



SCANN DY

powerlineECCO+

Quick Reference Guide

manufactured by:



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Declaration of conformity

These devices has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not in-stalled and used in accordance with the instructions, may cause harmful interference to radio communications. The appearance of disturbance in particular installations is not excluded. In the case that these devices should disturb your surroundings by their powering on and off, please inform advanced PANMOBIL systems GmbH & Co. KG immediately.

The user is cautioned that any changes or modifications not expressly approved by advanced PANMOBIL systems GmbH & Co. KG could void the user's authority to operate the equipment.

Consumer electronics

These devices has been tested and found to comply with the limits for class B digital devices, pursuant to the CE EMC directive.

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PRODUCT REFERENCE

powerlineECCO+



No.	Description	Function
1	Green LED	Lights up green when ECCO+ is powered ON. Is flashing green (2 sec.) If battery is low (Other function can be defined by API)
2	Yellow LED	Lights up yellow if a barcode or RFID tags was read successfully. Is flashing yellow (500ms) when connected to USB (Other function can be defined by API)
3	Red LED	Lights up red if connect to ext. power (USB or power adapter) Red = Battery charging Off = Battery fully charged
4	Blue LED	Lights up blue when ECCO+ is connected by Bluetooth Is flashing fast (500ms) while WiFi is associating Is flashing blue (3 sec.) if WiFi is connected (Other function can be defined by API)
5	Key 1 (Trigger button)	Triggers the barcode and/or the RFID reader (Other function can be defined by UniversalConfigurator or API)
6	Key 2 (Delete button)	Triggers the barcode and/or RFID reader. The captured data will be deleted from the memory. (Other function can be defined by UniversalConfigurator or API)
7	Key 3 (Custom1)	Customer configurable key

		(Other function can be defined by UniversalConfigurator or API)
8	Key 4 (Custom2) Power key	Power key to power the unit ON. Pressing this key for 3 sec. turns the unit OFF. Customer configurable key (Other function can be defined by UniversalConfigurator or API)
9	Mini USB interface	USB communication interface and battery charging (USB profile can be defined by UniversalConfigurator or API) Please note! When using the device in USB Memory Stick mode, please use the removable drive eject function prior to disconnect the device from the USB interface!
10	Clip holder (accessory)	Holder for fixing the shirt clip, belt clip or neck belt (accessory)

CHARGING THE BATTERY

Before the first operation, the main battery should be charged by using the included power adapter or through the USB interface of the PC. As long as the battery is charging, the red LED (3) lights solid red. After the battery is fully charged the red LED (3) turns off.

A full recharge of the battery takes approximately 5 hours when using the included power adapter. Recharging the battery from USB interface of a PC may take longer.

POWERING UP THE DEVICE

Make sure the battery is fully charged before powering up the device for the first time.

To power up the device press key 4 / power key (8) for a short time. The power indicator LED green (1) lights solid green. The startup sequence takes approximately 7 seconds. The device plays a beep sequence as soon as the operating system has booted and started the installed application. The device is now ready to operate.

DEVICE CONFIGURATION

The ECCO+ comes with preinstalled universal software which can easily be configured to meet the application requirements. The device function can be determined by using the UniversalConfigurator software which is included with every device.

