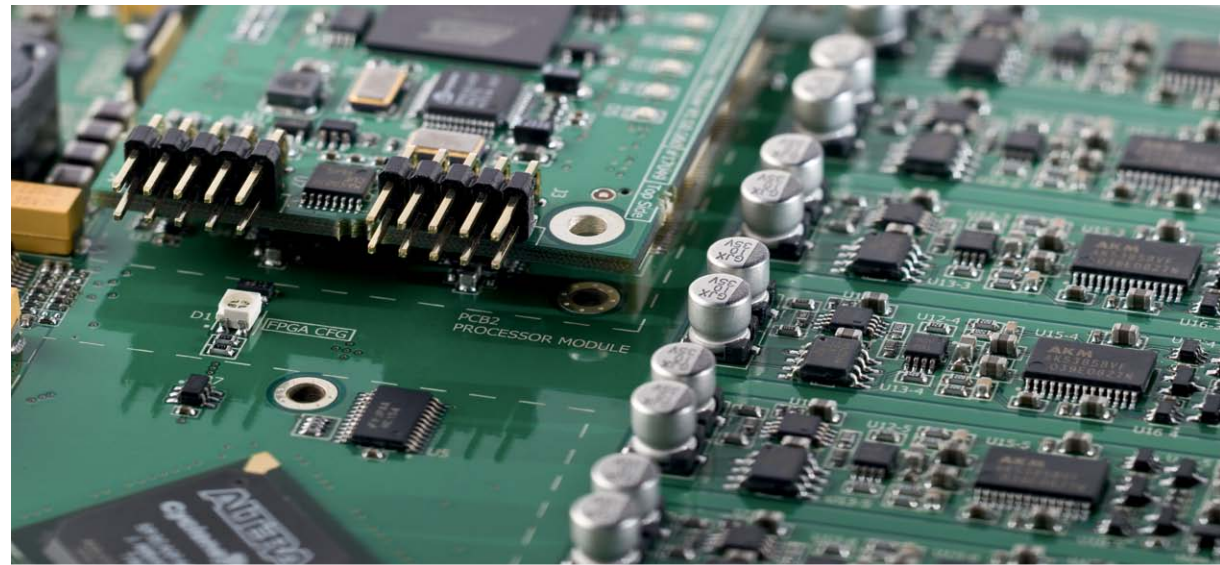
- Broadcast audio quality
- Sampling rate: 48 kHz with 24 bit word length
- Audio processing with flexible FPGA technology
- Matrix Cards available supporting all relevant audio formats
- 4 to 128 ports per card (depending on the card type)
- Number of ports per card freely scalable
- Optional DSP for input and output channels



GPIO32

Features GPIO Interface

- 16 opto-electronic inputs
- 16 relay switch contacts
- Connected via Ethernet
- +5V and +24 V auxiliary power supply
- Up to 2 GPIO32 in 19" / 1 RU



Interface Cards

Name	Number of Ports max. Channels	Interface	Format	Other
IF 8A	8 / 8	RJ45	Analogue audio connection	Board for 4-wire connections and Subscriber Panels
IF 8DIG	8 / 16	RJ45	AES3	Board for 4-wire connections and Subscriber Panels
IF 8COAX	8 / 16	BNC	DELEC coax with AES3	Board for Subscriber Panels
IF 8PL	8 / 8	D-SUB 25	Analogue audio connection	2-wire board for eight mono or four two-channel belt pack connections
IF MADI1	1 / 64	LC (SFP-Module)	MADI interface	4-wire board, 64 bidirectional audio channels
IF Dante	1 / 64	RJ45	Dante (AVB ready)	64 bidirectional audio channels, depending on the Dante™ network configuration
IF Link	1 / 128	LC (SFP-Module)	Gbit Ethernet layer 2	Redundant fibre connection board for system interconnection
DSP 1	Depending on the application – / 16	Plug-on module for all Matrix Cards	Various algorithms on request	SHARC DSP

GPIO Interface

Name	Rack Units	Inputs and Outputs	Other
GPIO32	1	<ul style="list-style-type: none"> • 16 Opto-electronical inputs • 16 Relay switching contacts 	<ul style="list-style-type: none"> • +5V and +24 V auxiliary power supply • Screw terminal

The digital *oratis* subscriber units

The *oratis* series offers subscriber panels in two basic versions, both of which display the call destinations with up to 18 characters of full text.

