SMS-MULTI-IO
Instruction Manual
# Contents

1 DESCRIPTION .................................................................................................................. 4  
1.1 Summary ....................................................................................................................... 4  
1.2 Safety instructions ........................................................................................................ 4  

2 SOFTWARE .................................................................................................................... 5  
2.1 System requirements ..................................................................................................... 5  
2.2 Software installation ...................................................................................................... 5  
2.3 Finding the COM port ................................................................................................... 6  

3 MODULE ....................................................................................................................... 8  
3.1 Place the SIM card ......................................................................................................... 8  
3.2 Connect the antenna ..................................................................................................... 9  
3.3 Connect to power .......................................................................................................... 10  
3.4 Connect to PC .............................................................................................................. 10  
3.5 LED description .......................................................................................................... 11  
3.5.1 Module status indication ......................................................................................... 11  
3.5.2 IO indication ............................................................................................................ 11  

4 CONFIGURATION ....................................................................................................... 12  
4.1 Connect to the SMS-MULTI-IO .................................................................................... 12  
4.2 Synchronize ................................................................................................................ 14  
4.2.1 Upload changes to the module ............................................................................... 15  
4.2.2 Download settings from module .......................................................................... 15  
4.2.3 Synchronize date/time ......................................................................................... 15  
4.2.4 Insert PUK code ..................................................................................................... 15  
4.2.5 Firmware update .................................................................................................... 16  
4.2.6 Reset module to default ....................................................................................... 16  
4.2.7 Download SMS log ............................................................................................... 16  
4.3 Diagnostics ................................................................................................................ 16  
4.4 Phonebook .................................................................................................................. 17  
4.4.1 Add contacts .......................................................................................................... 17  
4.4.2 Delete contacts ...................................................................................................... 18  
4.4.3 Import / Export phonebook .................................................................................. 18  
4.5 Settings ....................................................................................................................... 19  
4.5.1 Main settings .......................................................................................................... 19  
4.5.2 Periodical message ............................................................................................... 19  
4.5.3 Power cycle message ............................................................................................ 19  
4.5.4 Import / Export settings ....................................................................................... 19
5 I/O CONFIGURATION AND MESSAGING................................................................. 21
5.1 Digital Outputs.............................................................................................. 21
  5.1.1 Configuration............................................................................................ 21
  5.1.2 Messaging.................................................................................................. 21
    5.1.2.1 Writing to multiple digital outputs...................................................... 21
    5.1.2.2 Writing to a single digital output....................................................... 22
    5.1.2.3 Using the one-shot function............................................................... 22
    5.1.2.4 Reading from multiple digital outputs.............................................. 22
    5.1.2.5 Reading from a single digital output............................................... 22
5.2 Analog Outputs.............................................................................................. 22
  5.2.1 Configuration............................................................................................ 22
  5.2.2 Messaging.................................................................................................. 23
    5.2.2.1 Writing to multiple analog outputs................................................... 23
    5.2.2.2 Writing to a single analog output....................................................... 23
    5.2.2.3 Reading from multiple analog outputs.............................................. 23
    5.2.2.4 Reading from a single analog output............................................... 23
5.3 Universal Inputs............................................................................................. 24
  5.3.1 Reading from multiple universal inputs.................................................. 24
  5.3.2 Select receivers......................................................................................... 24
5.4 Analog inputs................................................................................................ 25
  5.4.1 Configuration............................................................................................ 25
  5.4.2 Reading from an analog input.................................................................... 26
5.5 Digital Inputs.................................................................................................. 26
  5.5.1 Configuration............................................................................................ 26
  5.5.2 Reading from a digital input...................................................................... 27
  5.5.3 Power guard ............................................................................................ 27
5.6 RTD inputs..................................................................................................... 28
  5.6.1 Configuration............................................................................................ 28
  5.6.2 Reading an RTD input................................................................................ 29
5.7 Read all IO statuses...................................................................................... 29
6 OTHER MESSAGES ........................................................................................... 30
  6.1 Module reset ................................................................................................ 30
  6.2 Stop messaging............................................................................................ 30
7 ADDITIONAL HARDWARE.................................................................................. 31
  7.1 External antenna........................................................................................... 31
  7.2 Power supply ............................................................................................... 31
  7.3 Programming cable ...................................................................................... 31
8 TROUBLESHOOTING......................................................................................... 32
  8.1 Cannot connect to the PC............................................................................ 32
  8.2 No connection to GSM network.................................................................... 32
  8.3 The module doesn’t send any messages..................................................... 32
8.4 The module doesn’t start........................................................................................................ 32