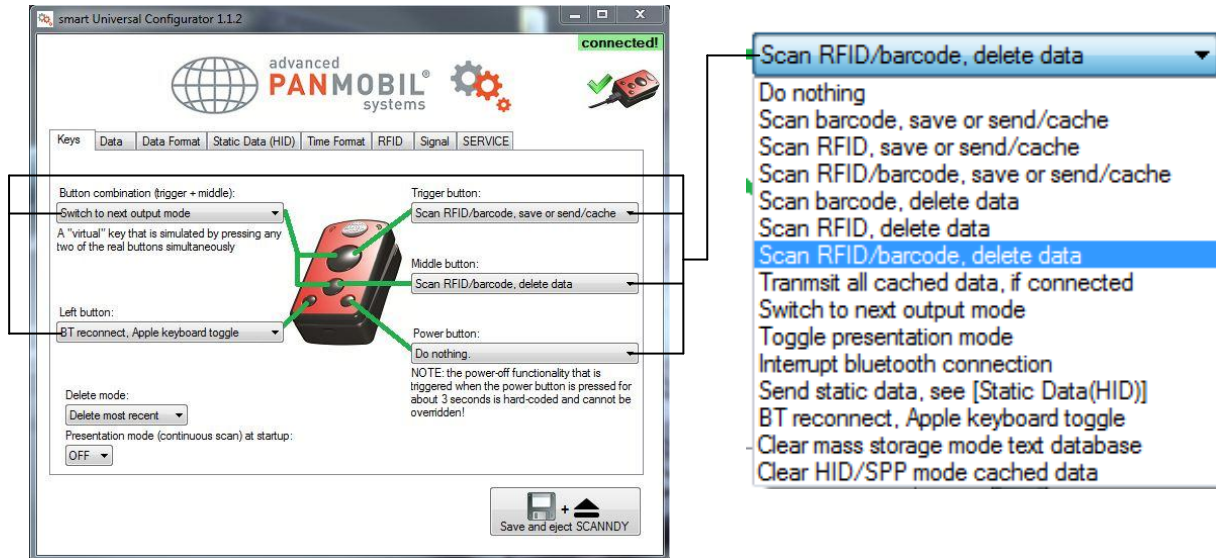
To install the UniversalConfigurator software, power up the device and connect to the USB interface of the PC by using the included USB cable. The PC opens the device as a memory stick where the UniversalConfigurator is located. Run the SetupSUC.exe and follow the instructions of the installation wizard.

After the software is successfully installed, run the UniversalConfigurator to configure the connected device.

UNIVERSALCONFIGURATOR

Section Keys

The function of each key and key combination can be defined in the section keys.



Function definition for the button Trigger, Middle, Left and Power button

Do nothing

- No function

Scan barcode, save or send/cache

- Triggers the barcode reader. The scanned data is saved in the memory or send via Bluetooth or WiFi according to the output mode set in the section Data.
If the output mode is set to Bluetooth or WiFi and the device is not connected, the scanned data is stored in the cache memory and resend as soon as the device is reconnected.

Scan RFID, save or send/cache

- Triggers the RFID reader. The scanned data is saved in the memory or send via Bluetooth or WiFi according to the output mode set in the section Data.
If the output mode is set to Bluetooth or WiFi and the device is not connected, the scanned data is stored in the cache memory and resend as soon as the device is reconnected.

Scan RFID/barcode, save or send/cache

- Triggers the RFID reader first. If no RFID tag is in reading range the barcode reader is triggered. The scanned data is saved in the memory or send via Bluetooth or WiFi according to the output mode set in the section Data.
If the output mode is set to Bluetooth or WiFi and the device is not connected, the scanned data is stored in the cache memory and resend as soon as the device is reconnected.

Scan barcode, delete data

- Triggers the barcode reader. If the scanned barcode is found in the database it will be deleted.

Scan RFID, delete data

- Triggers the RFID reader. If the tag data is found in the database it will be deleted.

Scan RFID/barcode, delete data

- Triggers the RFID reader. If no tag is in the reader field it triggers the barcode reader. If the Tag data or barcode is found in the database it will be deleted.

Transmit all cached data if connected

- Transmits the data from the cache file if the device is reconnected. This setting is valid if the device is used in online mode (Bluetooth, WiFi, USB HID (keyboard)). It can be configured to save the captured data in the cache file if no connection is available. (see section [Data])

Switch to next output mode

- The device can be configured to switch between three different output modes. Example: Mode 1 USB memory stick, Mode 2 USB HID, Mode 3 Bluetooth HID. Switch to next output mode switches from one mode to the other. (See section [Data])

Toggle presentation mode

- Toggles between trigger mode and presentation mode.
In presentation mode the barcode and/or RFID reader is permanently on.

