RFID TRANSPONDER **TECHNOLOGY**

EK20-IDPAYFP   USER MANUAL

IDPAYFP (here named READER) is a fixed RFID device oriented to PREPAYED PARKING ACCESS.

-Operates with High Security RFID CARDS MIFARE CLASSIC.
-LCD display for operation survey and user info.
-Records 2500 payment LOG.
        Any LOG saved is sent to the HOST in real time after each operation.
        If the HOST is inactive all the pending LOGS are automatically sent at the next reactivation.
-Connection to HOST via RADIO UHF (200 mt) or RS485. The USB can be used for firmware upgrade.
-Black list for card blocking.
-Can create a CUSTOMER DATABASE using the program IDONE-PAY.
-Actuator relay and Bar status input, if used.
-Auxiliary relay for external warnings.
-Led red-green to indicate status O/C.
-IP65 class protection. Wall mounting.
-Operating temperature -20'C to 65'C.
-Available a very low power version for solar power supply (30uA stand by), waked up via CAPSENSE.
-IDONE-PAY software free download at: www.zetanetweb.com/download/zetanet.htm

INDEX

1.0 HOW TO OPERATE WITH READER

At power up appears for 3 seconds:
- The model PAYP and the active APPLICATION (Ex.03).
- The installed version (Ex. 1.5R).
- The READER number (Ex.N:00).
- The current date and time.

```
PAYP03 1.5R N:00
12/10/14 13:56
```

The READ CARD is active only if the BAR is CLOSED.
If the BAR is CLOSED the LED is **RED** and on the display appears:

```
APPROACH
YOUR  CARD
```

When the customer approach the CARD the READER verify if it is a VALID CARD with the correct SECRET KEY
for the current APPLICATION (EX.03).
Subtract the set PAY VALUE and save the LOG of the operation.
If OK the Buzzer emit a sound and on the display appears the
previous VALUE and the new VALUE after the operation.

```
0865 → 0863 -
WAIT……..
```

A command has been sent to the ACTUATOR and the BAR begin to open.
The LED became **GREEN**, the customer can enter the parking and any
read operation is inhibited. On the display appears:

```
0865 → 0863 -
WELCOME
```

When the BAR returns CLOSED the LED become **RED** and a new entry
is enabled.

```
APPROACH
YOUR  CARD
```

In case of error the buzzer sounds and these warnings are displayed:

CARD VALUE out of limit

```
CARD OUT LIMIT
RECHARGE!
```

CARD out of expiry date

```
CARD EXPIRED
RECHARGE!
```

CARD VALID but with corrupted data.

```
CARD NOT VALID
CONTACT US!
```

WRITE ERROR appears:

```
REPEAT
OPERATION
```

2.0   IDONE-PAY PROGRAM INSTALL

INSTALL USB DRIVERS
1) Copy into the PC the folder [MCP2200WindowsDriver].
2) In folder [DriverInstallationTool] select the folder [X64] for 64Bit or [X86] for 32bit platforms.
   Launch "MCP2200DriverIstallationTool.exe".
   Press "Install" and wait to the end of drivers installation.

INSTALL USB ON YOUR PC
1) Turn off the READER. Insert the USB plug and turn on.
2) The PC begin the new device install. Wait for the complete install of the assigned COM PORT.

INSTALL RADIO-PEN-UHF ON YOUR PC
1) Insert the RADIO PEN UHF into the USB connector of the PC.
3) The PC begin the new device install. Wait for the complete install of the assigned COM PORT.