9 TECHNICAL SPECIFICATIONS.......................................................................................... 34
1 Description

1.1 Summary

The SMS-MULTI-IO is a compact remote control and messaging system. All IO’s of the module are monitored and controlled by SMS communication through the GSM network.

The module can be configured with the SMS-MULTI-IO PC software. Each IO can be modified by user-defined parameter names and messages. A selected group of (max. 5) users can be chosen from the phonebook to control the module.

The SMS-MULTI-IO features:
- 4 Digital Outputs (DO), relay outputs 2x CO contact, 2x NO contact 250V/8A
- 2 Analog outputs (AO), 0...10V DC
- 8 Universal Inputs (UI) which can be set by software as:
  - Analog Input (AI), 0..10V or 0(4)..<20mA
  - Digital Input (DI)
  - Resistive Temperature Device (RTD), Ni1000, PT1000 or PT100

On each defined input status change (rising or falling flank for Digital Inputs or reached level for analog or RTD inputs) the module sends a pre- or user-defined message to the selected group of users.

The outputs can be set when a selected user sends a pre- or user-defined SMS to the SMS-MULTI-IO.

The SMS-MULTI-IO can send a periodical SMS on user defined times, or when the module comes back from a power reset.

1.2 Safety instructions

- This device is NOT suitable for monitoring sensible or time critical processes. Power interruption or GSM network failures do not guarantee flawless monitoring.
- Keep ESD precautions in mind when opening the module.
2 Software

Download the latest SMS-MULTI-IO configuration software at:

The interface software checks on start up if there is a new firmware and/or interface version. There can be manually checked for updates by clicking: Help -> check for updates.
NOTE: checking for updates requires an internet connection.

2.1 System requirements

The following requirements are needed to run and use the software properly:
• Windows XP sp3, Vista, 7
• Minimal 768x1024 pixels screen resolution
• Microsoft .NET framework 4.0 installed
• 50MB Hard disc capacity available
• 256MB RAM
• USB port

2.2 Software installation

Run the SMS-MULTI-IO_setup.exe to install the application. The setup wizard will guide you through the rest of the setup process.

For Windows7 and Windows Vista right click on the SMS-MULTI-IO_setup.exe and choose ‘run as administrator’. After installing go to C:\Program File (x86)\Conta-Clip\ Sms-Multi-IO\ and right click on the SMS-MULTI-IO.exe. Choose the Compatibility tab and check: Run this program as administrator.
After starting up the interface the language can be set by: Edit -> Language. The chosen language is saved and recalled at start up.

2.3 Finding the COM port

After connecting the USB cable to the PC windows prompts that new hardware is found. When the SMS-MULTI-IO configuration software is installed Windows will find the drivers automatically and prompt that the device ‘USB COM port’ is ready for use.

To see which COM number Windows has assigned to the USB cable select: Start-> control panel-> device manager
When expanding Ports, the USB serial port is shown.
NOTE: The COM port number should be less than 9 to guarantee proper function of the communication. If the Com port number is greater than 8:

- Right click on "USB Serial Port" and click on Properties.
- Click on the "Port Settings" tab. Click the "Advanced" button.
- Pull down the scrollbar on the bottom, left side and select a free port.
3 Module

3.1 Place the SIM card

Place a SIM card into the SIM card holder to access the GSM network:

- If the antenna is placed set it at a right angle to the front of the module and lift the lid with a small flat screwdriver.