The subscriber panels equipped with extra-large LCD buttons offer superior convenience and are also furnished with a rotary encoder per button for rapid adjustment of crosspoint volume. However, the compact subscriber units with one large display and smaller keys offer higher packing density.

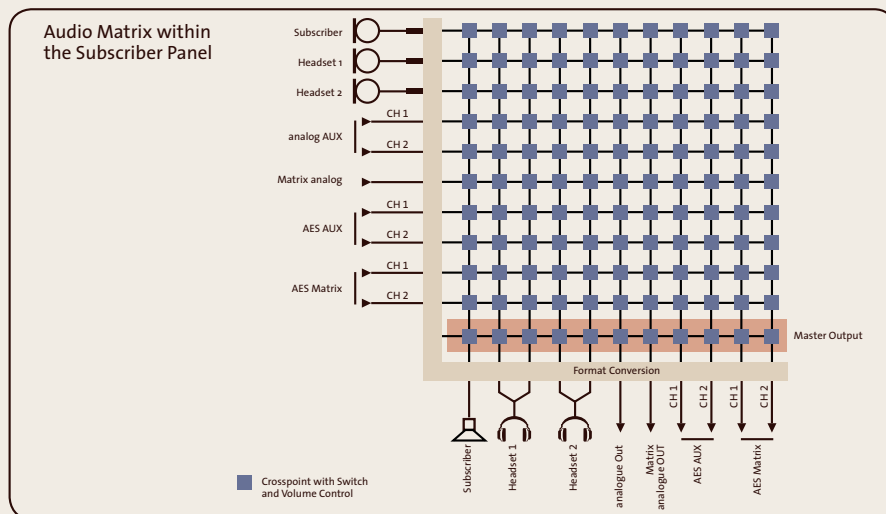
The standard subscriber panel includes an internal audio matrix for routing signals to connected headphones, speakers and other destinations. The Lite version with reduced audio connectivity is an interesting alternative for less complex applications. All subscribers are now available with Dante interface.



