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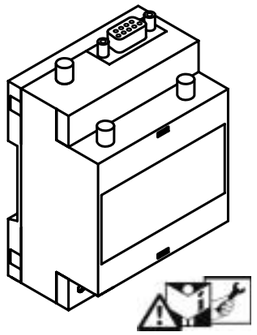
B1006.EN / 0517

naos.III

GSM / GPRS / EDGE / UMTS / HSPA+
DATA MODEM



EN USER GUIDE

Naos.III 1006 . G 3 . 0 0

BANDS
GLOBAL **G**
EMEA / APAC / LATINAMERICA **E**
NORTH AMERICA **N**

COM PORTS
RS232 + AUX **1**
RS485 + AUX **2**
RS485 + RS232 + AUX **3**

VERSION
STANDARD VERSION **0**
CUSTOM VERSION ID **-**

GPS
YES **G**
NO **0**

STANDARD VERSION 1600.G3.00

DECLARATION OF CONFORMITY

Radio Equipment Directive 2014/53/EU

Company identification: Manufacturer: Contrive, Srl
Via Enrico Fermi 18 I-24040 Suisio

Product identification: Brand: Contrive
Equipment name: Naos.III
Equipment type: Quad-Band GSM/EGSM/DCS/PCS
Penta-Band FDD I/II/IV/V/VIII
data modem with GPS receiver

We declare on our sole responsibility, that the product described above, is in conformity with the essential requirements of the 2014/53/EU Directive.

THE CONFORMITY WITH THE ESSENTIAL REQUIREMENTS OF THE EUROPEAN DIRECTIVE 1999/5/EC HAS BEEN VERIFIED AGAINST THE FOLLOWING STANDARDS:

- EN 301 511 : v 9.0.2 : 2003
- EN 60950-1 : 2007 + A11 : 2010 + A1 : 2014 + A2 : 2014 + A12 : 2014
- EN 55022 : 2013 + A1 : 2015
- EN 301 489 - 1 : v 1.9.2
- EN 301 489 - 7 : v 1.3.1
- EN 301 489 - 24 : v 1.5.1

THIS DEVICE COMPLIES WITH FCC RULES

CFR (CODE OF FEDERAL REGULATIONS) TITLE 47 TELECOMMUNICATIONS
Contains FCC ID: RI7HE910

- Part 15B Radio Frequency Devices
- Part 22H Public Mobile Services
- Part 27 Miscellaneous Wireless Communication Services
- Part 24E Personal Communication Services

OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:

1. this device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation.

Suisio, Italy May 15, 2017

WARRANTIES

CONTRIVE GUARANTEES FOR TWO YEARS FROM THE DATE OF MANUFACTURE OF ITS PRODUCT TO REPLACE, OR, AT ITS OPTION, TO REPAIR ANY PRODUCT OR PART THEREOF WHICH IS FOUND DEFECTIVE IN MATERIAL OR WORKMANSHIP OR WHICH OTHERWISE FAILS TO CONFORM TO THE DESCRIPTION OF ITS SALES ORDER. CONTRIVE MAKES NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY EXPRESS OR IMPLIED. IN NO EVENT SHALL CONTRIVE BE LIABLE FOR CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY NATURE WHICH MAY ARISE IN CONNECTION WITH SUCH PRODUCTS.

THE WARRANTY DOES NOT APPLY IN CASE OF IMPROPER USE

SAFETY INFORMATION

Do not install this unit near medical devices like pacemakers or hearing aids. This unit may interfere with the operation of these devices.

Switch off this unit when flying.
Secure it so that it cannot be switched on inadvertently.

Do not install this unit near petrol stations, fuel depots, chemical plants or blasting operations when this unit can disturb the operation of technical equipment.

Interference can occur if this unit is used near televisions, radios or personal computers.

If the device is coming from a cold environment, then condensation can occur.
Before starting operations, the device must be absolutely dry.
Thus, an acclimatization period of at least three hours must be observed.