- Gently remove the LED panel by lifting it from its headers.
• Place a SIM card into the SIM card holder.

• Replace the LED panel and lid.

3.2 **Connect the antenna**

Screw the enclosed antenna on the antenna connector through the hole in the front lid.
3.3 **Connect to power**

Connect the 24V and 0V to a 24VDC power supply.

3.4 **Connect to PC**

Remove the terminal lid width a small screwdriver.
Connect the programming cable (artnr. 16062.2, sold separately, Please contact Conta-Clip for further information) to the audio plug, and the other end to a USB port on the PC.

3.5 LED description

3.5.1 Module status indication

The Led ‘Run’ indicates module activity:
- Flash = searching for modem
- ON = power ON and modem detected
- OFF = no power / no CPU activity

The Led ‘Com’ indicates network activity:
- green ON = connected to GSM network
- green Flash = roaming GSM network
- green OFF = not connected to GSM network

The Led ‘Busy’ indicates modem activity:
- ON = modem currently busy
- OFF = no modem activity

After sending new parameters to the module it will perform a reset. During this time the Com network activity LED lights up red for 5 seconds.

3.5.2 IO indication

- For each Digital Output a Led lights up when the relay is activated.
- The brightness of the Analog Output Leds varies along with the output voltage.
- The Universal Input Leds light up when:
  - When set as digital input : the input is active (1)
  - When set as analog input or RTD : a top or bottom threshold is reached
4 Configuration

4.1 Connect to the SMS-MULTI-IO

First connect the USB programming cable between the SMS-MULTI-IO and a PC USB port. Connect 24VDC to the module. Now start the SMS-MULTI-IO configuration software. On start-up the configuration software searches all available COM ports for an available SMS-MULTI-IO. If found the software prompts to download the settings from the device. This action will take about 20 seconds, the user interface will be automatically updated. If no device is found check the COM settings: select Edit->COM settings.

Make sure the baud rate is 115200bps and NO parity selected.
Click the connect button in the upper right corner to search for the module:

![Search Module](image)

If the module is found the diagnostic data will be downloaded and at the bottom left side the text ‘connected’ will appear.

### 4.2 Synchronize

Press the synchronize button to edit the module:
4.2.1 Upload changes to the module

Upload any changes in the configuration software by clicking the settings button, and then choose if you want to upload the current page only to save time or upload all pages. Uploading all pages will take about 30 seconds.

4.2.2 Download settings from module

When a module is connected to the configuration software the settings can be downloaded from the device. This action will take about 20 seconds, the user interface will be automatically updated.

4.2.3 Synchronize date/time

The date and time of the module is synchronized to your PC system time.

4.2.4 Insert PUK code

When a wrong PIN number is given 3 times the SIM card is locked and requests the PUK code. The diagnostics page shows this in the error messages.

Insert the correct PUK and PIN code:
4.2.5 Firmware update

Download the latest firmware at: http://www.conta-clip.com/en/service/

After downloading, unzip the complete folder to a location on your PC. Click the firmware update button and the software prompts to the location of the firmware. Locate the unzipped folder and select the SMS-MULTI-IO.HEX file.

During the firmware update all Leds except the Analog Output Leds on the module light up. The firmware update takes about 2 minutes.

4.2.6 Reset module to default

This action restores all parameters on the module back to factory default. This action takes about 1:15 minutes.

4.2.7 Download SMS log

The module keeps track of the last 10 incoming SMS messages. This information includes the sender, date and message.

To view the log file connect the module to the PC. Click the synchronize button and then download the log file. Windows will prompt with ‘save as’. Give the file a name and save it on a preferred destination on the PC.

4.3 Diagnostics

After connecting to the module the diagnostics tab is filled. This page shows:

- Registered GSM network or connection errors
- signal strength in percentage
- Registered GPRS network or connection errors
- IP address (when registered to internet)
- Date/time
- Module firmware version
- Error messages
  - SIM PIN code required
  - SIM PUK code required
  - Date / Time not set
  - No user selected
4.4 Phonebook

The configuration software has a phonebook to list all your contacts for future usage. The phonebook has an auto save function. All actions in the phonebook will perform the auto save on completion.