INSTALL IDONE-PAY SOFTWARE ON YOUR PC
Dowload the IDONE_PAY setup from the site: www.zetanetweb.com/download/zetanet.htm
Launch "IDONE_PAY_40x_Setup" and follow the instructions to end.
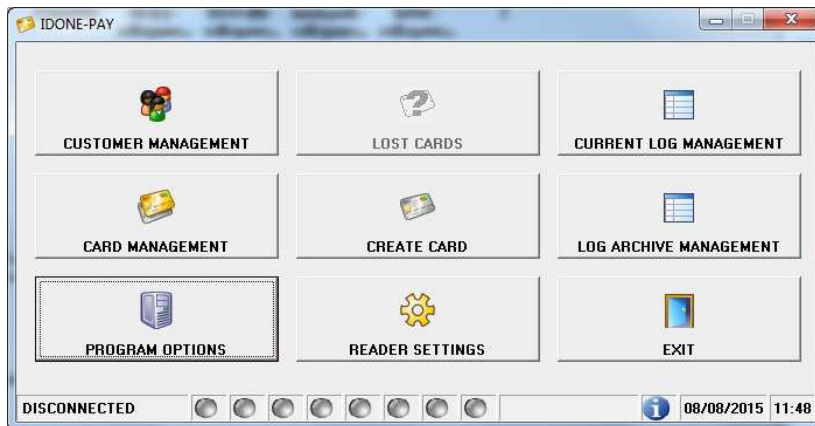Into your PC (WINDOWS7) will be created by default these specific folder:
 C:/ProgramData/ZETANET/IDONE-PAY/Database Files/idone-pay.mdb. The application Database.
 IMPORTANT: Don't erase or rename this file. You can lost all the work made before.
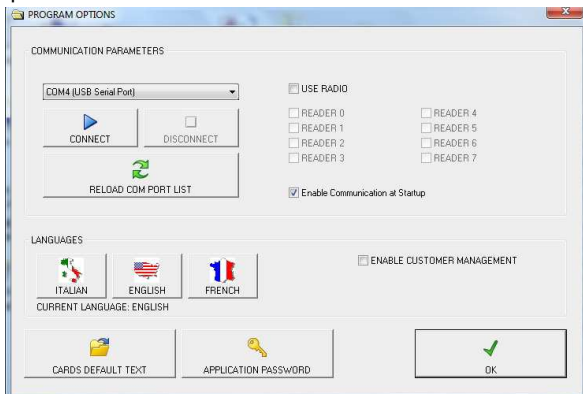
Will be created an icon on your desktop.

Now launch the IDONE-PAY program.

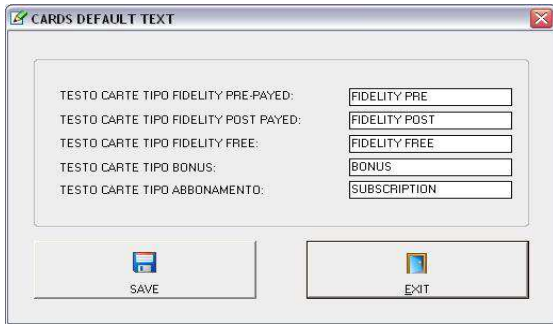Open the "PROGRAM OPTIONS" window.

Click the "LANGUAGE" to change the CURRENT LANGUAGE.
Click "ENABLE COMMUNICATION AT START-UP".The connection go active at any IDONE-PAY restart.
Click "ENABLE CUSTOMER MANAGEMENT" if you want to create a CUSTOMERS DATABASE associated to the CARDS.

Modify or use the default texts in "CARDS DEFAULT TEXT".
These texts will be written into the CARDS in "CREATE CARD" operations.

CARDS DEFAULT TEXT

TESTO CARTE TIPO FIDELITY PRE-PAYED:	FIDELITY PRE
TESTO CARTE TIPO FIDELITY POST PAYED:	FIDELITY POST
TESTO CARTE TIPO FIDELITY FREE:	FIDELITY FREE
TESTO CARTE TIPO BONUS:	BONUS
TESTO CARTE TIPO ABBONAMENTO:	SUBSCRIPTION

SAVE   EXIT

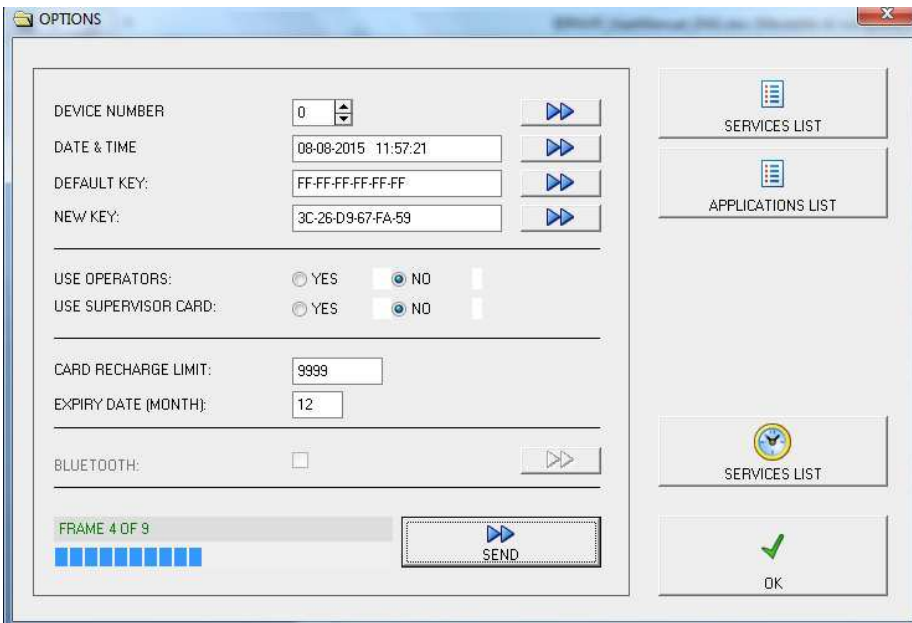### 3.0   HOW TO CONFIGURE THE READER USING IDONE-PAY

CONFIGURATION MODE BY RADIO
To CONFIGURE the READER the RADIO is the best choice. Avoid to open the box.
Uncheck "USE RADIO" in the window "COMMUNICTION PARAMETERS".
 To avoid problems, make attention that no other READER with the same DEVICE NUMBER is turned on.

