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Technical Specification
Nera WorldPhone Voyager w/TPU

Specifications subject to changes without notice

NWM Nera WorldPhone Voyager
ARU Antenna Radio Unit
PSU Power Supply Unit (DC/DC Converter)
TPU TelePhone Unit

General

The Nera WorldPhone Voyager is Inmarsat approved with Certificate Number 76EB54

Standard Functions:

Voice
Fax 2.4 kbps Group III
Data 2.4 kbps
SIM Card handling
Hands free
10 different last number dialled
Telephone book for 99 numbers (22 digit)
Prepaid minutes
Call logging
Access Code
Restricted dialling
Restricted LES
Multi language

Optional Functions:

Secure Interface Unit - STU-II B / STU III Interface

Display size and number of characters:

Large graphical back light LCD display (64*240 pixels). 8*40 characters in text mode.

Keyboard:

On/Off
Help
Clear
12 Alpha numerical keys
4 Soft keys (Function changes according to task)
4 Arrow keys (Function changes according to task)

Size and weight :

Antenna Unit	:	H = 140mm, Diameter = 275 mm, Weight = 3,0 kg
Telephone unit	:	W=235 mm, Depth =190 mm, H=44 mm, Weigh = 1,0 kg
Power Supply Unit	:	W=230 mm, D=197 mm, H=33 mm, Weigh = 1,6 kg

Power:

DC input to PSU	:	10-32 V. Polarity dependant
Typical power consumption	:	During Transmission = 30W, During Standby = 15W.

AC/DC converter (Option) :

AC input	:	240 V, 47-63 Hz, 80 VA.

Environmental conditions:

Storage:	:	-50°C - +80°C
Operational		
Telephone unit:	:	-25°C - +55°C, 40°C 95 % humidity (non condensing)
Antenna unit:	:	-35°C - +55°C, 40°C 95% humidity, (non condensing)
Infrared:	:	500 W/m^2,
Ultra violet:	:	54 W/m^2 ,
Visible:	:	1150 W/m^2
Antenna unit:	:	IP66,
Telephone unit	:	IP53.
Power Supply	:	IF43
Velocity	:	Up to 250 km/h providing not exceeding : - Turing acceleration up to 20 deg/sec^2 - Induced acceleration 0,5g
Wind	:	Relative average wind velocity up to maximum 200 km/h
Ice	:	Outdoor equipment up to 25 mm
Turning rate	:	60 degrees per second

Robustness and shock:

Operational			
Vibration	:	5 - 20 Hz	0,02g^2/Hz
		20 - 120 Hz	- 3dB/octave
Survival			
Vibration	:	Vibration (12,7g RMS) in each of the three mutually perpendicular axes	
		5 - 20 Hz	0,05g^2/Hz
		20 - 150 Hz	- 3dB/octave

External Interfaces:

1. Two-wire interface for standard DTMF phone, cordless basestation or PABX (Trunk lines)
2. Two-wire interface programmable for i.e. standard DTMF phone, cordless basestation, PABX (Trunk lines) or fax machine (default).

Specifications for two wire interface:

Connector	:	RJ11
Speech level	:	+2.5 dBm
Receive level	:	-9 dBm
Dial tone	:	425 Hz -19 dBm
DTMF minimum	:	Dialling: -20dBm0
Line voltage	:	30V DC
Ringing signal	:	35V RMS 25Hz (Max two telephones/faxes)
Signalling	:	Hook off: >20mA/Hook on: < 9mA

Data connector for data communication, printer or software download.

Connector	:	D-sub, 9 pins RS232
Data Protocol	:	Hayes AT compatible
Bitrate	:	1.2 - 38.4 kbps
Parity	:	No Parity (AT programmable: Odd/even/mark/space)
Data Bits	:	8 bits (AT programmable: 7 or 8 bit)
Stop bit	:	1 bit (AT programmable: 1 or 2 stop bits)
Flow control	:	RTS/CTS (AT programmable NO, XON/XOFF or RTS/CTS)
3. SIM card interface	:	According to Inmarsat SDM module B annex 7 (subset of ISO 7816)
4. PSU Antenna plug	:	16 QLA 01-2-4c
5. Power connector	:	Outer 5.5mm, inner 2.1mm length 10mm

Antenna separation:

5 meter cable (standard delivered)

Optional cables with maximum loss -10dB at 1.6 GHz, 0,6 ohm resistance:

Cable Type	Max Lenght	W/Pig-tail QRPM911059-1000
S01112D	12 m	
RG 223	12 m	
RG 214	24 m	*
RG 214U	28 m	*
Ethernet 062300	40 m	*
S 12272-4	61 m	*
Nokia $^{1}/_{2}$”	91 m	*
Cellflex $^{7}/_{8}$”	145 m	*
Cellflex $1^{1}/_{4}$”	175 m	*
Cellflex $1^{5}/_{8}$”	230 m	*

G/T, EIRP and Antenna gain:

Antenna (2 patch) Gain	:	Tx 9dB, Rx 10 dB RHCP
Beam width at –3 dB points	:	25 degrees in azimuth
		45 degrees in elevation
G/T	:	- 17 dBK
EIRP	:	+14 dBW

Frequency:

1626.5 to 1660.5 MHz (transmitting)
1525.0 to 1559.0 MHz (receiving)

Bit rates/modulation:

Voice channel	:	5.6 kbits/s, O-QPSK, 60% roll-off
Speech codec rate	:	4.8 kbits/s advanced multiband excitation (AMBE) encoding

Built in RAM Backup Battery:

Life time	:	10 years
Type	:	Li-Mn 3V, CR2032