



## com.sat Multichannel PRA

- GSM-Gateway with up to 64 channel for a high volume of traffic
- Saving communication costs for calls to or from a GSM network
- LCR also for routing to the fixed network
- Programmable via RS232 or Ethernet (IP)
- Easy to use e-mail / SMS - Gateway (optional): send/receive SMS from any e-mail program
- Versatile technical support (e-mail, telephone)
- Including antenna solution and software package

## Applications:

The coM.sat Multichannel PRA is based on long and approved ISDN-GSM technology of coM.sat. Built into a 19" rack, the Multichannel PRA has 2 separate PRI ports and a maximum of 64 GSM channels. By using antenna combiners 32 GSM channels can be served with only one dual-band antenna. This saves space and installation time. Antennas as well as cable can be delivered individually to each concerning specification. Providing a flexible LCR all customers are able to use the Multichannel PRA to their very own needs and to save as much money as possible. Remote access is achieved either via GSM or Ethernet. All call records can be accessed, saved and automatically exported to any database, online. A visualization software provides the graphical formatting of the data.

Once the GSM Gateway is connected to an internal or external PBX Port it functions like a mobile phone, by installing SIM-cards (3V). Calls from internal DDIs to the GSM network are routed by the PBX to the GSM-Gateway. This way, the PBX connected to the GSM-Gateway is able to set up calls inside the GSM network. Calls from the PBX (PRI 1/2) to GSM networks are routed over the SIM cards, which are installed in the gateway (e.g. best VPN or flatrate tariff).

### Call Center

**GSM Gateway:**  
Termination of calls to the GSM network only.

A coM.sat Multichannel makes up to 60 simultaneous calls possible. Traffic from the diaer on one or two PRI is routed to up to 64 GSM channels.

### Small- to medium-size companies

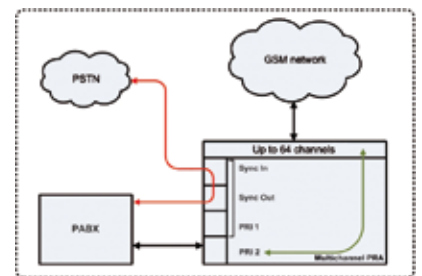
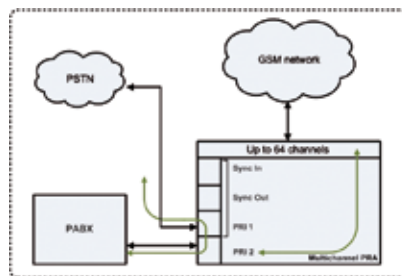
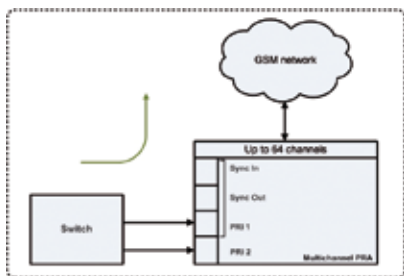
**GSM/PSTN Router:**  
Termination of calls through the coM.sat Multichannel PRA to PSTN and GSM network.

All connections to and from PSTN and GSM network are routed through the PRA.

### Large companies

**GSM Adapter:**  
Externally synchronized GSM adapter, for PBX with additional fixed network interface.

Connections to and from PSTN are looped through the PRA for synchronization purposes without being affected.



## What are the advantages of the coM.sat Multichannel PRA?

- coM.sat Multichannel PRA is connected with a max. of two PRI ports
- Reducing fixed to mobile, mobile to fixed communication costs by 50% to 70% (average, depending on e.g. tariff and/or country)
- Simultaneous usage of SIM-cards by different providers possible
- Modular system for small-/medium-/large-size companies
- The connected PBX does not need a PSTN line at all, when using the PRA as an WLL (Wireless Local Loop) solution
- The coM.sat Multichannel PRA can be used as SMS server to send SMS messages directly from an e-mail client (e.g. Outlook, Lotus Notes)