Interrupt Bluetooth connection

- Disconnects the Bluetooth connection

Send static data (USB HID mode only)

- Send static data configured in the section [Static Data]

BT reconnect, Apple keyboard toggle

- Tries to reconnect Bluetooth
- If connected to an Apple device: Displays the virtual keyboard of the connected Apple device (iPod, iPhone, iPad)

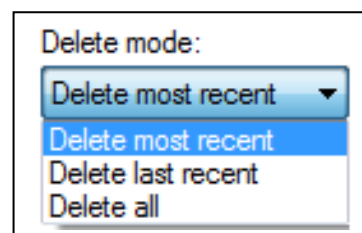
Clear mass storage mode text data base

- Deletes the data records from the database

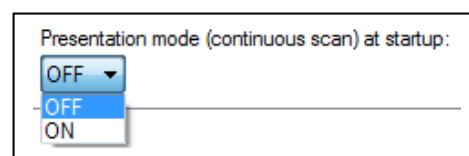
Clear HID/SPP mode cached data

- Deletes the data records saved in the cache file

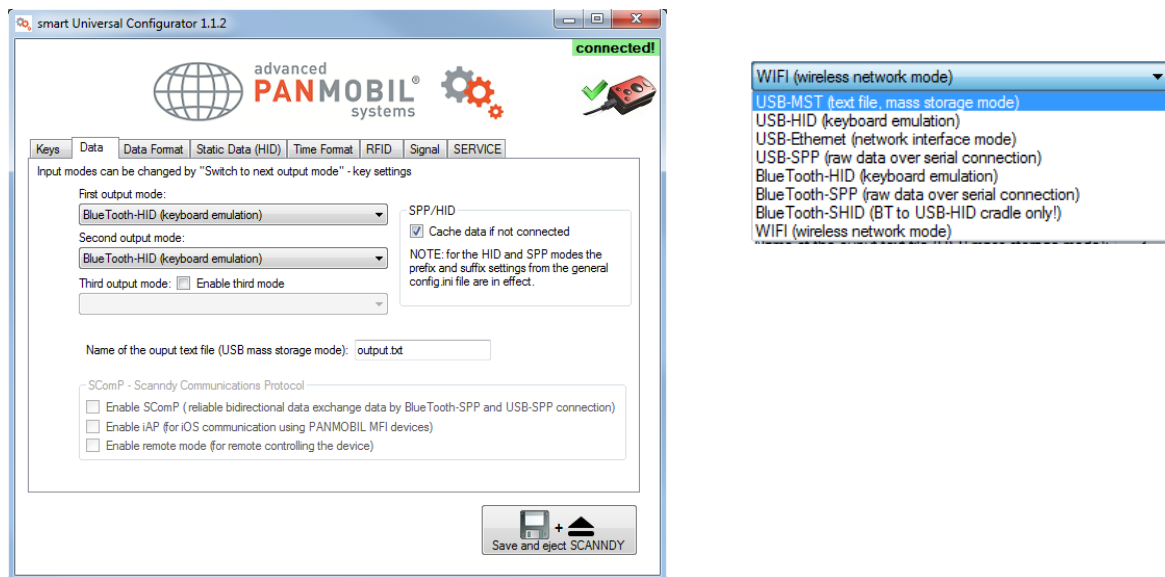
Delete mode



Presentation mode (continuous scan) at start up Section Data



Up to three different output modes can be defined at the same time



Text file (USB mass storage mode)

- The scanned data is saved in a file on the device memory. The device will be recognized as a memory stick if connected to a PC

USB-HID (keyboard emulation)

- The device will be recognized as a USB keyboard when it is connected to a PC.
The scanned data will be sent directly to the PC same like typing on the PC keyboard.

