OVERDIGIT GWP32 GSM GPRS Gateway User Manual

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OVERDIGIT

OVERDIGIT GWP32 GSM GPRS Gateway

Specifications

- **Product Name:** GSM/GPRS gateway GWP32 series IPC-line
- **Manufacturer:** OVERDIGIT
- **Update Date:** 22-03-2012
- **Website:** https://manual-hub.com/

Installing the SIM card and mechanical fixing

The GWP32 modem requires the installation of a SIM card for a GSM/GPRS connection. Follow the steps below:

1. Insert the SIM card into the slot on the back of the unit.
2. Ensure the SIM card is retained by the spring of the locking system.
3. Pay attention to the correct direction indicated in the figure provided.

To remove the SIM card, press it further to disable the locking system and expel it from the slot. After installing the SIM card, you can fix the GWP32 gateway on a DIN rail using the clip provided on the back.

Note: Keep the antenna away from metal objects or other apparatus.

Electrical connections

All the electrical connections of GWP32 are accessible on the front panel. Refer to the picture below for possible connections and pin-out of connectors.

Note: The RS485 signal lines are indicated with 485+ and 485-, where the polarity refers to the active state of line driving (transmission of bit 0).

To use the COM1 serial port, configure the following parameters in the file CHIP.INI:

- Item [PLC_CFG]
- **COM1_HW:** COM1
- **Value:** RS485 USER
- **Description:** Section of PLC configuration parameters, Select type of hardware driver for the port, Select the software use of the port (USER: available for the IEC application through the libraries, PROG: used for the CoDeSys online connection)

Points of intervention and signaling

To handle the START/STOP of the IEC program, the GWP32 has a button on the front panel. Follow the steps below:

1. Use a thin object with a diameter not exceeding 1 mm.
2. Press the button to invert the RUN/STOP state of the program.
3. To block the execution of a wrong IEC program, power on the unit with the button pressed until the STOP status is reached.

The front panel also features 5 LEDs that indicate the current status of the GSM/GPRS modem, the RUN/STOP of the IEC program, and the proper power supply of the device.

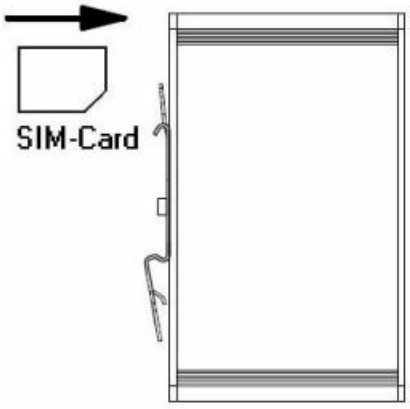
Configuration of the GSM/GPRS modem
The GWP32 gateway is installed with a GM01 type GSM/GPRS modem realized with the G24-L module of Motorola. The GM01 modem can establish a permanent connection to the Internet using PPP (Point to Point Protocol) over GPRS. This can be done in two alternative ways:

1. Installing the GPRS_PPP.EXE driver into the autoexec.bat file
2. Using function blocks of MODEM_Lib.lib into the IEC program

INSTRUCTION

Installing the SIM card and mechanical fixing

- The GWP32 modem requires, for GSM/GPRS connection, the installation of a SIM card.
- The SIM card must be inserted into the slot on the back of the unit before fixing it mechanically on the DIN rail. Insert the SIM card until it is retained by the spring of the locking system, paying attention to the correct direction indicated in the figure below:

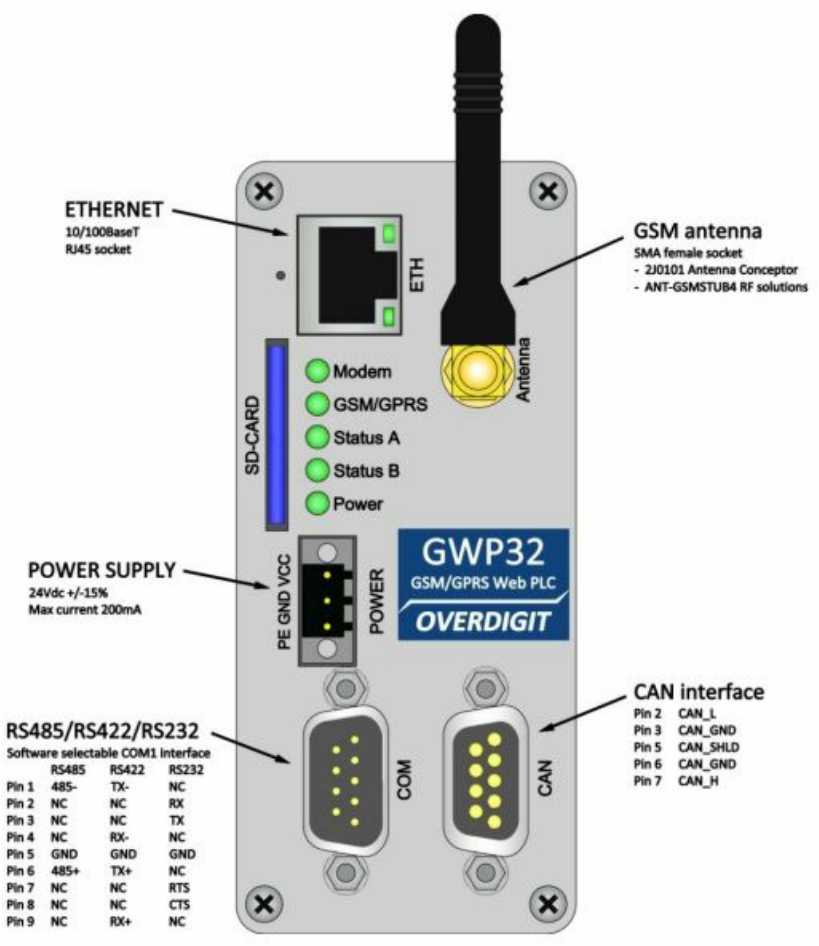


- To remove the SIM card, press it further, to disable the locking system with the subsequent expulsion.
- After installing the SIM card you can fix the GWP32 gateway on the DIN rail using the clip provided on the back as indicated by the following illustration:

NOTE: The GWP32 gateway must be installed taking care to keep, as much as possible, the antenna away from metal objects or other apparatus. Are available antennas of different types, also equipped with a magnetic support and connection cable, which can be installed in different and unshielded positions.

Electrical connections

All the electrical connections of GWP32 are accessible on the front panel. The picture below shows the possible connections and the pin-out of connectors:



NOTE: The RS485 signal lines are indicated with 485+ and 485- where the polarity refers to the active state of line

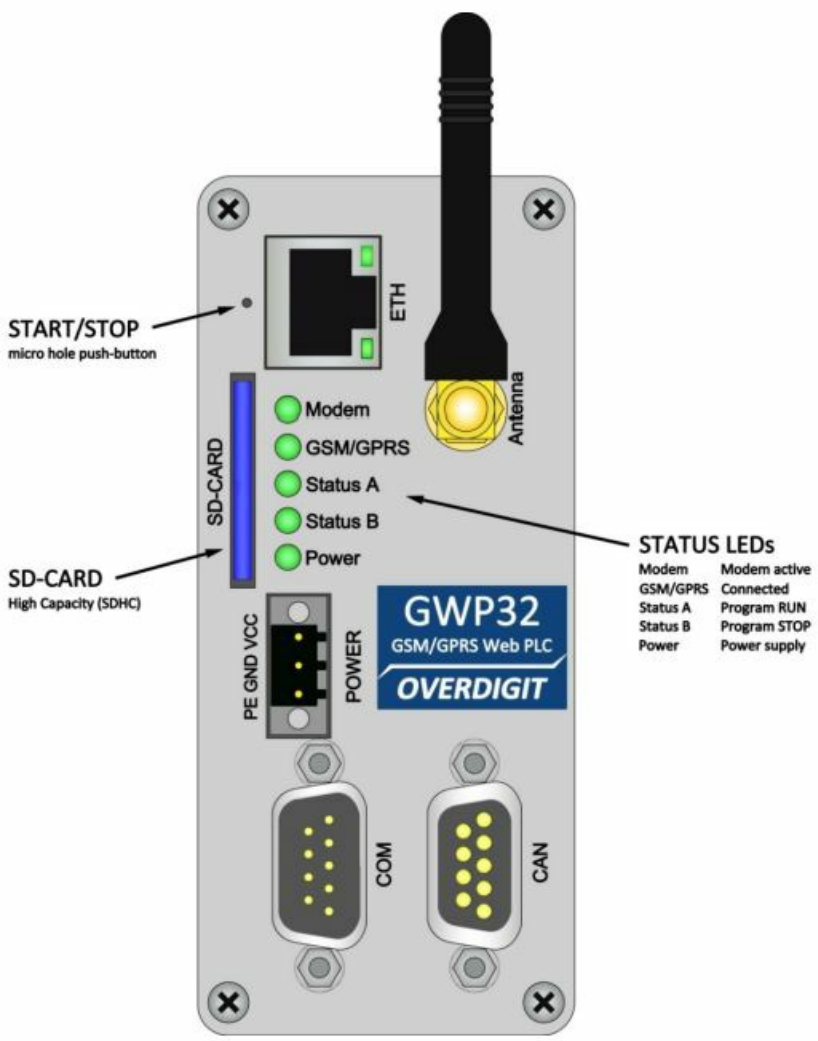
driving (transmission of bit 0). In other systems, the signals are indicated by the letters A and B, and normally A=485- / B=485+ is the corresponding connection.