In order to avoid possible damage, we recommend that you only use the specified accessories.
These have been tested and shown to work well with this unit.

This device should be installed only by qualified personnel. Carefully read the instruction manual in its entirety and keep it safe for future reference.
It is essential to know the information and comply with the instructions given in the manual to ensure the fitting is installed, used and serviced correctly and safely.

This RF unit is not designed for and intended to be used in portable applications (within 20 cm or 8 inches of the body of the user) and such uses are strictly prohibited.
The antenna gain must not exceed:
5.22Bi (850MHz/FDDV) 3.31dBi (1900MHz/FDDII) 6.45 dBi (FDDIV)
Operation in conjunction with any other antenna or transmitter is not allowed.

This unit is not authorized for use as critical component in life-support devices or systems unless a specific written agreement .

If incorrectly installed in a vehicle, the operation of this radio device could interfere with the correct functioning of vehicle electronics. Verification of the protection of vehicle electronics should form a part of the installation.
Regulations must be considered to operate a vehicle's light or horn on public roads.

No complex software or hardware system is perfect.
Bugs are always present in a system of any size.

In order to prevent danger to life or property, it is the responsibility of the system designer to incorporate redundant protective mechanism appropriate to the risk involved.

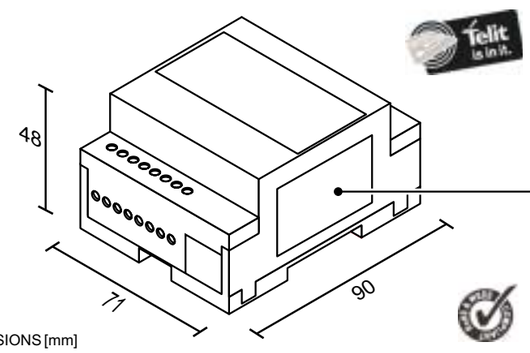
All units are 100% functionally tested. Specifications are based on characterisation of tested sample units rather than testing over temperature and voltage each unit.

CONTRIVE disclaims all liability for damage to the fitting or to other property or persons deriving from installation, use and maintenance that have not been carried out in conformity with this instruction manual, which must always accompany the fitting.

PRODUCT DESCRIPTION

Naos.III is a DIN rail modem for 3G data connectivity in M2M applications enabling remote monitoring, control, management and reporting of industrial and commercial equipment.
Naos.III is equipped with an integrated SIM card holder, main communication port through RS232 or RS485 interface, aux communication port through RJ45 jack.
Naos.III is fully backward compatible with existing EDGE and GSM / GPRS networks through quad-band radios.
Working out-of-the-box for applications in all regional markets where the product has frequency band coverage: the ideal solution for wide geography applications, embedded TCP-IP stack, extended AT command set.

Temperature:	-40 to 85°C
Relative humidity:	operating 10 to 85% non-condensing storage & transport 5 to 95% condensation allowed outside
Enclosure:	EN-50022 rail 4 modules, polycarbonate, UL94 -V0
Overall dimensions:	mm 71 x 90 x 48 (W x H x D)
Weight:	200 g
Degree of protection:	IP 40 (EN-60529 / IEC 529) properly fitted



DIMENSIONS [mm]

PRODUCT FEATURES

Multi-band HSPA+ data modem, with GSM / EGPRS fallback and optional GPS.