USB-SPP (raw data over serial connection)

- The device will be recognized as a serial device. The device driver for USB serial must be installed on the PC to be able to receive data from the device. A virtual COM Port will be available after the driver is installed successfully.

Bluetooth-HID (keyboard emulation)

- The device will be recognized as a Bluetooth keyboard when it is connected to a PC via Bluetooth.
The scanned data will be directly sent to the PC same like typing on the PC keyboard.

Bluetooth-SPP (raw data over serial connection)

- The device will be recognized as a serial device. A virtual COM Port will be available when the device is paired by Bluetooth.

Bluetooth-SHID (BT to USB-HID cradle only)

- Bluetooth connection to Panmobil cradle. The cradle transmits the data to the PC as a HID keyboard

Bluetooth configuration

The Bluetooth properties can be configured in the file "config.ini" which is located on the device memory. Connect the device to the PC and open the file "config.ini"

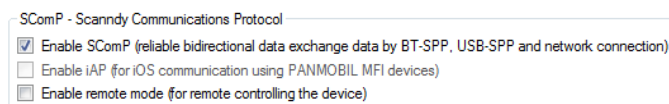
[bt]	
devname=powerSCANN DY500192	Device name
masterkey=1234	Security Key in Master mode
slavekey=1234	Security Key in Slave mode
security=0	Security enable/Disable (0=off/1=on)
available=1	Visible for other devices (0=off/1=on)
dirty=0	Initialize Bluetooth with the new settings
defaddress=000000000000	BT address of the device to connect to
address=90507BC5EC9E	Own BT address
sppchan=0	Channel for communication in SPP profile

Note!

If you have modified Bluetooth properties, set the value for “dirty” to 1, save the config.ini file and restart the device to update the Bluetooth setting.

WiFi (Wireless network mode)

- WiFi connection to the WiFi network. The WiFi communication support raw socket communication or SComp protocol.



WiFi configuration

The WiFi properties can be configured in the file “config.ini” which is located on the device memory. Connect the device to the PC and open the file “config.ini”

[wifi]	
host=	Host IP address
port=	Host port
dhcp=1	enable/disable dhcp (0=off/1=on)
ip=	specific IP address
netmask=	Subnet mask
gateway=	Gateway address
domain=domain	Domain name
dns1=	DNS1 server address
dns2=	DNS2 server address
crypt=2	Encryption (0=none, 1=WEP, 2=WPA-PSK, 4=WPA2-PSK)
ssid=	Wireless network name
wepkey=	WEP key
wpapsk=	WPA-PSK/WPA2_PSK key
mode=2	Wireless mode(0=Auto, 1=ad-hoc peer-to-peer, 2=infrastructure)
region=48	WiFi region
channel=0	WiFi channel
bssid=	(reserved)

Note!

Save the config.ini file after you have modified any settings and restart the device

Cache data if not connected

- When the device is configured for Bluetooth, WiFi or USB HID, the data will be stored in a cache if the connection is interrupted.

SPP/HID

☒ Cache data if not connected

NOTE: for the HID and SPP modes the prefix and suffix settings from the general config.ini file are in effect.

Name of the data file where the scanned data is saved to when the device is in mass storage mode

Name of the output text file (USB mass storage mode):

SComP Communication protocol

SComP - Scanndy Communications Protocol

- ☐ Enable SComP (reliable bidirectional data exchange data by BlueTooth-SPP and USB-SPP connection)
- ☐ Enable iAP (for iOS communication using PANMOBIL MFI devices)
- ☐ Enable remote mode (for remote controlling the device)