To use the COM1 serial port the following parameters must be configured in the file CHIP.INI:

Item	Value	Default	Description
[PLC_CFG]			Section of PLC configuration parameters
COM1_HW	RS485 / RS422 / RS232	RS485	Select type of hardware driver for the port
COM1	USER / PROG	USER	Select the software use of the port USER: available for the IEC application through the libraries PROG: used for the CoDeSys online connection

Points of intervention and signaling

- The GWP32 gateway has a slot on the front panel to install an SD card memory used as a hard disk additional to the internal drive. Is usable both a normal SD card, the first generation, and the newer SDHC high capacity that can store many gigabytes of data.
- To use the SD card the driver program EXTSD.EXE must be inserted into the autoexec.bat file, specifying as a parameter the name of the disk to be installed (for example B). Normally the device is provided with the driver already installed for disk B.
- To handle the START/STOP of the IEC program, the GWP32 has a button on the front panel that can be accessed through a thin object with a diameter not exceeding 1 mm. At each press of the button, the RUN/STOP state of the program is inverted. This function can also be used to block the execution of an IEC program that is wrong. In this case, the unit must be powered on with the button pressed until the STOP status is reached.
- On the GWP32 front panel are also 5 LEDs that indicate the current status of the GSM/GPRS modem, the RUN/STOP of the IEC program, and the proper power supply of the device.



Configuration of the GSM/GPRS modem
In the GWP32 gateway is installed a GSM/GPRS modem of GM01 type realized with the G24-L module of Motorola.
The GM01 modem can realize a permanent connection to the Internet using PPP (Point to Point Protocol) over GPRS. This can happen in two alternative ways:

1. Installing the GPRS_PPP.EXE driver into the autoexec.bat file
2. Using function blocks of MODEM_Lib.lib into the IEC program

In case 1, the GPRS_PPP.EXE connection program should be included in the autoexec.bat file and the operating parameters should be set into the CHIP.INI configuration file.
In this way, after the booting process on power-on, it will run the GPRS_PPP.EXE program that requires a certain time (about 30 “) to establish a permanent connection to the Internet.
To allow other programs, for example, the IEC application, to know the connection status, an item of the configuration file, named PPP_STATUS, is available.

Furthermore, by setting to 1 the value of the BATCHMODE item in the [BATCH] section, you can postpone the next scheduled program (CoDeSys Run Time System) at the connection established. The BATCHMODE parameter makes it possible to activate the sequential execution of programs listed into autoexec.bat, as an alternative to their simultaneous execution. The GPRS_PPP.EXE driver, when the connection is established, however, restores the simultaneous execution of subsequent programs of the autoexec.bat file, allowing the execution of the CoDeSys Run Time System.

In case 2, the connection functions are handled by the IEC application using the function blocks of the CoDeSys library for the GM01 modem. The integrated management of the modem into the IEC application allows for greater

flexibility and control of the connection functions. Moreover, only in this case, you can use the modem for other functions such as sending and receiving SMS messages. To simplify the parameterization of GM01 modem function blocks you can still use the values set in the CHIP.INI configuration file. These settings are considered as default values for the input variables of the library function blocks. Furthermore, in the absence of the value of a CHIP.INI item, is still used as a fixed value by default.