Supported frequencies:
- GSM | GPRS | EDGE 850, 900, 1800, 1900
  UMTS | HSPA 800/850, 900, AWS1700, 1900, 2100

Output power:
- Class 4 (2 W, 33 dBm) @ GSM 850 / 900
  Class 1 (1 W, 30 dBm) @ GSM 1800 / 1900)
  Class 3 (0.25 W, 24 dBm) @ UMTS
  Class E2 (0.5 W, 27 dBm) @ EDGE 850 / 900
  Class E2 (0.4 W, 26 dBm) @ EDGE 1800 /1900

Sensitivity:
- -111 dBm @ UMTS
  -109 dBm @ GSM 850 / 900 MHz
  -110 dBm @ DCS1800 / PCS1900 MHz

Data:
- HSUPA Uplink up to 5.76 Mbps
- HSDPA Downlink up to 21.0 Mbps GLOBAL VERSION
- HSDPA Downlink up to 7.2 Mbps NON GLOBAL VERSION
- WCDMA Uplink / Downlink up to 384 kbps
- EDGE Uplink up to 236.8 kbps
- EDGE Downlink up to 296 kbps
- GPRS Uplink up to 85.6 kbps
- GPRS Downlink up to 107 kbps
- CSD over GSM up to 9,6 kbps
- CSD over WCDMA up to 14,4 kbps

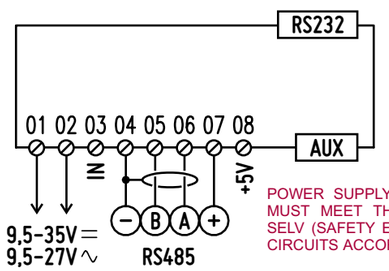
GPS (optional):
- SUPL 1.0 (Secure User Plane Location)
- High sensitivity (indoor) better than -165dBm (A-GPS)
- Cold Start Autonomous sensitivity -147 dBm
- Hot Start Autonomous sensitivity -161 dBm
- GPS tracking mode sensitivity -166 dBm
- Accuracy 3 m
- Time To Fix from Cold Start 42 s
- Time To Fix from Warm Start 30 s
- Time To Fix from Hot Start 1.8 s
- Supports multi-channel GPS
- GPS NMEA 0183 output format
- Datum WGS-84

SMS:
- Point to point M.O. and M.T.
- Concatenated SMS supported
- SMS cell broadcast
- Text and PDU mode
- SMS over GPRS
- Character management (IRA, UCS2, GSM)

Interfaces:
- SIM and USIM 1.8 V / 3 V
- Main UART RS232 or RS485 selectable
- Aux UART (RJ45 Link cable)
- USB 2.0 (internal, optional)
- 1 Analog input 0...12VDC
- I2C available on RJ45

Additional features:
- 3GPP release 7 compliant
- Control via AT commands (3GPP TS 27.005, 27.007)
- Custom AT commands
- Serial port multiplexer (3GPP TS27.010)
- SIM application Toolkit (3GPP TS 51.014)
- Built in UDP / TCP / FTP / SMTP stack
- IP stack with TCP and UDP protocol
- eCall compliant
- DARP (Downlink Advanced Received Performance)
- Real Time Clock
- Alarm management
- Event monitor service (AT command on event)
- SMS AT command run service
- TCP AT command run service

WIRING



1. Power supply
2. Power supply
3. Analog Input
4. Negative
5. RS485 data B
6. RS485 data A
7. RS485 enable Input
8. Positive 5VDC output

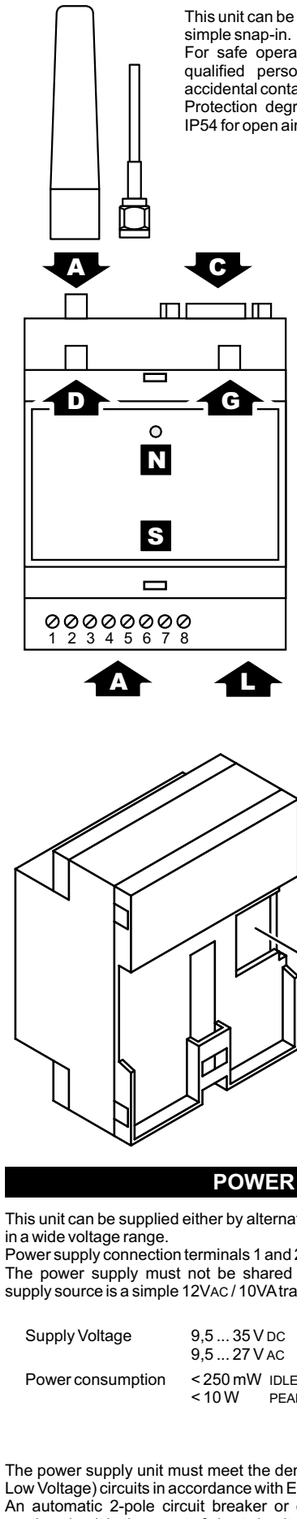
POWER SUPPLY, INPUTS AND COM PORT MUST MEET THE DEMANDS PLACED ON SELV (SAFETY EXTREMELY LOW VOLTAGE) CIRCUITS ACCORDING TO EN60950 / IEC950

