



# Your Highway to GSM/3G Networks VoIP/PRI – GSM/3G Multichannel Gateway

- Ideal tool for alternative carriers
- Scalable capacity (up to 32 GSM/3G channels)
  - VoIP interface
- Up to 8 SIM cards per channel
  - 2 ISDN PRI connections
  - Sophisticated LCR
- Voice and SMS transmission
  - Worldwide use
- Comfortable remote control and management

Wireless  
Modules  
by Siemens  
embedded



  
STARGATE

## **ATEUS® – StarGate**

### Your Highway to GSM/3G Networks VoIP/PRI – GSM /3G Multichannel Gateway

The ATEUS® – StarGate is a VoIP/PRI GSM/3G gateway with up to 32 GSM/3G channels. It's an ideal equipment for large corporations with high proportion of calls to GSM/3G networks and for alternative carries as the StarGate gateway is a great tool for terminating calls providing maximum performance, stability and reliability. Thanks to its scalability you can create a tailor made solution according to your needs. You can benefit from a mixture of GSM/3G channels, 2 ISDN PRI ports, VoIP interface and additional software solutions. If the StarGate is used, you gain substantial savings on calls, as all calls aiming for GSM/3G networks are routed through this gateway. Thanks to the efficient and sophisticated LCR (Least Cost Router), the calls are always routed in the cheapest possible way as there is taken into consideration time of call, prefixes of operators, free minutes on the SIM cards. As the StarGate gateway has been enhanced with a VoIP interface, there is no need to install an external VoIP gateway.

There are 2 main advantages of 2 PRIs over to just 1 PRI port:

- no need of any additional PRI card in the company PBX
- no need to change the configuration of the PBX, everything is programmed in the gateway

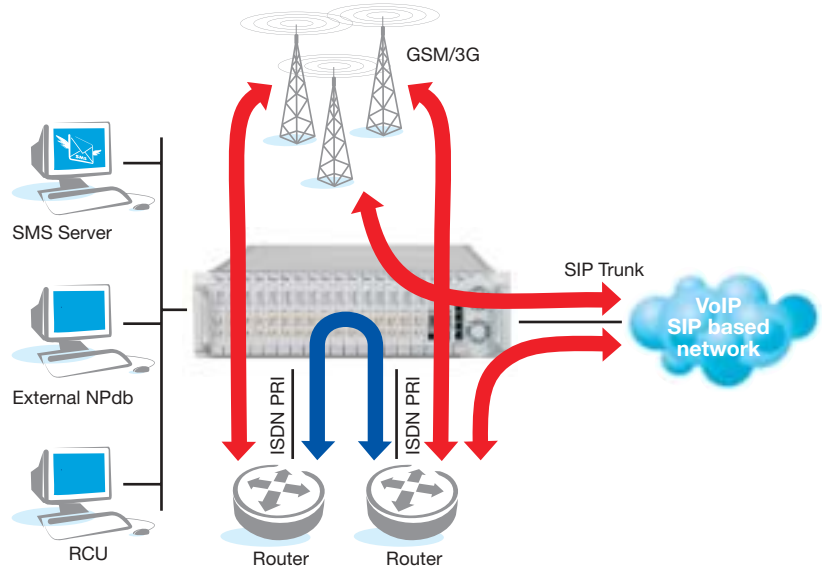
SMS and Voice CallBack is a software solution with authorization and restriction capabilities. It's mostly utilized by company staff who are in the field. This software contributes on higher savings on calls.

  
TELEKOMUNIKACE

# ATEUS® – StarGate

## Features:

- Up to 32 GSM/3G channels (hot swappable)
- 3G network support
- Up to 8 SIM cards per channel
- Up to 2 ISDN PRI interfaces
- VoIP interface
- Efficient Least Cost Routing (LCR) according to free minutes, prefixes of operators, call time etc.
- Dynamic Clip Routing
- Large memory (250 thousand) for detailed call data records
- Correct tone detection
- SMS and Voice CallBack
- Support of SMS sending and receiving
- Antenna splitter – two high gain YAGI antennas for the whole system
- Comfortable remote control and management
- Support of external number portability database (NPdb)
- Compact design
- Worldwide use (all frequencies are supported) \*



