

## GSM-PDA with NFC / Mifare® AGPA 13,56 MHz (incl. Electronic Terminal structure)

This universal applicable **NFC / Mifare® GSM Mobile PDA** incl. Windows® CE.NET 4.2 is developed in cooperation with Austro Montan. This mobile phone includes the latest Philips RFID technology which combines all technical requirements for use in a variety of RFID market segments and applications. It supports both ISO 14443A-3 (MIFARE® family), ISO 14443A-4 (T=CL), FeliCa™ and active->passive / active->active Near Field Communication (NFCIP-1) according to ISO18092.

This *peer to peer* (p2p) function allows automatic intuitive communication e.g. between two mobile phones or NFC / Mifare® reader for access control or cashless payment.

Furthermore the GSM-PDA has a separate memory IC which allows to store the transactions data (standard 32kByte, enough for app. 300 transactions in the most of the applications)

The GSM Mobile PDA provides a bidirectional data transfer possibility through a GSM Data Call. This can be started whether by the phone or by the host-system. If the host initializes it there is no necessary any activity by the phone user to be able to get or collect the store data from the transaction memory.

The circuit design and software of this mobile GSM-PDA offers a direct and secure (e.g. triple-DES) communication between host system and the RFID-Card. (This kind of transactions is typical for payment systems).



### Applications are:

- ✓ Contactless E-Ticketing Application
- ✓ Access control
- ✓ E-purse loading
- ✓ Cashless payment
- ✓ Data Exchange
- ✓ Time control
- ✓ Health care application
- ✓ Loyalty programmes

## TECHNICAL SPECIFICATIONS

	features	remarks
<b>Dimension</b> .....	110x48x26 mm	Handset + Battery
<b>Weight</b> .....	128g (0,128 kg)	Handset + Battery + NFC/Terminal PCB
<b>Connectivity</b> .....	<ul style="list-style-type: none"> <li>✓ GSM900</li> <li>✓ GSM1800</li> <li>✓ GSM1900</li> </ul>	Tri- band, GPRS class 10, IRDA USB, NFC
<b>Battery</b> .....	Standard Battery: Li-ion, 1300mAh	Hard Pack
<b>Stand by</b> .....	Up to 120hrs @Standard Battery	Estimated
<b>Talk Time</b> .....	More than 3.5 hours @Standard Batt.	Estimated
<b>Operating System and Memory</b> .....	Windows® CE. Net 4.2	Memory: 64MB Flash ROM 64MB SDRAM 50MB User Accessible
<b>Color</b> .....	Silver /Black	
<b>Display</b> .....	LCD-TFT, 240x320 Pixel	262.144 Colour
<b>Digital Camera</b> .....	960 x 1280 Pixel	
<b>Supported Standards</b> .....	ISO18092 (NFC transport protocol, Mifare® family, compliant to ISO14443A, (Availability: "A+B" app.Q3/06) ISO14443A – 4 (T=CL), Felica™)	
<b>Reading range</b> .....	<b>RFID:</b> up to 30 mm / 1.18 Inch (ISO14443-A) depends on tag <b>NFC:</b> up to 30 mm / 1.18 Inch (passive mode) / 60 mm / 2.36 Inch (active mode)	
<b>Support</b> .....	Depends on application software (e-Ticketing, E-purse loading, Cashless payment, Time control, Health care application)	

Product specification in detail: **GSM-PDA incl. NFC / Mifare® AGPA with WINDOWS® CE 4.2**

<b>Connectivity:</b>	Tri-band, GSM (900/1800/1900 MHz), GPRS Class 10, IRDA, USB
<b>NFC/PMC Module:</b>	<b>NFC/PMC Module, incl. electronic Terminal structure, Development: Arygon Technology and Austro-Montan</b>
<b>Operating System:</b>	Microsoft® Windows® CE .NET 4.2 Microsoft Pocket Internet Explorer, Windows Media Player, Microsoft Image Viewer, MSN Messenger, Transcriber software included.
<b>Processor:</b>	Freescale i.MX21
<b>Display:</b>	2.2" Transflective TFT LCD 18-bit (262,000) colors 4 LED Backlight
<b>Camera:</b>	240x320 to 960x1280 photo resolution in JPEG format Supports MPEG 4 and H.263 format video recording Up to 30 frames per second
<b>Memory:</b>	64MB Flash ROM 64MB SDRAM 50MB User Accessible
<b>Dimensions:</b>	110 (h) x 48 (w) x 26 (d) mm
<b>Weight:</b>	120g
<b>Expansion:</b>	Integrated mini SD slot Supports standard mini SD memory cards
<b>Power:</b>	Removable/rechargeable 1300mAh - Up to 3.5 hours talk time* - Up to 150 hours standby time* * dependent on network and usage
<b>Audio:</b>	Integrated microphone Integrated speaker 2.5 mm stereo headphone jack Loud speaker for speaker phone function Supports AMR NB and AAC format Audio Recording
<b>Buttons:</b>	12 Alpha Numeric Key pad 5 Way Navigation 2 Call Dial and Call End Keys 1 Windows Start Key 1 Return Key 1 On/Off Key 1 Camera/Video Mode Key 1 Snap Photo Key 1 Two way Volume Key