dual reader
RF-IDtag / barcode

PHL 2700
RF-ID
handheld terminal

The PHL2700 terminal is a programmable handheld terminal, well suited for a variety of indoor portable applications. Different identification methods can be chosen for data collection: the built-in scanner is able to read all popular barcodes in combination with RF-ID tags.

The PHL2700 terminal can be programmed in C-language. The clear and easily readable graphic display enables the user to use the terminal in combination with advanced application programs.

Operating power is supplied by the main battery. A rechargeable battery pack, that can be charged in the cradle, or non-rechargeable penlite batteries can be used.

For communication the PHL2700 is provided with an IrDA interface. Through this interface the terminal is able to communicate with the cradle, or apart from the cradle to all computer devices that use IrDA. Also belt printers can easily be approached by the PHL2700 thanks to the smart location of the IrDA window.

Features	*Benefits*
■ Rechargeable Nickel Metal Hydride battery pack	■ Long life batteries
■ 8 MB Memory available	■ Enables continuous working even with large data storage
■ Easily readable graphic display	■ Enables advanced applications
■ RS232 data transmission by cradle	■ Easy data storage into the computer system
■ Built-in IrDA interface	■ Ideal to use together with portable computers, like note books.
■ Integrated laser technology and RF-ID technology	■ Possibility to read both bar codes and RF-ID tags

IRU2700
cradle for data transmission and
charging rechargeable battery pack

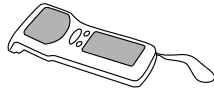**Dual data collection**
programmability and portability
barcode reading and RF tag reading
in one terminal

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PHL2700 RF-ID handheld terminal

Electrical specifications

Main battery	☐ rechargeable pack: Ni-MH ☐ dry cell: Alkaline penlite ☐ optional: other 2 x AA-size penlite
Main battery operating time	☐ Ni-MH: When having every 10 seconds on: 1 sec laser, 0.4 sec. green LED, 0.4 sec. buzzer, 1 sec. RFIDtag reading, 0,2 sec. RFIDtag writing, operating time is: approx. 22 hours ☐ Alkaline: When having every 10 seconds on: 1 sec laser, 0.4 sec. green LED, 0.4 sec. buzzer, 1 sec. RFIDtag reading, 0,2 sec. RFIDtag writing, operating time is: approx. 43 hours ☐ Different operation conditions affect the operating time ☐ Use of other penlite batteries affect the operating time
Backup battery	Lithium (CR2032)
Backup battery operating time	If fully charged: 30 days backup time
Battery management	☐ Low voltage indicated on the terminal display. ☐ When battery is low the terminal switches off automatically.
Charging method	☐ Rechargeable Ni-MH pack in terminal via cradle

Specifications laser module (barcode reading)

Light source	650 nm visible laser diode
Scan rate	100 scans/sec
Decode rate	100 decodes/sec
Reading width	62 mm at 30 mm 111 mm at 100 mm
Resolution at PCS 0,9	0.15 mm (6mil)
Depth of field	0 - 140 mm (at PCS 0.9, res. 0.25)

Specifications RF-ID module (RF-ID tag reading)

|	
Reading range	up to 15 mm, dependent on type of RF-ID tag

Physical specifications

Dimensions (l x w x d)	177 x 62 x 41 mm
Case material	ABS
Weight	body (excl. battery): 195 g
Direct cable	optional for maintenance: RS232 - DB9 female

Functionality

Memory	☐ ROM: 32 kB ☐ FlashROM (for O/S and program): 512 kB ☐ fast RAM: 2kB ☐ battery backed up D-RAM (for data): 8 MB
Microprocessor	16-bit
Real time clock	Quartz RTC, time and date programmable, leap year handling, (accuracy $\pm$ 60 sec./month)
Display	☐ 128x64 Pixels graphic LCD with backlight ☐ Character fonts: 4/8 lines x 16 characters 5/10 lines x 21 characters
Keyboard	☐ 27 keys total (26 keys user definable) ☐ 8 Function keys ☐ Alpha/Numeric mode
Trigger mode	Manual
Programming	Functionality is provided by user application. The application may be downloaded from PC via cable, com port or IrDA.
Interfaces supported	☐ RS232 by direct cable ☐ RS232 by cradle ☐ IrDA on terminal
Transmission speed	☐ RS232 direct cable: 2400 - 115200 baud ☐ RS232 cradle: 2400 - 115200 baud ☐ IrDA terminal: 2400 - 115200 baud

Environmental specifications

Temperature	☐ -10 - 40 °C in operation ☐ -20 - 60 °C in storage
Humidity (non condensing)	☐ 20 - 80 % in operation ☐ 20 - 90 % in storage
Shock: drop:	1.5 m drop onto concrete surface
Shock: vibration:	10 - 50 Hz with 1G for 30 min, cycle for X,Y,Z.
Ambient light rejection	☐ fluorescent 3.000 lux max. ☐ direct sun 50.000 lux max.
Emission	According to EN50081, part 1
Immunity	According to EN50082, part 1
R&TTE	According to EN300-330
Protection against dust and moisture	According to IEC529, IP 42
Safety, Laser class	According to IEC825, Class I laserproduct

Supported symbologies	Chinese Post 2of5 - Codabar incl. ABC and CX - Code 39 - Code 93 - Code 128 - EAN-8 incl. +2,+5 - EAN-13 incl. +2,+5 IATA - Industrial 2of5 - Interleaved 2of5 - Italian Pharmaceutical - Laetus - Matrix 2of5 MSI/Plessey - UK/Plessey - S-Code - Telepen - UPC-A incl. +2,+5 - UPC-E incl. +2,+5

Supported RF Tags at 13.56 MHz	Philips I-Code	Texas Instruments Tag-It	ISO 15693	
Supported RF Tags at 134.2 kHz	Texas Instruments TIRIS			For other requests contact Opticon.

IRU-2700 cradle
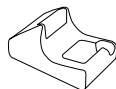
Physical specifications

Dimensions (l x w x d)	150 x 90 x 81 mm
Case material	ABS
Weight	250 g
Standard connector	RS232 - D Sub 9P Female RS485 - 6 pins modular plug

Functionality

Interfaces supported	☐ RS232 ☐ RS485
Serial communication	☐ RS232 Baudrate: 1200 - 115200 ☐ RS485 Baudrate: 1200 - 115200
Transmission modes	☐ Half duplex RS232 ☐ Half duplex RS485
Parity	Odd, Even, None

Environmental specifications

Temperature	☐ 0 - 40 °C in operation ☐ -20 - 60 °C in storage
Humidity (non condensing)	☐ 30 - 85 % in operation ☐ 30 - 90 % in storage
Shock: vibration:	10 - 50 Hz with 1G for 30 min, cycle for X,Y,Z.
Emission	According to EN50081, part 1
Immunity	According to EN50082, part 1

Electrical specifications

Battery charging time	☐ when battery in terminal: 8 hours charge

Preliminary specifications are subject to change without notice. Printed 01-2003

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