4.4.1 Add contacts

To add a contact to the phonebook click on the next empty row and fill in the name and phone number.
Note: The phone number must be preceded by the international access code
E.g. for the Netherlands +31, for Germany +49.

4.4.2 Delete contacts

To delete a contact select the row to delete and the delete button is activated. Click this button to delete.

4.4.3 Import / Export phonebook

The phonebook can be exported for usage on another PC that has the configuration software installed. To export the phonebook click the ‘phonebook’ button and ‘export phonebook’. Windows prompts ‘save as’. Save the file with a given name on a preferred destination to the PC.

To import the phonebook click the ‘phonebook’ button and ‘import phonebook’. Windows prompts to point the location of an exported *.cpf file.
4.5 Settings

4.5.1 Main settings

The main functions of the module are configured in the ‘settings’ tab:

- Module name
- SIM pin number, this is the pin number to access the SIM card. Default by most providers it is set to 0000.
- Users, select a group of max. 5 users who will gain access to the module and receive messages

4.5.2 Periodical message

The SMS-MULTI-IO can send a periodical message on a user defined time:

- Daily, set the time
- Weekly, set the day and time
- Monthly, set the day of the month and time

This message can be supplemented with the actual status of all IO’s.

4.5.3 Power cycle message

The SMS-MULTI-IO can send a message on every module start-up so the users are aware of any power failure.

To receive a message directly after a mains power-down the additional SMS-PS (sold separately) can be connected to the SMS-MULTI-IO. Please contact Conta-Clip for further information.

4.5.4 Import / Export settings

Export the settings for usage on other modules after exiting the user interface. To export all settings click the ‘settings’ button and ‘export settings’.
Windows prompts ‘save as’. Save the file with a given name on a preferred destination to the PC.

To import the settings click the ‘settings’ button and ‘import settings’. Windows prompts to point the location of an exported *.ccf file.
5 I/O configuration and messaging

The module responds to read and write commands. Commands are preceded by an ‘r’ for read and ‘w’ for write actions.

All SMS commands are NOT case sensitive.

5.1 Digital Outputs

5.1.1 Configuration

The SMS-MULTI-Io has 2 NO and 2 CO outputs. The following items can be configured with the software:

- Name, this name must be unique and can not be used with any other input or output. Default set as DO1 to DO4.
- After setting a digital output the module can send a confirmation message followed by the actual output state. This message is sent to only the sender of the message, or to all selected users.

5.1.2 Messaging

The digital outputs are set individual or as a group.

5.1.2.1 Writing to multiple digital outputs

To set all Digital outputs send the default message: \textit{wm}doxxxx

Each \textit{x} represents the state of its positions output: 0=off, 1=on, 2=don’t change and 3=toggle.

E.g. when you send \textit{wm}do0123:

- DO1 sets to 0
- DO2 sets to 1
• DO3 is not changed
• DO4 toggles its state (0 to 1 or 1 to 0)
The module sends a confirmation message with the output states only to the sender: ‘status DO1=x, DO2=x, DO3=x, DO4=x’

5.1.2.2 Writing to a single digital output
To set an individual DO send the following default message: \texttt{wdo}nx, where n= the output number and x is the state.
E.g. when you send \texttt{wdo31} DO3 is set to 1.

When a user defined name is given to an output it can be addressed by putting the name between asterisks. E.g. an output is called ‘light’ you can set it by sending \texttt{w*light*3}, this output will be toggled.

If set, the module sends a confirmation message: ‘status DO\texttt{n}=x’, or when a user defined name is given: ‘status \texttt{name}=x’

5.1.2.3 Using the one-shot function
The digital outputs can be set for a given time from 1 to 9999 seconds. When this command is received the DO sets to 1 and after the number of seconds the DO sets back to 0. The one shot function is called by setting a single DO to 1 followed by a ‘t’ for time and the time in seconds. E.g. when you send \texttt{wdo1t10} DO1 is set for 10 seconds.