Please perform the following tasks after receiving the product :

- Inspect the unit for damage.
  If the unit appears damaged upon receipt, contact the shipper immediately.
- Verify receipt of the correct unit by checking the label on the right side of the unit.
- If you have received the wrong model or the device does not function properly, contact your supplier.

INSTALLATION

This unit can be installed on any standard EN-50022 rail by simple snap-in.
For safe operation, the unit must be installed only by qualified personnel in an enclosure which prevents accidental contact with hazardous voltages.
Protection degree IP40 must be guaranteed, raised to IP54 for open air application.



A. GSM / WCDMA
Main antenna connector SMA/F

D. GSM / WCDMA GLOBAL VERSION
Diversity antenna connector SMA/F
INTERFERENCE CANCELLATION RECEIVER 3I

G. GPS / GNSS GPS VERSION
Antenna connector SMA/F

C. EIA/RS232 interface
Sub-D 9 RS232 VERSION

A. Power Supply input
RS485 interface RS485 VERSION
8 x 2,5mm² (AWG14)

L. Aux com port
RJ45

S. Main COM indicator
- OFF
  RS232 active
- ON
  RS485 active

N. GSM operation LED indicator
- OFF
  No power supply
- FLASH
  1s ON / 2s OFF
  StandBy
  Registered full service
- ON
  PERMANENTLY
  Not registered on the network
  Missing SIM or invalid PIN
  Communication in progress

Disconnect all power supplies and battery before to insert or remove the SIM card.
Replace the plastic cover before to operate the unit.

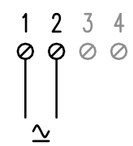
H. SIM / USIM card holder
3V and 1,8V SIM card allowed

CAUTION !
Avoid excessive torque tightening the coaxial antenna jack.

POWER SUPPLY

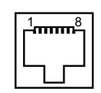
This unit can be supplied either by alternating or direct current, polarity independent, in a wide voltage range.
Power supply connection terminals 1 and 2.
The power supply must not be shared with other equipment: suggested power supply source is a simple 12VAC / 10VA transformer.

Supply Voltage	9,5 ... 35 V	DC	
	9,5 ... 27 V	AC	
Power consumption	< 250 mW	IDLE	
	< 10 W	PEAK	



The power supply unit must meet the demands placed on SELV (Safety Extremely Low Voltage) circuits in accordance with EN60950.
An automatic 2-pole circuit breaker or equivalent protection capable of disconnecting circuit in the event of short circuit or over-current condition should be placed on the AC mains side of power supply unit.
Maximum permissible connection length between device and low voltage supply source is 3 m.

This unit can receive power supply from RJ45 connector [L] through RJ45 to USB converter [2505.00.03].
This could be useful for configuration but main power supply is required to operate the unit full service.

