

Rev.Date January 4 th 2000	Rev. F	Document no. 1522-QUFC 911 940
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Technical Specification Nera WorldPhone Provident w/TPU		

Specifications subject to changes without notice

Abbreviations

NWP Nera WorldPhone Provident

ARU Antenna Radio Unit

TPU TelePhone Unit

General

The Nera WorldPhone Provident w/TPU is Inmarsat approved with Certificate Number 76EB53

Standard Functions:

- Voice
- Fax 2.4 kbps Group III
- Data 2.4 kbps
- SIM Card handling
- Handsfree
- 10 different last number dialled
- Telephone book for 99 numbers (22 digit)
- Mail Alert
- NIMS
- Call logging
- Access Code
- Restricted dialling
- Restricted LES
- Multilanguage
- Prepaid minutes

Optional Functions:

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

Display size and number of characters:

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

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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 :

- Telephone unit separate : W=235 mm, H= 44 mm, D=190 mm
- Antenna unit : W=525 mm, H=525 mm, D= 52 mm
- Weight complete : 6 kg. (ARU, TPU, 10 m cable, 3000 mAh battery).

Power

- DC input to Liberator : 10-32 V. Polarity dependant
- Power consumption : Transmit Max. 12W, Standby 0,5W

AC/DC Adapter

- AC input : 100-240 V, 47-63 Hz, 30 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/m²,
- Ultra violet: : 54 W/m²,
- Visible: : 1150 W/m²
- Antenna unit: : IP66
- TPU : IP53.
- Wind : Relative average wind velocity up to maximum 150 km/h
- Rain : 50 mm/h with wind of 55 km/h
- Ice : Outdoor equipment up to 25 mm

Robustness Survival :

- Vibration : Vibration (1,05g RMS) in each of the three mutually perpendicular axes
- 5 - 20 Hz : 0,02g²/Hz
- 20 - 150 Hz : - 3dB/octave

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External Interfaces:

1. Two-wire interface for standard DTMF phone, cordless base station or PABX (Trunk lines)
2. Two-wire interface programmable for i.e. standard DTMF phone, cordless base station, 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

3. 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)

4. SIM card interface : According to Inmarsat SDM module B annex 7 (subset of ISO 7816)
5. Antenna plug : 16 QLA 01-2-4c
6. Power connector : Outer 5.5mm, inner 2.1mm length 10mm

Antenna separation:

10 meter cable (standard delivered)

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

Cable Type	Max Length	W/Pig-tail QRPM911059-1000
RG 214	24 m	*
RG 214U	28 m	*
Ethernet 062300	40 m	*
S 12272-4	61 m	*
Nokia 1/2"	92 m	*
Cellflex 7/8"	145 m	*
Cellflex 1 1/4"	175 m	*
Cellflex 1 5/8"	230 m	*

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G/T, EIRP and Antenna gain:

Antenna (16 patch) Gain : Tx 19,3dB Rx 19.1 dB RHCP
Beam width at -3 dB points : +/- 10 degrees both in vertical and horizontal direction
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