5.1.2.4 Reading from multiple digital outputs
To retrieve the status of all digital outputs sent: \texttt{rmdo}.
The module answers: ‘status DO1=x, DO2=x, DO3=x, DO4=x’

5.1.2.5 Reading from a single digital output
To retrieve the status of an individual digital output, send: \texttt{rdo}, where n is the number of the requested digital output. The module will answer: ‘status DO\texttt{n}=x’

When a user defined name is given to a digital output it can be addressed by putting the name between asterisks. E.g. an output is called ‘light’ you read the status by sending \texttt{r*light*}. The module answers: ‘status light=x’

NOTE: To receive a user defined confirmation message from a non user defined output name the user has to read the output by sending: \texttt{r\*don*}.

5.2 Analog Outputs

5.2.1 Configuration
The SMS-MULTI-IO has 2 analog outputs which can be set from 0..10VDC. The following items can be configured with the software:
• Name, this name must be unique and can not be used with any other input or output. Default set as AO1 and AO2.
• After setting an analog output the module can send a confirmation message followed by the actual output value. This message is sent to the sender of the message only, or to all selected users.
5.2.2 Messaging

The analog outputs are set individual or as a group.

5.2.2.1 Writing to multiple analog outputs

To set all analog outputs send the default message: \texttt{wmaoxxxxxyyy}

The 4 x’s represent the value for AO1, the 4 y’s the value for AO2. These values are from 0000(0V) to 1000(10V). E.g. when you send \texttt{wmao02500750}:

- AO1 is set to 2.5VDC
- AO2 is set to 7.5VDC

The module sends a confirmation message with the output values only to the sender: ‘status AO1=xxxx, AO2=xxxx’

5.2.2.2 Writing to a single analog output

To set an individual AO send the following default message: \texttt{waoxxxxx}, where n= the output number and xxx is the value. E.g. when you send \texttt{wao20900} AO1 is set to 9VDC.

When a user defined name is given to an analog output it can be addressed by putting the name between asterisks. E.g. an output is called ‘motor’ you can set it by sending \texttt{w*motor*0500}, this output will be set to 5VDC.

If set, the module sends a confirmation message: ‘status AOn=xxxx’ or when a user defined name is given: ‘status name=xxxx’

5.2.2.3 Reading from multiple analog outputs

To retrieve the status of all analog outputs sent: \texttt{rmao}. The module answers: ‘status AO1=xxxx, AO2=xxxx’

5.2.2.4 Reading from a single analog output

To retrieve the status of an individual analog output, send: \texttt{rano}, where n is the number of the requested analog output. The module will answer: ‘status AOn=xxxx’
When a user defined name is given to an output it can be addressed by putting the name between asterisks. E.g. an output is called ‘motor’ you read the value by sending \texttt{r*motor}. The module answers: ‘status motor=xxxx’

NOTE: To receive a user defined confirmation message from a non user defined output name the user has to read the output by sending: \texttt{r*aon}.

5.3 Universal Inputs

The SMS-MULTI-IO has 8 universal inputs which can individual be set to:
- Analog input
- Digital input (default)
- RTD input

The selected button represents the chosen function and is set after uploading. In the following example UI1 is set as a digital input:

![Image of digital input settings](image)

5.3.1 Reading from multiple universal inputs

To read all universal inputs send the default message: \texttt{rmui}

The module sends a status message with the input states: ‘read UI1=xxxx, UI2=xxxx, .... UI8=xxxx’. \texttt{UI} will be replaced by the configured input type: AI, DI or RTD.

5.3.2 Select receivers

Each UI is automatically provided with the selected users from the settings tab. In each UI tab users can be de-selected so only a selective group of users receive messages from an individual UI.
5.4 Analog inputs

To use as a current input, lift the lid (see 3.1) and place a 250Ω / 0.1% resistor into the header on Ri:

To use as a voltage input the header must be empty.