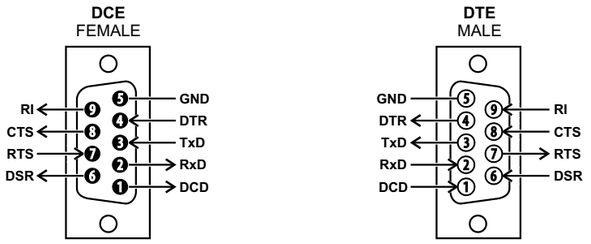


MAIN COM PORT

Naos.III is a DCE (Data Communication Equipment) managed by AT commands according to the GSM/UMTS specification.
The supported commands are listed in the *AT Commands Reference Guide*.
The main communication port is the interface for the application software and the connection to DTE (Data Terminal Equipment): RS232 or RS485 available (USIF0).

RS232

This is the default interface providing data and control signals, implemented as DB-9 FEMALE connector [C], circuit type SELV, max 15 m length, shielding not required.



DB9	DB25	V24	RS232	SIGNAL	I/O	FUNCTION
1	8	109	CF	DCD	O	DATA CARRIER DETECT
2	3	104	BB	RxD	O	RECEIVE DATA
3	2	103	BA	TxD	I	TRANSMIT DATA
4	20	108	CD	DTR	I	DATA TERMINAL READY
5	7	101	AB	GND	-	SIGNAL GROUND
6	6	107	CC	DSR	O	DATA SET READY
7	4	105	CA	RTS	I	REQUEST TO SEND
8	5	106	CB	CTS	O	CLEAR TO SEND
9	22	125	CE	RI	O	RING INDICATOR

The RTS control line indicates permission to the DCE to send data to the DTE.
The CTS control line indicates permission to the DTE to send data to the DCE.

RS485

The RS-485 differential line consists of two pins:

A	or	D+	or	TxD+ / RxD+	NON INVERTING PIN
B	or	D−	or	TxD− / RxD−	INVERTING PIN

THE B LINE IS POSITIVE (COMPARED TO A) WHEN THE LINE IS IDLE

SC	or	−	or	G	REFERENCE PIN

The SC line is the optional voltage reference connection specified by EIA standard as common reference ground (sometimes called C).

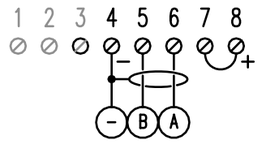
The recommended arrangement is as a series of point-to-point (multidrop) nodes. Ideally, the two ends of the cable will have a termination resistor connected across the two wires (typically, 120 ohms for twisted pairs).

Disable flow control

```
AT+IFC=0,0
```

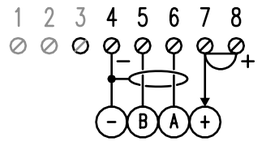
and set baud rate within the limit allowed by line length, maximum data rate is 500 kb/s for very short lines

```
AT+IPR=...
```



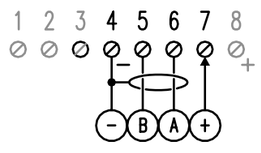
This interface is activated when a +5V is provided at terminal 7, RS232 receiver is disabled but output signals are available.

For permanent selection link terminal 7 to +5V output available at terminal 8.



Power supply at terminal 8 (respect to negative terminal 4) could be used for small external loads.

Output voltage: 5V CC ± 5%
Output current: 100mA MAX



Enable or disable the RS485 interface from the application by means of external +5V control line.

Input voltage: 4,5 ... 5,5V CC
Input current: 3mA MAX

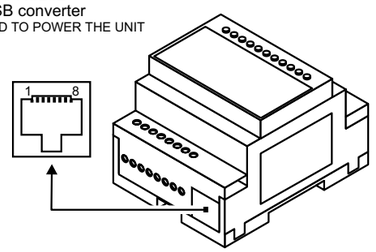
AUX INTERFACE

The AUX interface provides via RJ45 modular jack the following options:

- Auxiliary communication port, RS232 with RX and TX signals only (USIF1)
- RTS / CTS signals (managed through GPIO control)
- I2C SDA/SCL (managed through GPIO control) 3VDC
- Power supply input/output 5VDC