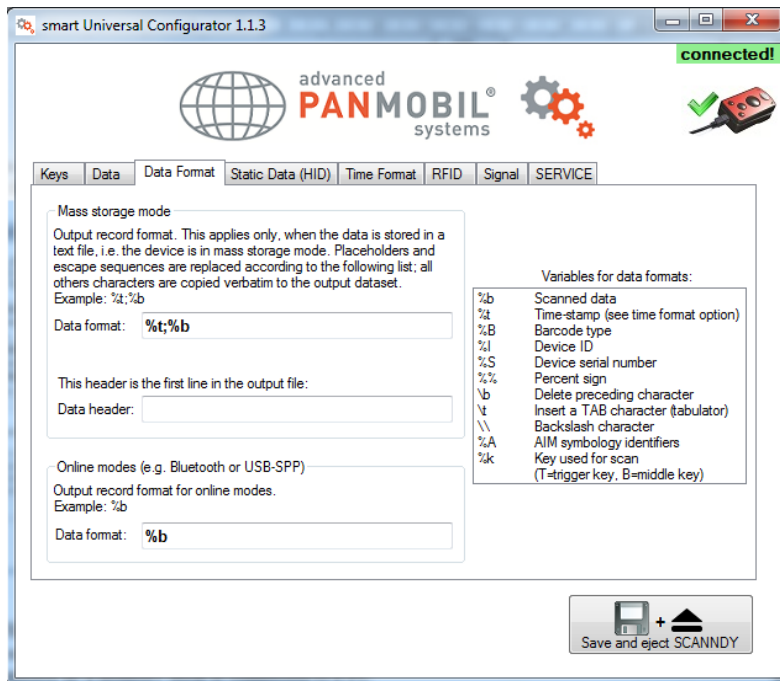
SComP protocol is a bidirectional communication protocol used in online modes like Bluetooth (SPP), WiFi and USB (serial).

SComP - Scanndy Communications Protocol

SComP is intended to allow data transfer to and from, as well as remote control of, Panmobil (smart)Scanndy devices by exchanging messages between two endpoints. SComP uses message ids to allow for matching request/response pairs and assures data integrity through use of CRC-32 checksums. Its main use is to provide reliable bidirectional communication over unreliable serial communication lines. The SComP metadata is human readable and is composed of only ASCII characters, to simplify debugging and transport over binary intransparent communication lines. In the design, simplicity was given higher precedence than efficiency.

Section Data Format

The data record format can be configured in the section “Data Format”
The captured data will be stored according to the configuration



The format of the output record will be according to the sequence of the variables set in the field “Data format”.

Example:

Data format %t;%b

Record in data file: time stamp; barcode data

2013-06-07 11:15:00;4023500081009

Data format %S;%b;%t

Record in data file: device serial number; barcode data; time stamp

500187;4023500081009;2013-06-07 11:18:35

Data header

Some applications require a data header as first line in the data file.

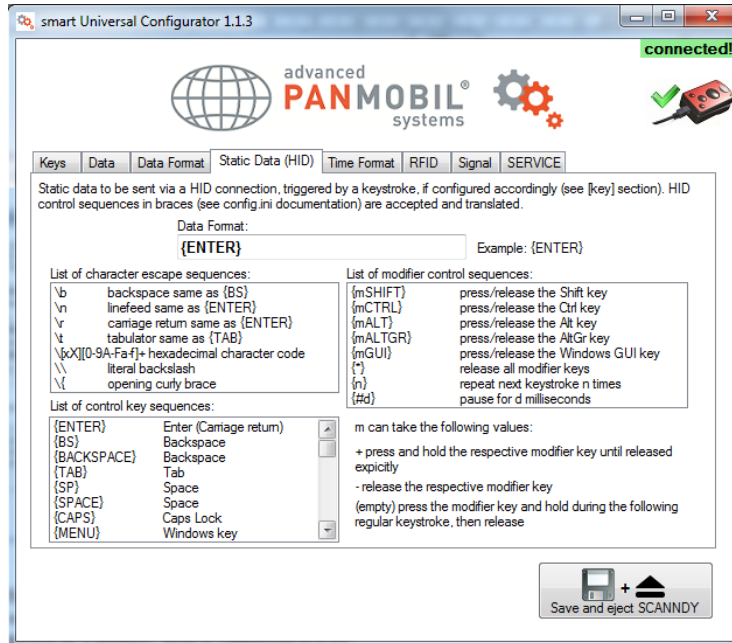
The header can be set in the field “Data header”