COMMUNICATION PARAMETERS

COM12 (USB Serial Port)   ☐ USE RADIO

CONNECT   DISCONNECT

☐ READER 0   ☐ READER 4
☐ READER 1   ☐ READER 5
☐ READER 2   ☐ READER 6
☐ READER 3   ☐ READER 7

RELOAD COM PORT LIST   ☑ Enable Communication at Startup

Click "READER SETTINGS"

OPTIONS

DEVICE NUMBER	0	▷▷
DATE & TIME	08-08-2015 11:57:21	▷▷
DEFAULT KEY:	FF-FF-FF-FF-FF-FF	▷▷
NEW KEY:	3C-26-D9-67-FA-59	▷▷

SERVICES LIST
APPLICATIONS LIST

USE OPERATORS: ☐ YES   ☑ NO
USE SUPERVISOR CARD: ☐ YES   ☑ NO

CARD RECHARGE LIMIT: 9999
EXPIRY DATE (MONTH):   12

BLUETOOTH: ☐   ▷▷

SERVICES LIST

FRAME 4 OF 9   ▷▷ SEND

OK

Set the "DEVICE NUMBER" =0 and click the button to send to the READER.

Click the button to send the actual "DATE & TIME" to the READER.

The DEFAULT KEY is preset with the code (FF-FF-FF-FF-FF-FF). Do not change.
Press the button to send it to the READER.

The "SECRET KEY" protects your CARDS against fraud and duplication.
Enter 12 digits with numbers from 0 to 9 and letters from A to F. Example: 3C-26-D9-67-FA-59.
For safety reasons, the "SECRET KEY" will not appear again, you will see always FF-FF-FF-FF-FF-FF.
Press the button to send it to the READER.
IMPORTANT: Write this code and keep it in a safe place.

4

Click "SEND" to transmit the other parameters to the READER.
A bar indicates the good transfer.

Click "APPLICATION LIST".
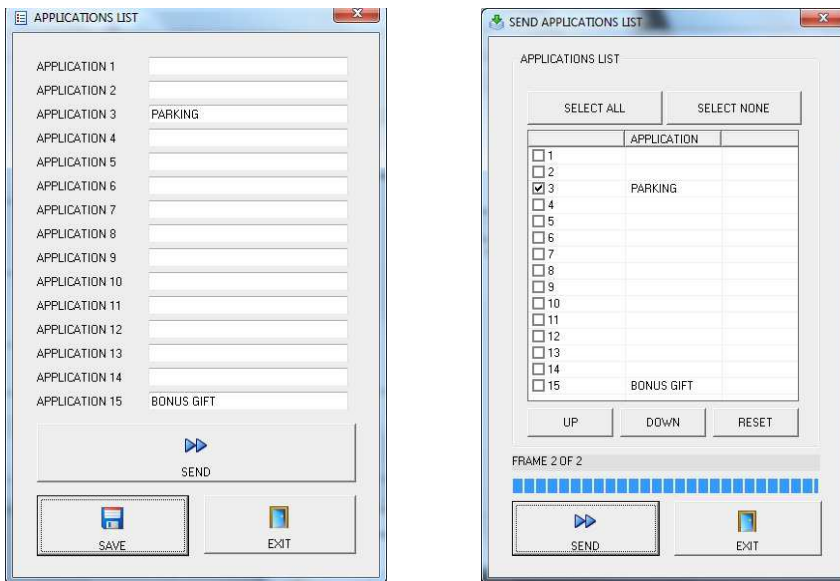
Insert the PARKING name in one of the APPLICATION less the 15. (Ex.the APPLICATION 3)
Click SAVE to memorize the created list and click SEND.
Will appear the window "SEND APPLICATION LIST".
Check "PARKING" and click "SEND" to transfer to the READER.
 A bar indicates the good transfer.

4.0 LOG MANAGEMENT
They are two visualization mode:
CURRENT LOG MANAGEMENT
Here you can verify in real time all the LOG transferred from the READER and saved into the current LOG FILE.
You can save the current LOG FILE into an EXCEL ARCHIVE.
LOG ARCHIVE MANAGEMENT
You can open any previous LOG FILE present in the EXCEL ARCHIVE to explore it.
All this operations don't interact anyway with the CURRENT LOG MANAGEMENT activities that flows normally.