Cable adapters available:
2505.00.01 RJ45 to DB9 RS232
2505.00.03 RJ45 to USB converter
CAN BE USED TO POWER THE UNIT

1. AUX.RxD
2. GND
3. AUX.TxD
4. I2C.SCL - GPIO8
5. AUX.CTS - GPIO3
6. I2C.SDA - GPIO9
7. AUX.RTS - GPIO10
8. +5V SUPPLY IN-OUT



GSM ANTENNA

The main antenna [A] should be placed away from electronic devices or other antennas, recommended minimum distance between adjacent antennas operating in a similar radio frequency band is at least 50 cm.
If signal strength is weak, it is useful to face a directional antenna at the closest radio base station. This can increase the strength of the signal received by the modem.
Some versions provide an additional RF connector [D] for a Rx diversity antenna which improves the quality and reliability of the wireless connectivity.
The modem's peak output power can reach 2W. RF field strength varies with antenna type and distance: at 10cm from the antenna the field strength may be up to 70V/m and at 1m it will have reduced to 7V/m. In general, CE products for residential and commercial areas and light industry can withstand a minimum of 3V/m.
Antenna gain should be less or equal to 3dBi.
The antenna must fulfil the following requirements:

Frequency Range	GSM 850/900/1800/1900 MHz
	WCDMA 850/900/1900/2100 MHz
Impedance	50 ohms
VSWR	< 2 : 1
Input power	> 2 W peak

GPS ANTENNA

An active GPS/GNSS antenna must be connected to SMA female coaxial jack [G].
The use of combined RF/GPS/GNSS antenna is NOT recommended.
Power supply is provided by Naos.III.
The antenna must fulfil the requirements given below:

Frequency Range	GPS/L1 1575.42 MHz
	GLONASS 1597.55-1605.89 MHz
Power Supply	3...5 VDC
Impedance	50 ohms
Gain	14...17 dBi

ANALOG INPUT

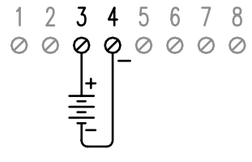
One analog input is available at terminal 3 respect to negative terminal 4.
An AT command is available to read the measured value :

```
AT#ADC?
```

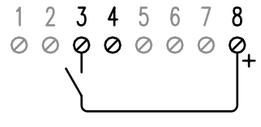
The command returns the last valid measure expressed in V x 100.

```
#ADC=1200
```
READING A FULL SCALE VALUE OF 12,00V

Input range	**0 ... 12 V**
Resolution	0,01 V
Accuracy	± 2%
Impedance	20 k



Use +5V available at terminal 8 to read a digital status (i.e.: a contact).



QUICK START

Insert a valid SIM card and verify that the antenna is connected.
Connect a PC running a terminal emulation program to main (or aux) interface.
Naos.III is factory set to 115200 bps (or autobaud) mode, 8 bit data, no parity, 1 stop.

Send an AT command to test the communication:
`AT<cr>` and wait for response `OK`
If no response is received within the timeout period of 200 ms, retry.

Set the preferred port rate:
`AT+IPR=<rate><cr>` and wait for response `OK`
rate is the port speed, most used settings are:
300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 bps.

Enable the extended error result codes:
`AT+CMEE=<format><cr>` and wait for response `OK`
`<format>` `0` numeric format
`1` verbose format

Query SIM presence and status:
`AT+CPIN?<cr>` and wait for response:
`+CPIN: SIM PIN` SIM found and PIN is required to continue operations
`+CPIN: SIM PUK` SIM found and SIM PUK is required
`+CPIN: READY` SIM found and no PIN is required to proceed
`+CME ERROR: 10` SIM not present
`+CME ERROR: 13` SIM failure
`+CME ERROR: 14` SIM busy
`+CME ERROR: 15` SIM is wrong type

Provide SIM PIN (only if required):
`AT+CPIN=****<cr>` and wait for response `OK`
where `****` stands for the SIM PIN code (e.g. 1234)
When receiving the ERROR message, repeat query SIM presence and status since after 3 failed attempts SIM PIN is not anymore requested: you must provide SIM PUK instead (AT Commands reference guide for full command description).