Online modes

For all online modes like Bluetooth, WiFi or USB serial, the data record can be configured in the field “Data format”

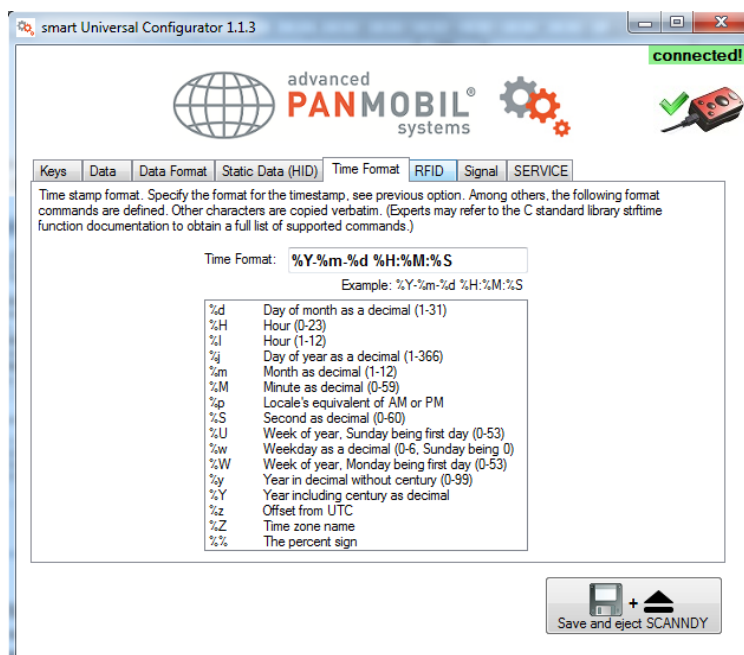
Section Static Data

For application where the device is used as a cable connected barcode reader simulation a USB keyboard, the device can be configured to send static data triggered by a keystroke.



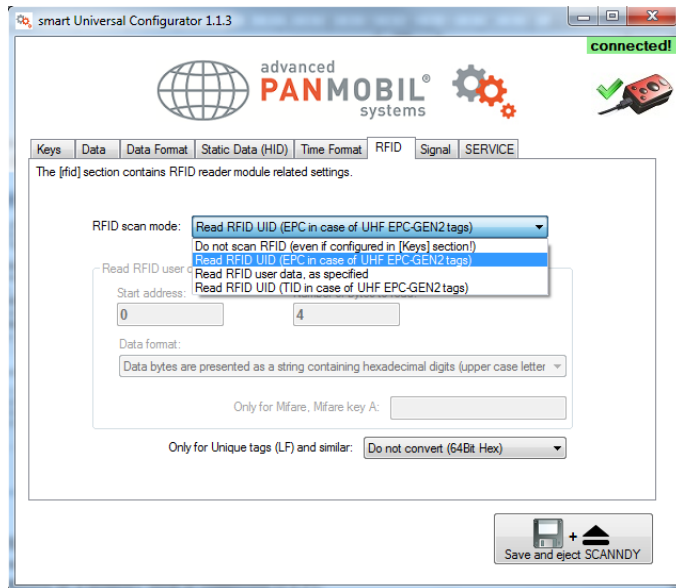
Section Time Format

The time stamp saved in the data record can be configured to the requirements of the application



Section RFID

Devices equipped with a build in RFID read/write unit, can be configured in the section RFID. The RFID unit can be configured to read data from the EPC, TID or user memory of a RFID Tag.



RFID scan mode

Specifies the memory to read.