| Item description                                                                                          | Part No. |
|-----------------------------------------------------------------------------------------------------------|----------|
| Basic unit (CPU, PSU, AUX and 1 PRI)                                                                      | 507000E  |
| Basic unit (CPU, PSU, AUX and 2 PRI)                                                                      | 507010E  |
| GSM card (2 GSM channels, 4 SIM holders per GSM channel) with 2 Siemens TC35i modules (900/1800 MHz)      | 507002E  |
| GSM card (2 GSM channels, 8 SIM holders per GSM channel) with 2 Siemens TC35i modules (900/1800 MHz)      | 5070022E |
| GSM card (2 GSM channels, 4 SIM holders per GSM channel) with 2 Siemens MC46i modules (850/1800/1900 MHz) | 507006E  |
| StarGate SMS user license                                                                                 | 5070994E |
| StarGate Look Up license                                                                                  | 5070993E |

## Technical parameters

| PRI ISDN                       |                                                                                                                                                         |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of ports                | 1x NT/TE or 1x NT + 1x TE                                                                                                                               |
| PRI ISDN details               | S interface<br>signaling EDSS1 (Q.931)<br>QSIG (1x PRI)<br>SS7 (ISUP)                                                                                   |
| Synchronization                | Connection via RJ45 connectors<br>Master/Slave                                                                                                          |
| VoIP**                         |                                                                                                                                                         |
| Voice signalling               | SIP                                                                                                                                                     |
| Number of voice channels       | 32                                                                                                                                                      |
| Codecs                         | G.711 PCM at 64 kbps<br>G.726 and G.727 E-ADPCM at 16 to 40 kbps<br>G.729/Annex A CS-ACELP at 8 kbps<br>G.723.1 (optional) MP-MLQ/ACELP at 6,3/5,3 kbps |
| Echo Cancellation              | G.168-2000; max. echo length 25 ms (15 ms for G.729A)                                                                                                   |
| VAD/CNG                        | G.729B for G.729A coders                                                                                                                                |
| (Silence Suppression)          | G.723.1A for G.723.1 coders                                                                                                                             |
| PCM Companding                 | A-law/u-law (selectable)                                                                                                                                |
| GSM                            |                                                                                                                                                         |
| GSM channels                   | From 2 to 32 (step 2)                                                                                                                                   |
| Network types                  | 850/900/1800/1900 MHz*                                                                                                                                  |
| GSM engine                     | Siemens TC35i, MC45, MC46                                                                                                                               |
| Transmitter power              | 2 W (1 W)                                                                                                                                               |
| SIM card                       | Small plug-in, 3 V                                                                                                                                      |
| Antenna connector              | SMA (female) Impedance 50 Ω                                                                                                                             |
| External antenna splitter      |                                                                                                                                                         |
|                                | Integrated overvoltage protection                                                                                                                       |
| Input connector                | SMA (female) Impedance 50 Ω                                                                                                                             |
| Output connector               | N type female, impedance 50 Ω                                                                                                                           |
| Isolation between two channels | > 20 dB                                                                                                                                                 |

| Antenna               |                                                                                                                    |
|-----------------------|--------------------------------------------------------------------------------------------------------------------|
| With splitter         | High gain YAGI dualband                                                                                            |
| Without splitter      | Small dualband discreet antennas                                                                                   |
| Mains                 |                                                                                                                    |
| Power supply          | 100–240V/50–60 Hz or 36–70 V DC***                                                                                 |
| Power input           | Max. 230 VA                                                                                                        |
| Local control         |                                                                                                                    |
|                       | 2x RS232 serial connection<br>D-Sub 9 pin connector<br>Transmission rate 57600 bps                                 |
| Remote control        |                                                                                                                    |
|                       | External Analog, ISDN or GSM modem<br>TCP/IP (Telnet protocol)<br>PRI ISDN DATA<br>HTTPS, SSH, SNMP, SMS, SMTP**** |
| Others                |                                                                                                                    |
| Dimensions            | 482x133x360<br>(84HPx3Ux360 mm)                                                                                    |
| Weight                | 9.8 kg                                                                                                             |
| Operating temperature | 20–50 °C                                                                                                           |
| Relative humidity     | Max 95 % at 40 °C                                                                                                  |
| Recommended           | Air condition, Line interactive UPS                                                                                |

- \* depends on the GSM engine type
- \*\* optional
- \*\*\* separate part number
- \*\*\*\* with the ATEUS® – RCU

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