Select cellular network:
`AT+WS46=12<cr>` select GSM (GERAN)
`AT+WS46=22<cr>` select UMTS (UTRAN)
`AT+WS46=25<cr>` select both (GERAN + UTRAN) factory default
the parameter is stored and the command will take effect at next power on.
If both technologies are available, UTRAN is preferred.

Band selection:
`AT#AUTOBND=2` to enable automatic band selection
`AT#AUTOBND=0` to disable automatic band selection, then
`AT#BND=<gsmband>,<umtsband>` to manually select active bands

Query network status:
`AT+CREG?<cr>` and wait for response:
`+CREG: 0,0` / `+CREG: 1,0` Not registered, not searching
`+CREG: 0,1` / `+CREG: 1,1` Registered on its home network
`+CREG: 0,2` / `+CREG: 1,2` Waiting for network registration
`+CREG: 0,3` / `+CREG: 1,3` Registration not allowed
`+CREG: 0,4` / `+CREG: 1,4` Unknown network status
`+CREG: 0,5` / `+CREG: 1,5` Registered in roaming

Check the received signal quality:
`AT+CSQ<cr>` and wait for response: `+CSQ: <rssi>,<ber>`
the value of `<rssi>` parameter reported should be more than 10
`<rssi>` 99 means no signal available

To place a CSD Data call (not GPRS) set the device in data mode:
`AT+FCLASS=0<cr>` and wait for `OK` response
Stored in memory: no need to repeat if +FCLASS setting is not changed.

Set the desired modulation and speed for the connection:
`AT+CBST=<mod>,0,<ce><cr>` and wait for `OK` response
(AT Commands Manual for full command description).

Dial a given phone number:
`ATD <PhoneNumber><cr>` and wait for response:
`CONNECT 9600` The called modem is now on line
`BUSY` The line called is busy
`NO ANSWER` The receiver did not answer the call
`NO CARRIER` The modem handshaking has not been successful

Once data transfer has been completed, hang up the data call:
`ATH<cr>` and wait for response `NO CARRIER`

Before to send SMSs, the device has to be properly set up.
Select SMS format type:
`AT+CMGF=<mode><cr>` and wait for response `OK`
where `<mode>` is the SMS format type `0`=PDU `1`=Text
This setting is stored and remains until the device is turned off.

Check (or set) SMS Service Centre number:
`AT+CSCA?<cr>` (AT Commands Manual for full command description).

A new SMS can be sent directly to the network:
`AT+CMGS="<da>"<cr>`
where `<da>` is the destination address (phone number)
wait for prompt `">"`
enter SMS text (MAX 160 characters), close with `CTRL-Z` char (0x1A hex) or abort with `ESC` char (0x1B hex) and wait for response:
`ERROR` Some error occurred
`+CMS ERROR: 330` SMSC address unknown
`+CMS ERROR: 41` Temporary Failure, maybe the device isn't registered
`+CMGS: <mr>` Message has been successfully sent
`<mr>` represents the message reference number

FACTORY PROFILE

Naos.III stores the values set by several commands as profiles in the internal non volatile memory (NVM), allowing to remember this setting even after power off.
There are two user customizable profiles and one factory profile in the NVM of the device: by default the device will start with user profile 0 equal to factory profile.