For reading data from the user memory of a tag, the start address and number of bytes to be read must be specified in the fields "Start address" and "Number of bytes to read".
The format of the received data, can be specified in "Data format".

Specifically for reading data from the user memory of Mifare Tags an access key is required.
The access key can be configured in the field "Mifare key A"

The output of the UID of 125KHz Tags (Unique or similar) can be converted to three different formats.

64Bit Hex (default)

40Bit Hex

64Bit decimal

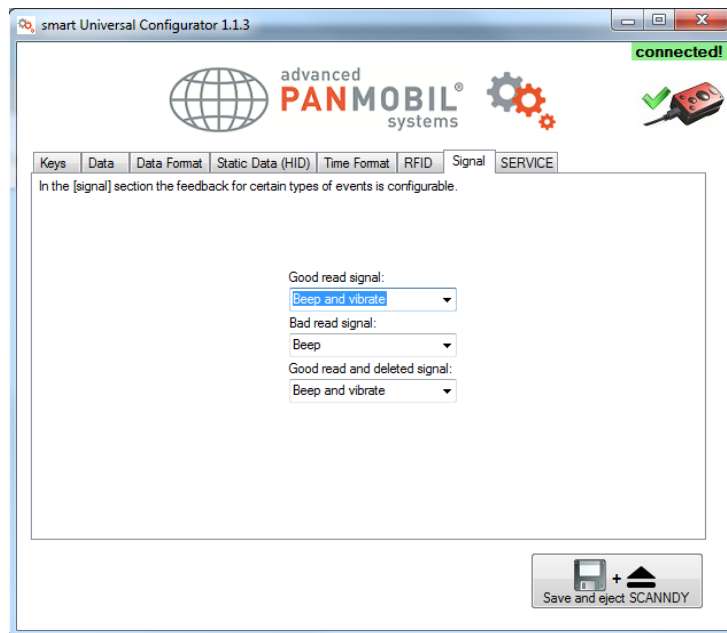
Note!

The properties for UHF RFID can be set in the config.ini file located on the device.
Connect the device to the PC and open the file config.ini

[uhf]	
region=8	UHF region setting (please refer to the config.ini file description)
pwrsave=2	Power save mode (please refer to the config.ini file description)
rwpower=1999	read/write power 1000...1999 centi-dbm
fast=1	UHF fast mode
gen2session=0	EPC Gen2 sessioning
freq=0	UHF single frequency operation

Section Signal

In the signal section the feedback for certain types of events is configurable.



Events:

- | | |
|-------------------------------------|--|
| Good read signal: | Barcode or Tag was read successfully.
Data does match the requirements |
| Bad read signal: | Barcode or Tag could not be read
Barcode or Tag was read successfully, but data does not match the requirements |
| Good read and delete signal: | Barcode or Tag was read successfully
Barcode or Tag was found in the data file for deletion |

Signals:

No feedback: the device does not beep or vibrate

Beep: the device beeps (no vibration)

Vibrate: the device vibrates (no beep)

Beep and vibrate: the device beeps and starts the vibration

Section Service



Click the button “Open device drive” to brows the device memory



The options set by using the smartUniversalConfigurator are stored in a file on the device. Click the button “Open smart.ini config file” to open the configuration file.

Please Note!

Changing parameters in this file will have direct effect on the device function!



Click the button “Save to device” to save the modified parameters
All modifications will be updated after the device is disconnected from the PC or after a reboot.



Click the button “Reset configuration” to reset all settings

The advanced device configuration for Barcode, Bluetooth, WiFi ect. is saved in a file “config.ini” located on the device. Click the button “Open config.ini file” to open the config.ini file.



Please Note!

Changing parameters in this file will have direct effect on the device function!

ADVANCED DEVICE CONFIGURATION

The Scannidy2 config.ini file contains the most common device settings. The following tables provide a short summary of the option names, along with their respective meaning and possible values. To reset the config.ini file to the default values hold the lower black button down while the firmware starts and, after the beep, confirm the reset with the OK / PW button. NOTE: this is not a build-in functionality, it has to be supported by the firmware by calling the PwrUpChkReset() function.

