

# DinBox GSM M4

Industrial GPRS/LTE Cat.M1 Modem

*Designed by Bausch Datacom!*

## GPRS/LTE Cat.M1 Modem

The DinBox GSM M4 modem is a versatile communication device designed to provide flexible data communication solutions for industrial environments. It includes up to 5 different AC and DC power supply options, holds a watchdog circuit to insure continuous operation and a Sierra Wireless communication module. In addition, the modem has a RS-232 interface and a galvanically isolated RS-485 interface. Everything is managed by a powerful Cortex M4 microcontroller. Lastly, the modem is built into a standard DIN rail mountable housing.



### Product Highlights

- GPRS/LTE Cat.M1 Communication
- 1X DI & 1X DO
- Serial transparent Communication
- Ethernet Routing
- TLS Security
- Supercap 'Last gasp'
- DINrail

### Typical Applications

- GSM modem with 4 standard working modes
  1. CSD
  2. TCPserv
  3. TCPclient
  4. Basic TCP/IP router

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## DinBox GSM M4 specifications

The DinBox GSM M4 modem configuration can be done locally via the HTML GUI (graphical user interface), through the LAN interface. The modem has 4 working modes :

1. CSD standard 2G GSM data connection, to connect a serial device
2. TCPserv used to IP connect a serial non-IP device in PULL mode
3. TCPclient used to IP connect a serial non-IP device in PUSH mode
4. Basic TCP/IP routing used to access a device with a standard TCP/IP LAN connection

Furthermore, thanks to the Bausch 'M4' design, it is possible to implement other functions on the DinBox GSM M4 hardware design; for example a modbus (RS-485) to IEC 60870-5-104 gateway

### Housing

- Bernic 1570 housing – 9 modules wide
- Black base part with grey top and transparent lid
- Self-extinguishing according to UL94-V0
- Dimensions 157 x 86 x 58 mm

### Power Supply

- Different options are possible:
- PS1 option AC isolated 85 – 264 Vac / 100 – 370 Vdc [default] - 3.5 Widle - 4.5 Wmax
- PS2 option DC isolated 18 – 75 Vdc
- PS3 option DC isolated 9 – Vdc
- PS4 option DC non-isolated 9 – 57 Vdc
- PS5 option DC non-isolated 10 – 15 Vdc

### Communication Engine

- Sierra Wireless CF3 HL footprint
- 3GPP
  - HL6528 – quad band GSM/GPRS & GSM Data
  - HL6528RD – quad band GSM/GPRS
  - HL8518 – dual band HSPA, GSM/GPRS/EDGE
  - HL8548 – quad band HSPA, GSM/GPRS/EDGE
  - HL7690 – FDE band LTE Cat-1
  - HL7692 – FDE band LTE Cat-1 with dual band GSM/GPRS/EDGE fallback
- LPWA
  - HL7800 – LTE Cat-M1, Cat-NB1
  - HL7802 – LTE Cat-M1, Cat-NB1 with dual band GSM/GPRS fallback
- SIM card and/or eSIM
- eUICC possibilities
- 50 ohm SMA antenna connector

### Environmental

- Temperature in use -25°C / + 55°C
- Humidity in use 10% - 75% (non-condensing)

### Certification

- CE

### Communication Protocols

- IEC 60870-5-104
- FTP
- Modbus

### Processors

- Cortex-M4 (STM32Fxx)

### Firmware

- Dual memory flash bank redundancy
- Different local and remote update possibilities

### Interface & Connectors

- RS-232 full V.24, non-isolated (also used for debugging)
- RS-485 2 or 4-wire, galvanically isolated
- LAN 10/100Mbps/s
- 1x DI non-active 5 - 25Vdc
- 1x DO optomos 'solid state', 600 Vpeak / 90 mAmAx

### Security

- Authentication and Data Encryption via TLS (Transport Layer Security)

### Diagnostics

- Detailed debug and trace information on different levels via different interfaces
- 4 status LEDs

### Configuration

- Local via HTML GUI
- Remote via HTML GUI & Telnet commands

### Watchdog

- On different levels, working mode dependent:
- Periodical hardware reset
- Triggered by transmitted/received data
- Periodical PING response check

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