

ID info 7000
RFID Terminal
Hardware description and commissioning

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1 Introduction

1.1 Overview

The ID information 7000 is a single-board computer based on Linux Debian 9 on a LXDE 9.5 desktop surface or with custom graphics drivers for the built-in touch screen. Below the touch screen, the RFID device with antenna is installed.

How do I turn on and use the product?

If you receive this product, please follow these steps:

1. Open the box, take out the product and the power adapter.
2. Power On - Connect the DC adapter to the AC power supply. The maximum input voltage is 230V. When you hear a "DI", the product starts to work.
3. Internet - Connect the internet cable to the LAN port on the back of the product. You can therefore connect to Wi-Fi (select from settings).
4. Language selection in Settings
5. The operational

1.2 Reference literature:

If you want to do more with the built-in RFID device than just reading the UID, please read the descriptions of the corresponding document RFID device about the functions and the communication protocol.

In the HF version of the ID INFO 7000 Desfire the module M890 is installed.

For the ID info 7000 with HF RFID this is:

OEM DES devices Communication Protocol_4.51_EN

2 installation

2.1 Electrical connections

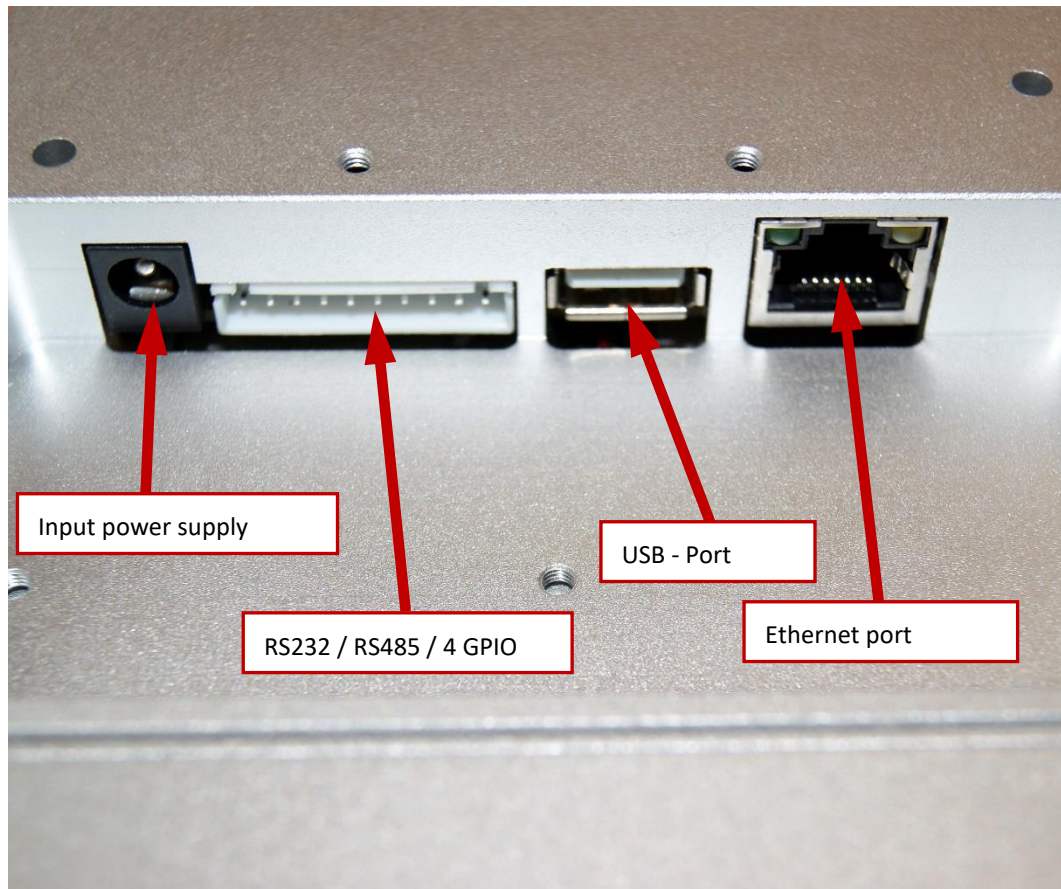


figure 1: Location of the connections

Mechanical installation

2.2 Dimensions

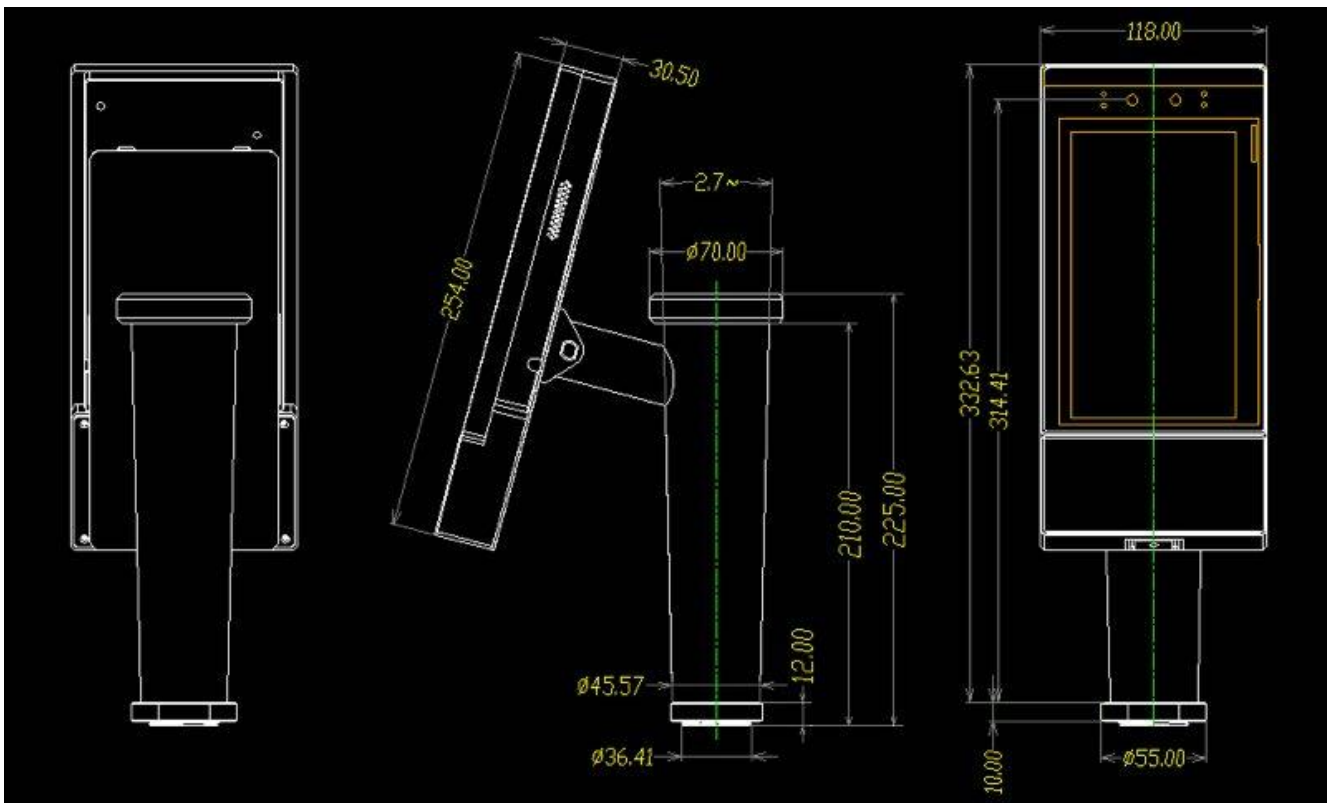


figure1: Dimensions

3 Remote access to the device

We recommend WinSCP for remote access. This allows you to update files in the same software and to copy them to your PC, so even edit files for changing the settings.

factory settings

- IP Address: assigned via DHCP

Open the terminal under System Tools LX terminal. To display the IP, execute the command: "ip a".

If this does not work with an IP scanner search. The device is displayed as "linaro-alip".

