



GPRS communications with the eWON

TN 09

ver 1.1

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For all eWON types embedding a GSM/GPRS modem

1 Overview

This document gives additional technical information that can be useful for using the eWON Embedded GPRS modem.

The eWON® 4000 embeds a Siemens GSM/GPRS modem with reference: MC35, while the eWON® 2001 or 4001 embeds a Wavecom GSM/GPRS modem with reference Q2426, Q2406 or Q2403.

The device is dual band and supports standard GPRS communication as well as normal dual band GSM communications.

You should also read Technical Note 06, for normal GSM communications operations and configuration.

2 GPRS principle from the user point of view

GPRS operation is different from the common modem operation found in the eWON.

When the eWON uses the GPRS communication, it goes online on Internet with a direct access to the GSM operator's Internet Access Point. As soon as the device is online, it receives an IP address from the operator and it can use all the services from Internet. **Communication cost is not based on the connection time, but on the amount of data transferred**, this means that connection is fast and it can be maintained.

IMPORTANT REMARK: the previous paragraph also means that it is not possible to connect to the eWON using GPRS communication, instead you must connect to the eWON using an ISDN or Analog modem.

3 What you need to configure the eWON

See TN06.pdf for normal GSM configuration.

The following parameters are required in order to access the operator GPRS network:

- **APN (Access point name): This is usually in the form of an internet domain like *my.mobistar.be***
- **And Username, password for PPP connexion (usually not used)**

See also document "netparameters_d.pdf" which is accessible from the link:

http://www.my-siemens.com/com.aperto/MySiemens/Files/Addon/dn/de/mw/hd/hd/netparameters_d.pdf

These documents are provided for help but all information must be available from GPRS operator.

Since eWON firmware version 4, it is possible to fine-tune the Quality of Service Profile ("Requested" and "Minimum acceptable").

If you want to send mails, you may need to use the Operators mail server and you should fill-in its name (**SMTP Server Address** field from the **Main Configuration** page).

4 How to configure GPRS on the eWON

This configuration only concerns outgoing calls.

4.1 eWON firmware versions 3.5 and 3.8

- **Default initialisation line:**
 AT&FE0&D2&C1\Q3+IPR=19200
 Must be replaced by:
 AT&FE0&D2&C1\Q3+CGDCONT=1,ip,my.mobistar.be
 Where **my.mobistar.be** must be replaced by your own APN.
- **Then the phone number to perform an outgoing call must receive the following value:**
 *99***1#
- **User name and password are usually not used.**
 This entry is valid for everyone.
 Actually this entry requests to use slot number 1 (*99***1#) of the configuration. This slot is configured by +CGDCONT=1,ip,my.mobistar.be in the modem initialisation line.
 Once these 2 parameters have been entered, the outgoing calls to 99**1# will use the GPRS connection.

4.2 eWON firmware versions 4.xx

- Since version 4 there is a special edit box available for the APN entry.

MODEM SETTINGS			
Modem Detected	Internal BIBAND GSM		
GSM Pin Code (reboot required)	1234	Signal Level: 19	Network: Home network
Modem Init String (Basic Part)	AT&FE0&D2&C1+IFC=2,2 <small>clear this line to restore default value</small>		
GPRS Settings			
PDP context definition		<input checked="" type="checkbox"/> Enable this config	
Access Point Name			WARNING: case sensitive

Figure 1: eWON firmware version 4.xx GPRS modem settings

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- It is also possible to configure the Quality of Service:

Quality Of Service Profile (Requested)		<input checked="" type="checkbox"/> Enable this config
precedence	0: Subscribed	(default: Network Subscribed Value)
delay	0: Subscribed	(default: Network Subscribed Value)
reliability	0: Subscribed	(default: Network Subscribed Value)
peak	0: Subscribed	(default: Network Subscribed Value)
mean	19: Best effort	(default: Network Subscribed Value)
Quality Of Service Profile (Minimum Acceptable)		<input checked="" type="checkbox"/> Enable this config
precedence	0: Subscribed	(default: Network Subscribed Value)
delay	0: Subscribed	(default: Network Subscribed Value)
reliability	0: Subscribed	(default: Network Subscribed Value)
peak	0: Subscribed	(default: Network Subscribed Value)
mean	19: Best effort	(default: Network Subscribed Value)

Update Modem Settings

Figure 2: eWON firmware version 4.xx Quality of Service settings

5 Calling a standard PPP server

It is also possible to call directly an analog or digital modem like with a GSM modem, in that case the GPRS capabilities are not used.

The server phone number (and user, password) entered will replace the *99***1# value specified above.

Please refer to application note TN06.pdf for a detailed description of this procedure.

6 Calling the eWON

As explained before, the GPRS link cannot be used to access the eWON.

- It is not possible to dial in the eWON with GPRS
- The IP address allocated to the eWON by the GSM operator is usually protected by an operator's firewall and cannot be used to access the eWON WEB server, FTP server or other resources behind the eWON.

When the eWON is online, doing a PING to its IP address will normally work but the same address used in Internet Explorer will fail.

Some operators provide contract for fixed IP address, in that case, access to the eWON through Internet should be granted, but it has to be considered for each different case.

Anyway, what is true with a normal GSM modem is also true with the GPRS modem, you can call the DATA phone number of the eWON's modem. Please read section "Calling the eWON with a modem" of TN06.pdf for details about this procedure.



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7 Sending EMail

When you are connected to the operator GPRS network, you may be unable to send mails using other provider's SMTP server because they will probably deny relaying of you message (typical error message is "Relaying denied"). Or they will simply refuse the TCP/IP connection to their server ("Connect socket failed" error is then reported).

You have to obtain the SMTP server name of your GPRS operator, in order to send your emails from the eWON.

8 Sending SMS

The GPRS is also able to send SMS directly to the other party using the **gsm** protocol described in the manual, as with the GSM modem. See the manual for mode details.

Example :

0477858564 , gsm , 0