5.4.1 Configuration

Configure the following items with the software:

• Name, this name must be unique and can not be used with any other input or output. Default set as A11 to A18.
• The input source:
  • 0..10V
  • 0..20mA
  • 4..20mA
• The unit for the input feedback. E.g. litres (Ltr) or kilograms (kg).
• The min. value represents the scaled value for 0V, 0mA or 4mA.
• The max. value represents the scaled value for 10V, 20mA.
• Lower limit threshold.
• Upper limit threshold.
• Minimal change (hysteresis).
• The Analog Inputs can generate messages with value and unit when:
  • The upper limit + hysteresis is reached
  • The lower limit – hysteresis is reached
  • The status recovers between the upper and lower limit +/- hysteresis

Note: The min./max. and threshold/hysteresis values are limited to 5 digits with a maximum of 2 decimals.

E.g.: A water tank level is converted to 0..10V. 0V represents 10 litres and 10V represents 100 litres. If a message should be sent when the tank reaches a minimum of 20 litres and when during filling the level of 80 litres is reached, configure the module as follows:
5.4.2 Reading from an analog input

To retrieve the status of an analog input, send: $ruin$, where $n$ is the number of the requested input. The module answers: ‘status A$in=n=xxxx’

When a user defined name is given to an input it can be addressed by putting the name between asterisks. E.g. an output is called ‘watertank’ you read the status by sending $ru*watertank**$. The module answers: ‘status watertank=xxxx’

NOTE: To receive a user defined confirmation message from a non user defined input name the user has to read the input by sending: $ru*ain*$.

5.5 Digital Inputs

5.5.1 Configuration

The following items can be configured with the software:

- Name, this name must be unique and can not be used with any other input or output. Default set as DI1 to DI8.
- The Digital Inputs can generate messages when:
  - A rising flank is detected: the status changes from 0 to 1
  - A falling flank is detected: the status changes from 1 to 0
5.5.2  Reading from a digital input

To retrieve the status of a digital input, send: \textit{ruin}, where \textit{n} is the number of the requested input. The module answers: ‘status DIn=x’

When a user defined name is given to an input it can be addressed by putting the name between asterisks. E.g. an output is called ‘door’ you read the status by sending \textit{r*door}. The module answers: ‘status door=x’

NOTE: To receive a user defined confirmation message from a non user defined input name the user has to read the input by sending: \textit{r*din}.

5.5.3  Power guard

DI8 can be used as a power guard to receive a message directly after the mains power has shut down. Therefore the additional SMS-PS module must be connected to the SMS-MULTI-IO. (artrnr. 16062.2, sold separately, please contactConta-Clip for further information)

If the power guard mode is set, DI8 has top priority over the rest of the module’s messaging. If the power down is detected the module sends a SMS to all selected users before shutting down. All output values are saved before shutting down and recovered when power is restored.
During power down guard the threshold of Digital Input 8 changes to: LO < 9.0V / HI > 9.5V.

NOTE: during power down detection the module doesn’t detect any changes on the inputs or reacts on settings on the outputs.
5.6 RTD inputs

To use as RTD input lift the lid (see 3.1) and place a 5.11kΩ / 0.1% resistor into the header on Rt:

Connect the RTD element between ground and the RTD input.

5.6.1 Configuration

Configure the following items with the software:

- **Name**, this name must be unique and can not be used with any other input or output. Default set as RTD1 to RTD8.
- The unit for the input feedback:
  - °C, degrees Celsius
  - °F, degrees Fahrenheit
- The RTD element:
  - PT1000
  - NI1000
  - PT100
- Lower limit threshold.
- Upper limit threshold.
- Minimal change (hysteresis).
- The Analog Inputs can generate messages with value and unit when:
  - The upper limit + hysteresis is reached
  - The lower limit – hysteresis is reached
  - The state recovers between the upper and lower limit +/- hysteresis

**Note**: The threshold/hysteresis values are limited to 5 digits with a maximum of 2 decimals.
5.6.2 Reading an RTD input

To retrieve the status of an RTD input, send: \texttt{ruin}, where \( n \) is the number of the requested input. The module answers: ‘status RTD\( n = \ldots \)’

When a user defined name is given to an input it can be addressed by putting the name between asterisks. E.g. an output is called ‘server room’ you read the status by sending \texttt{r*server room*}. The module answers: ‘status server room=\ldots’

NOTE: To receive a user defined confirmation message from a non user defined input name the user has to read the input by sending: \texttt{r*rtdn*}.