The following table summarizes the parameters of the CHIP.INI configuration file regarding specifically the functions of the GM01 modem:

Item	Value	Default	Description
[GM01]			Section of GM01 modem parameters
ENABLE	0/1	0	Global enable of GPRS_PPP.EXE driver (0 for not executing the program)
PORT	2	2	Serial port used by the modem (no change)
IGNPIO	0	0	Pin used for the ignition of the modem (no change)
DCDPIO	1	1	Pin used for the modem DCD signal (no change)
RESTPIO	17	17	Pin used for the modem RESET (no change)
SIMPIN	number	blank=disabled	Pin number of SIM card (refer to the operator) Normally left blank (disabled)
PPPAUTH	0÷4	0	Type of authorization for the PPP connection (refer to the operator) 0=No, 1=PAP, 2=CHAP, 3=PAPPEER, 4=CHAPPEER Normally not used (PPPAUTH=0)
PPPUSER	string	blank	The username for the PPP connection (refer to the operator) is Normally left blank (PPPAUTH=0). Used with PPPAUTH > 0
PPPPASSWORD	string	blank	Password for the PPP connection (refer to the operator) is Normally left blank (PPPAUTH=0). Used with PPPAUTH > 0
PPPGPRSCONNECT	string	AT+CGDCONT=1, “IP”,”ibox.tim.it”	String with APN for the PPP-GPRS connection (refer to the operator) Example: AT+CGDCONT=1,”IP”,”ibox.tim.it”
PPPDIAL	string	ATD*99***1#	Dial string for the PPP connection (refer to the operator) Example: ATD*99***1#
PPPIDLETIMEOUT	0÷Sec	0	Timeout in seconds to close the PPP connection in Idle Normally 0 (timeout disabled)
PPPSETNEWGATEWAY	0/1	1	Set the remote peer as a new gateway Normally 1 (enabled)
PPP_STATUS	string	–	Current status of the connection for GPRS_PPP.EXE driver program Values: DISABLED / INIT / INIT_ERR / LINK / RETRY

RETRY_SECONDS	0÷Sec	30	Waiting time in seconds to reconnect after the loss of the Link
MODEMTRACE	0/1	0	Enable debug messages on the Telnet window
[DNS]			Section of DynDNS client parameters
DYNDNS_ENABLE	0/1	0	Enable DynDNS client for GPRS_PPP.EXE driver program
DYNDNS_URL	URL string	members.dyndns. org/nic/update	URL where the service of the DynDNS server is available For “dyndns.com” is: members.dyndns.org/nic/update
DYNDNS_USER	string	name_user	Username to access the DynDNS server, choice to create your account In the default: “name” is the [DEVICE]NAME parameter value in CHIP.INI
DYNDNS_PASSWORD	string	name_password	Password to access the DynDNS server, choice to create your account In the default: “name” is the [DEVICE]NAME parameter value in CHIP.INI
DYNDNS_HOSTNAME	URL string	name.dyndns.org	Host name registered for access the device (example: gwp32.dyndns.org) In the default: “name” is the [DEVICE]NAME parameter value in CHIP.INI
DYNDNS_LAST_IP	IP string	–	Last IP address registered into DynDNS server Permanently stored for not abuse the service
[BATCH]			Section of autoexec.bat execution
BATCHMODE	0/1	0	Simultaneous (0) / sequential (1) execution of programs

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FAQ

- **Q: Where can I find the user manual for the GWP32 series IPC line?**
  - A: The user manual for the GWP32 series IPC-line can be found at https://manual-hub.com/.
- **Q: How should I install the SIM card?**
  - A: Follow the instructions provided in the user manual to install the SIM card correctly.
- **Q: Can I use the COM1 serial port for the IEC application?**
  - A: Yes, you can use the COM1 serial port for the IEC application by configuring the parameters in the CHIP.INI file.
- **Q: How can I handle the START/STOP of the IEC program?**
  - A: Use a thin object with a diameter not exceeding 1 mm to press the button on the front panel and invert the RUN/STOP state of the program.

Documents / Resources

	OVERDIGIT GWP32 GSM GPRS Gateway [pdf] User Manual GWP32 GSM GPRS Gateway, GWP32, GSM GPRS Gateway, GPRS Gateway, Gateway

References

- My Dyn Account
- name.dyndns.org is offline
- Manual-Hub.com - Free PDF manuals!
- User Manual