`&W` is used to save the actual values of both sections into the NVM user profile.
`&Y` instructs the device to load at start-up only the base section
`&P` instructs the device to load at start-up the full profile: base+extended sections
`&F` resets to factory profile values only the command of the base section
`&F1` resets to factory profile values the full set of base + extended section

The values set by following commands are stored in the profile base section:

DTE SPEED:	+IPR
DTE FORMAT:	+ICF
GSM DATA MODE:	+CBST
COMMAND ECHO:	E
RESULT MESSAGES:	Q
VERBOSE MESSAGES:	V
EXTENDED MESSAGES:	X
DSR (C107) OPTIONS:	&S
DTR (C108) OPTIONS:	&D
RI (C125) OPTIONS:	\R
POWER SAVING:	+CFUN
DEFAULT PROFILE:	&Y
S REGISTERS:	S0;S2;S3;S4;S5;S7;S10;S12;S25

The values set by following commands are stored in the profile extended section:

+FCLASS	+CSCS	+CR	+CREG	+CLIP	+CRLP
+CRC	+CLIR	+CSVM	+CCWA	+CUSD	+CAOC
+CSSN	+CIND	+CMER	+CPBS	+CMEE	+CGREG
+CGEREP	+CMGF	+CSDH	+CNMI	#QSS	#ECAM
#SMOV	#MWI	#NITZ	#SKIPESC	#CFF	#STIA
+CSTF	+CSDF	+CTZU	+CAPD	+CCWE	+CSIL
+CTZR	#NWEN	#PSNT	#SIMPR	#CESTHLCK	+COLP
+DR	$GPSNUM	+CSTA	+NCIH		

The values set by following commands are stored in the profile extended section and they don't depend on the specific AT instance (see +CMUX):

+CALM	+CRSL	+CMUT	+VTD	#SIMDET	+CLVL
#CAP	#SRS	#SRP	#STM	#TSVOL	#PSEL
#E2SMSRI	#CODEC	#SHFEC	#HFMICG	#HSMICG	#SHFSD
#SPKMUT	#NITZ	#E2SLRI	#HFRECG	#HSRECG	#SHFAGC
#SHSAGC	#SHSEC	#SHSNR	#SHFNR	#SHSSD	#DVI
#DVIEXT	#PSMRI	+CSCB4F4F5			

The values set by following commands are always stored in NVM, independently from the profile (unique values):

#SELINT	+COPS5F5F6	+CGCLASS	+CGDCONT	+CGQMIN	+CGQREQ
#ENS	#SCFG	#AUTOATT	#ICMP	#GSMCONT	#DNS
+CGSMS	+CGEQMIN	+CGEQREQ	#SMSMODE		

CARE AND MAINTENANCE

Your Naos.III is the product of advanced engineering, design and craftmanship and should be treated with care.

- Do not expose the unit to any extreme environment where the temperature or umidity are out of operating range.
- Do not use or store the unit in dusty or dirty areas. Its moving parts (SIM holder for example) can be damaged.
- Do not use chemical cleaning agent on the unit or the SIM card.
- Do not attempt to disassemble the unit or remove any part or label. There are no user serviceable parts inside.
- Do not expose the unit to water, rain or spilt beverages. It is not waterproof.
- Do not abuse the unit by dropping, knocking or violenty shacking it. Rough handling can damage it.
- Do not place the unit alongside computer discs, credit or travel cards or other magnetic media. The information contained on these devices may be affected.
- This unit is under your responsibility. Please treat it with care respecting all local regulations. It is not a toy. Therefore, keep it in a safe place at all times and out of the reach of childrens.
- Treat the SIM card with the same care as your credit card: do not bend or scratch or expose it to static electricity.
- Try to remember your unlock and PIN codes. Become familiar with and use the security features to block unautorized use and theft.

Both fixed and mobile applications are allowed, as defined below:

Fixed means that the device is physically secured at one location and is not able to be easily moved to another location.

Mobile means that the device is designed to be used in other than fixed locations and generally in such a way that a separation distance of at least 20 cm (8 inches) is normally maintained between the transmitter's antenna and the body of the user or nearby persons.

Do contact an authorized service center in the unlikely event of a fault in the unit.