Features* Subscriber Units

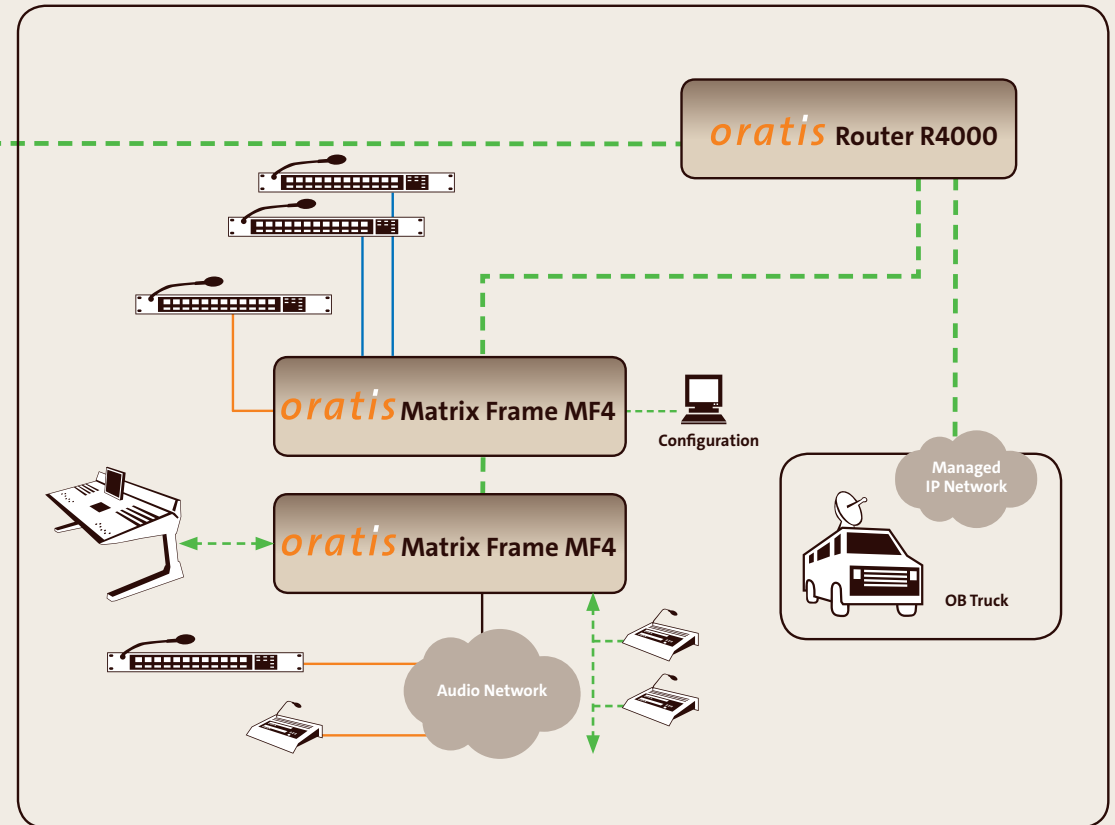
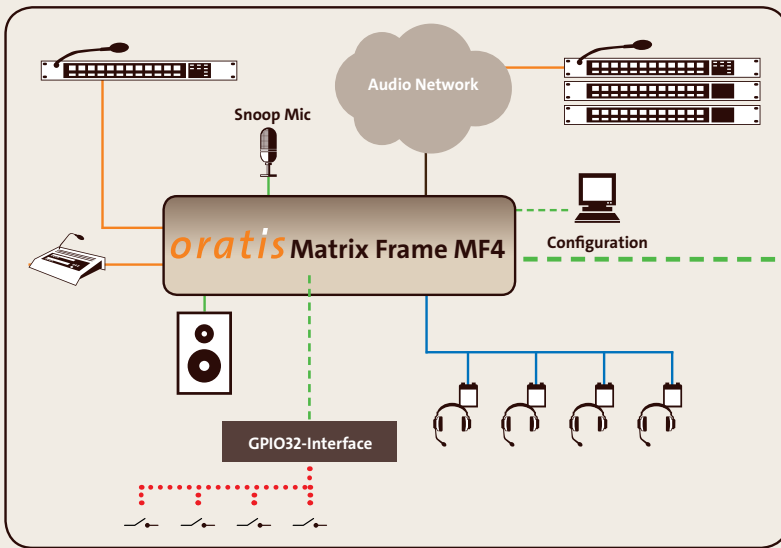
- Coloured display lights
- 18 characters per key
- Individual display and volume adjustment for each crosspoint
- 2 high quality microphone ports with phantom power (Lite: one mic port)
- External speaker port (Lite: not available)
- 4 layers per key
- Up to 7 key extensions per subscriber unit
- 2 bi-directional audio channels to the Matrix Frame, via a standard AES3 interface
- Removable microphone
- Internal audio matrix (Lite: not available)
- all subscribers are now available with Dante interface

*Features of the Lite versions in brackets



Type	Size	Subscriber Buttons	Headset Interface	Auxiliary Analogue	Auxiliary AES3	Matrix-Interface	GPI
Talk 12X	19"/1RU	12	2	2 Ch In 2 Ch Out	2 Ch In 2 Ch Out	AES3, Coax Analog, RS232	3 In / 4 Out
Talk 12LX	19"/1RU	12	1	-	-	AES3, Coax	3 In / 4 Out
Talk 12X Dante	19"/1RU	12	1	-	-	AES3, Coax, Dante	3 In / 4 Out
Key 16X	19"/1RU	16	-	-	-	-	-
Talk 16	19"/1RU	16	2	2 Ch In 2 Ch Out	2 Ch In 2 Ch Out	AES3, Coax Analog, RS232	3 In / 4 Out
Talk 16L	19"/1RU	16	1	-	-	AES3, Coax	3 In / 4 Out
Talk 16 Dante	19"/1RU	16	1	-	-	AES3, Coax, Dante	3 In / 4 Out
Key 16	19"/1RU	16	-	-	-	-	-
Desk 16	Desktop Subscriber	16	2	2 Ch In 2 Ch Out	2 Ch In 2 Ch Out	AES3, Coax Analog, RS232	3 In / 4 Out
Desk 16L	Desktop Subscriber	16	1	-	-	AES3, Coax	3 In / 4 Out
Desk 16 Dante	Desktop Subscriber	16	1	-	-	AES3, Coax, Dante	3 In / 4 Out

One System – Many Applications



- analogue Audio
- MADI
- AES3
- Ethernet
- GBit-Ethernet (redundant)
- ↔ Dante™
- GPIO
- Intercom Subscriber Panel