## How does the coM.sat Multichannel PRA work?

- Calls from fixed to GSM networks will be directed from the PBX to the GSM Gateway coM.sat Multichannel PRA. The GSM Gateway automatically dials the called number
- Calls from the PBX to the GSM network can be routed over the preferred SIM card with the best tariff (routing inside Gateway)
- Using the low-cost mobile tariff calls can be made from the GSM network to extensions of the PBX



## Technical Data:

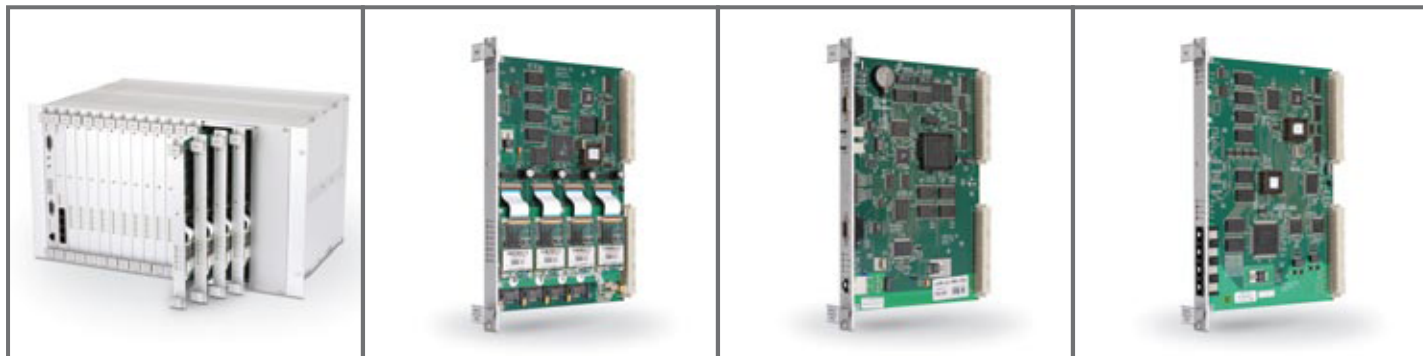
- Dimensions: 485x265x325mm (19", 6HE)
- Weight: approx. 20kg (PRA with 64 channels)
- Power supply: 220-240V AC, 50/60Hz
- Power consumption: max. 1,6A operating
- GSM 900/1800 Standard or
- GSM 800/900/1800/1900 (optional)
- Voice
- SMS (receiving/sending)
- 3V SIM-card
- Antenna: 50 Ohm Impedance
- Temperature: 0°C - 45°C (indoors)

## Router Functionality:

- Fast routing: typical delay < 200ms (between ISDN-SETUP and dialing to GSM)
- Up to 3000 entries in routing table available
- Routing to GSM or PSTN (PRI1/2)
- Routing between the two PRI ports
- Number grouping by operator prefixes or routing hints
- LCR (Least Cost Routing) depending on time/date
- Maximum allowed time per route
- Billing information per route (AOC-D, AOC-E) programmable
- Return Call Handling
- Call Through
- The GSM channels can be assigned to the B-channels to do routing from PBX/switch

## Synchronization:

- Synchronize clock to signal on PRI1 or PRI2
- Get clock from additional sync input
- Generate clock internally
- Interfaces operating in NT mode can be configured as clock slave as well



## Interfaces, Protocols:

- Protocol: 2 x E-DSS1 S2M (PRI, E1)
- All layers (1-3) of both ports can be configured independently (NT or TE mode)
- B-channels: up to 60
- Clock: 2 Mbit/s, Master or Slave, synchronisation to PRI1, PRI2 or separate Sync input
- Protocol: GSM phase 2+
- Channels: up to 64 GSM channels in steps of 4

## Signalling:

- CALL-PROCEEDING, ALERTING (user free), CONNECT
- User selectable Progress Indicator to make in-band-informations audible
- Translation table for GSM and ISDN are causes for DISCONNECT, RELEASE and NO CARRIER
- User free CLIP and CLIR
- Programmable AOC generation