For information about the configuration for options like Bluetooth, WiFi, UHF RFID as well as Barcode configuration please refer to the document Config_ini.pdf

SAFETY AND REGULATORY

Interference statement:

This device complies with Part 15 of the FCC Rules.

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.

Modification statement:

The FCC requires the user to be notified that any changes or modifications made to this device and are not explicit approved by advanced PANMOBIL systems GmbH & Co. KG, may void the user's authority to operate the equipment.

Class B digital devices regulatory notice:

This equipment has been tested and confirmed to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio or television technician for help

Wireless notice

This product emits radio frequency energy, but the radiated output power of this device is far below the FCC radio frequency exposure limits. Nevertheless, the device should be used in such a manner that the potential for human contact with the antenna during normal operation is minimized. The system antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

EU:

This equipment is intended to be commercialised in all the countries of the European Union and there is no commercialisation or operational restrictions in any of the countries.

Hereby, advanced PANMOBIL systems GmbH & Co. KG declares that this Bluetooth barcode scanner is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC

European countries, where this equipment can be used are : Austria (AT) - Belgium (BE) - Bulgaria (BG) - Switzerland/Liechtenstein (CH) - Cyprus (CY) - Czech Republic (CZ) - Germany (DE) - Denmark (DK) - Estonia (EE) - Finland (FI) - France (FR) - Greece (GR) - Hungary (HU) - Ireland (IE) - Iceland (IS) - Lithuania (LT) - Luxembourg (LU) - Latvia (LV) - Malta (MT) - Netherlands (NL) - Norway (NO) - Portugal (PT) - Romania (RO) - Sweden (SE) - Slovenia (SI) - Slovak Republic (SK) - United Kingdom (UK)-Italy (IT)-Poland (PO)-Spain (SP).

Laser notice

Use of controls or adjustments or performance of procedures other than those specified herein may result in exposure to hazardous visible laser light. The laser scanner utilizes a low-power laser diode. Although staring directly at the laser beam momentarily causes no known biological damage, avoid staring into the beam as one would with any very strong light source, such as sunlight. Avoid that the laser beam hits the eye of an observer, even through reflective surfaces like mirrors, etc.

The following information is shown on the laser scanner device class label:



Limited Warranty

The manufacturer warrants that the product will be free of defects in material and workmanship for 2 years from the date of shipment. The manufacturer will, at its option, either repair, replace the defective products. Such repair or replacement shall be buyer's sole remedy in the event of manufacturer's breach of this limited warranty. Repaired or replaced parts or product may include new, reconditioned or remanufactured parts and equipment at manufacturer's option. All costs associated with shipment to manufacturer for warranty service, including but not limited to freight, duties, insurance and customs fees are buyer's responsibility. Manufacturer will pay the freight costs (duties, insurance, customs and any other fees) associated with the return shipment to buyer. The method of shipment will be at the manufacturer's discretion. Repair or replacement of any parts or equipment does not extend the period of warranty provided for herein.

THIS LIMITED WARRANTY IS MANUFACTURER'S ONLY WARRANTY.

MANUFACTURER DOES NOT GIVE WARRANTIES OF MERCHANTABILITY OR WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE.

To take advantage of this warranty, buyer should contact the seller not the manufacturer. The warranty set forth herein does not cover and manufacturer will have no obligations hereunder if any non-conformance is caused in whole or in part by; accident, transportation, neglect, misuse, alteration, modification, or enhancement of the products or incorporation, interfacing, attachment of any feature, program, or device to the products by a person or entity other than manufacturer, failure to provide a suitable installation environment, use of the products for other than the specific purpose for which the products are designed or any use of the product not in accordance with the User Guide or other misuse or abuse of the product. The warranty does not cover problems linked to batteries.