- User name: root
- Password: root

3.1 WinSCP

The device only accepts SFTP for file access:

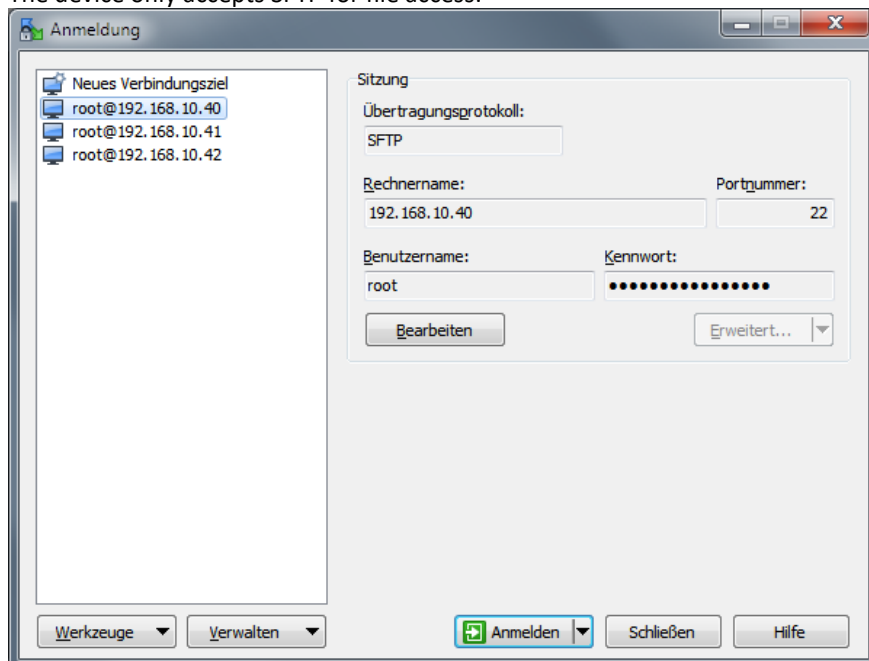


figure 2: Starting Screen of WINSCP

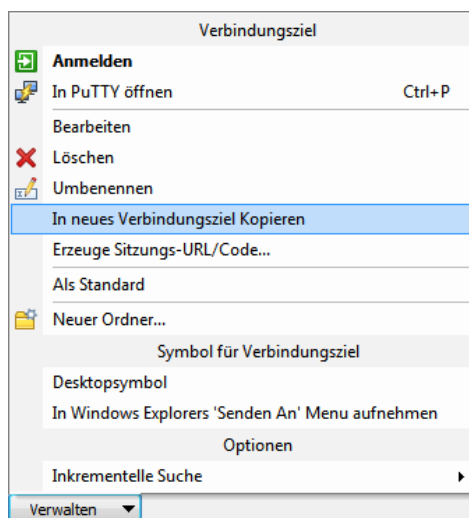


figure 3: Copy remote access Easily in WinSCP

Then a restart can be triggered in WinSCP. to call a simple terminal with [Ctrl + T] to enter "reboot" and confirm.

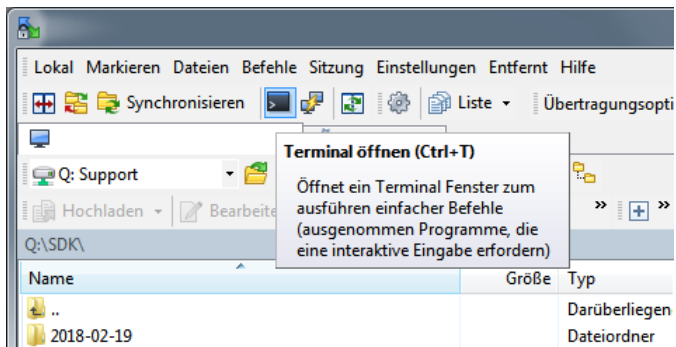


figure 4: Open a simple console

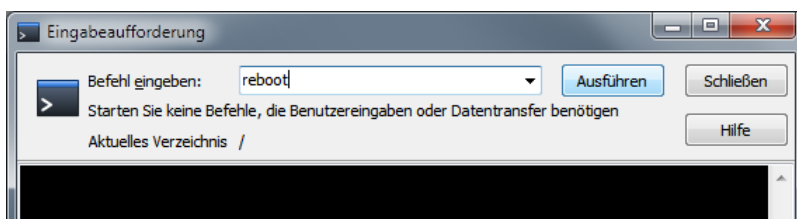


figure 5: Simple terminal window with manual command entry

3.1.1 Desktop Folder:

/ Home / linaro / 桌面 /

4 test Functions

4.1 Function Test GPIO

pin1 vcc 3v3

pin2 gnd

three gpio input default high level

pin3: GPIO8_A2

read the gpio function:

cat / sys / class / gpio / gpio250 / value

pin4: GPIO5_C3

read the gpio function:

cat / sys / class / gpio / gpio171 / value

pin5: SPI2_CS

read the gpio function:

cat / sys / class / gpio / gpio255 / value

three gpio output default high level

pin6: SPI2_RXD default high level

echo 0> / sys / class / gpio / gpio256 / value set low level

echo 1> / sys / class / gpio / gpio256 / value set high level

pin7: SPI2_CLK default high level

echo 0> / sys / class / gpio / gpio254 / value set low level

echo 1> / sys / class / gpio / gpio254 / value set high level

pin8: SPI2_TXD default high level

echo 0> / sys / class / gpio / gpio257 / value set low level

echo 1> / sys / class / gpio / gpio257 / value set high level

control LED light:

echo 0> / sys / class / gpio / gpio189 / value light on

echo 1> / sys / class / gpio / gpio189 / value light off

4.2 Function of the RFID reader

The module which installed the RFID reader in the device, is the DESFire module M890 of IDtronic.

The interface is connected ttyS3

The SDK includes command protocol can be found here:

<http://download.idtronic.de/Embedded/Embedded%20DES%20SDK.zip>

With the echo command to send commands directly to the interface and the output interface.

The program screen must be installed

The program screen, you can display the output of the module.

5 factory settings

5.1 Setting on the graphical user interface

Keyboard and mouse are automatically recognized.

5.1.1 Setting the keyboard

Open settings file for editing: `nano / etc / default / keyboard`

Here following set values:

```
#Keyboard CONFIGURATION FILE
```

```
#Consult the keyboard (5) manual page
```

```
XkbModel = "pc105"
```

```
XKBLAYOUT = "en"
```

```
XkbVariant = ""
```

```
XkbOptions = "terminate: ctrl_alt_bksp"
```

```
BACKSPACE = "guess"
```

You should still run the following command also to load the new keyboard layout:

```
sudo invoke-rc.d keyboard-setup start
```

5.1.2 Setting Application Startup

Autostart sequence

X-Server => LXDE => autostart script LXDE => calls autostart script of the software on

Startup software in the graphic surface LXDE

The graphical interface LXDE has a startup file:

```
/ Etc / xdg / lxsession / LXDE / autostart
```

6 Technical specifications

Dimensions	254 × 118 × 30.5 mm
power supply	DC input 12V 2A, circular plug ø 5.5 / 2.5 mm
power consumption	At 12 V: 2 A (about 24 watts)
RFID frequencies	13.56MHz (Mifare)
RFID modules	HF: OEM MF-M890 USB
operating system	Android 5.1
processor	Rockchip RK3288 (quad-core Cortex-A17 up to 1.8GHz, Mali-T764 GPU)
processor speed	1.8GHz
R.A.M.	2/4 GByte DDR3 @ 528MHz
Flash memory (on-board MMC)	8 GB
Ports (Internal)	2 x GPIO supports output 5V power level
ports externally	1X RS232 / Rs485 / 4x GPIO
interfaces	1 × USB host 1 1 × RJ-45 10/100 Mbps Ethernet
operating temperatur	from 0 ° C to +70 ° C
Multi-touch screen	Support up to 10 fingers
display	LCD 7 ", 1024 * 600, touch screen
Display	TFT LCD
graphics accelerator	OpenCL, DirectX 11; embedded 2D
Backlight	LED
wall mounting	available
optional	(125 VAC, 60 VDC) 1 external relay for controlling external devices
order data	ID info 7000 with HF RFID R-EA-IN7000-HF