5.7 Read all IO statuses

To retrieve the status of all IO’s sent: \texttt{rall}. The module will answer:
\begin{itemize}
\item ‘read DO1=x, DO2=x, DO3=x, DO4=x’
\item ‘read UI1=xxx, UI2=xxx, ... (to)... UI8=xxx’
\item ‘read AO1=xxxx, AO2=xxxx’
\end{itemize}

*\( UI \) is replaced by the chosen input: AI, DI or RTD.
6 Other messages

6.1 Module reset

Reset with the following command: \texttt{wreset}. This performs a full module reset. The module answers with the power cycle message if set.

6.2 Stop messaging

The command: \texttt{smsoff} will stop the module from sending any more messages.

To turn back on the messaging send: \texttt{smson}.

The module answers: ‘sms turned off/on’.
7 Additional hardware

The below described hardware is sold separately. Please contact Conta-Clip for more information.

7.1 External antenna

If mounted in a closed (metal) cabinet the GSM reception can be very poor. Therefore an external antenna is offered which can be placed outside the cabinet. (Art.nr. 16061.2)

7.2 Power supply

To receive a message when the mains power has shut down the additional SMS-PS can be connected to the SMS-MULTI-IO. (Art.nr. 16065.2)

7.3 Programming cable

To connect the module to a PC for configuration, a special USB to audio jack cable is used. (Art.nr. 16062.2). This cable may be connected only during the configuration of the module.
8 Troubleshooting

8.1 Cannot connect to the PC

- Disconnect the module from power wait 10 seconds and re-connect.
- Reboot the PC after driver installation.
- Check COM settings (chapter 4.1).

8.2 No connection to GSM network

- Make sure the SIM card is placed correctly.
- Check the diagnostics tab for error messages, PUK or PIN required.
- Check the signal strength.

8.3 The module doesn’t send any messages

- Is the used IO proper set.
- Make sure the SIM card is placed correct.
- Does the prepaid card holds enough credit.

8.4 The module doesn’t start

If the module fails to start-up or a firmware upgrade results into an error following steps should be taken:

- replace the lid and locate the 6pins header on the right side of the module.
- Take the jumper from the 3 pin header on the left of the ‘run’ Led.
- place the jumper on the two top pins of the header:

- the Led’s AO1 and AO2 light up.
- Remove the jumper.
- If the module starts-up recovery is ok, else:
- Place the jumper on the left lower two pins of the header, power cycle the module:

- All Led’s except AO1 and AO2 light up. The module is now in bootloader modus.
- Obtain the COM port number submitted to the programming cable(see chapter 2.3). The comport number must be less then 9.
- Open the (downloaded) folder with the latest firmware.
- Right click on the ‘Fw_SMS-MULTI-IO.bat’ and select ‘Edit’ (bewerken/Bearbeiten):
mode com1 Data=8 Parity=n Baud=115200 DTR=OFF RTS=OFF
AVROSP -dATxmega128A1 -e -ifSMS-MULTI-IO.hex -pf -vf -cCOM4
del ATxmega128A1.xml

- Replace the two comport numbers with the obtained comport number.
- Save and exit the ‘Fw_SMS-MULTI-IO.bat’.
- Double click the ‘Fw_SMS-MULTI-IO.bat’ to run.
- DOSPromt opens and performs the bootloader, this takes about 2 minutes.

- When finished remove the jumper and restart the module.
9 Technical specifications

Fout! Ongeldige koppeling.