-Check if there is a LOG FILE NAME:xxx.mdb where to save your LOGS.
 If it does not, open another existing file or create a new one by pressing "CREATE NEW LOG FILE".

They are two method to get LOG:
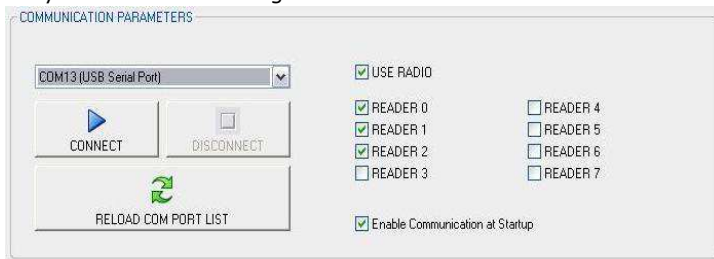
SCAN RADIO UHF
The LOG will be transferred from 1 to a max .8 READERS **in real time** only using the RADIO.
-Check "SCAN MODE" and check the "READERS" you want to be connected. (Ex. READER-0-1-2)
-Select the RADIO COM PORT and click "CONNECT".
-IDONE –PAY by the installed RADIO PEN UHF continuously scans the set READERS.
 Don't need any command, the LOG will be automatically transferred by the reachable READERS and visualized on
 the LOG window.
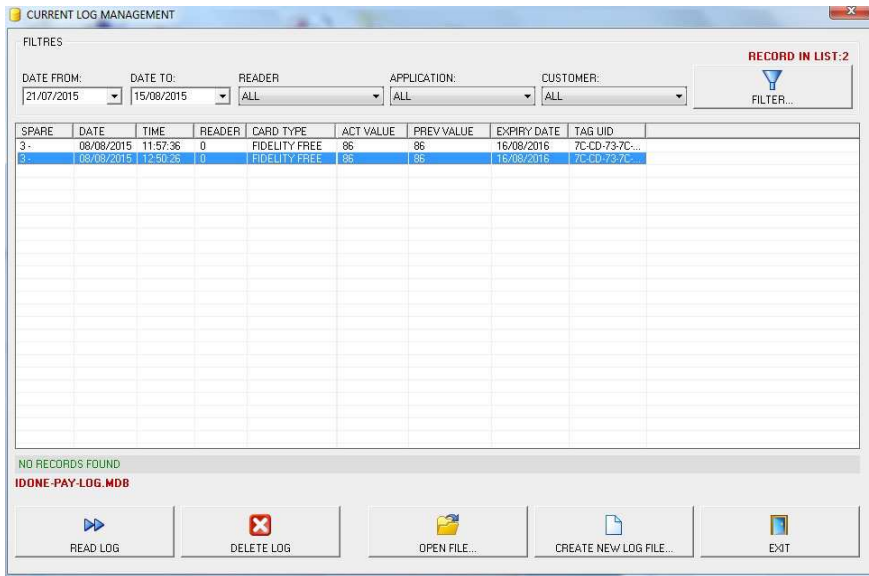-The READERS status is visualized by LED that show:
GREEN CONNECTED.
 YELLOW LOG transfer running.

PUNTO-PUNTO
The LOG will be transferred from a READER one at time by RADIO or USB.
-Deselect "SCAN MODE" in the "PROGRAM OPTION" window.
-Connect the USB or RADIO COM PORT.
-Press "READ LOG" in the window "CURRENT LOG MANAGEMENT".
-The LOG will be transferred from the connected READER.

Any record displays the following fields:

APPLICATION	The application related to the LOG.
DATE-TIME	DAY-MONTH-YEAR HOURS-MINUTES-SECONDS of the recorded LOG.
READER	DEVICE NUMBER of the READER.
CUSTOMER	Active only if "CUSTOMER MANAGEMENT" is enabled.
OPERAZIONE	The type of operation executed (+,-).
CARD TYPE	PREPAYED, FREE
ACT VALUE	The actual value charged in the CARD.
PREV VALUE	The previous value present in the CARD.
EXPIRY DATE	The date actually written in the CARD.
TAG UID	The CODE UID detected on the CARD (5 HEX Bytes).

5.0 HOW TO CREATE FIDELITY AND SUBSCRIPTION CARDS

This activity in fixed units as IDPAYFP can be made in two ways:
-Using an IDPAYM mobile READER. See instructions on the "IDPAYM_UserManual_ENG" .
 Usually an IDPAYM is used also to recharge the Customer CARD.
-Using an IDPAYF fixed READER placed near the PC. May use a spare part.

Use the RADIO UHF and uncheck "USE RADIO".
Select "CREATE CARD".
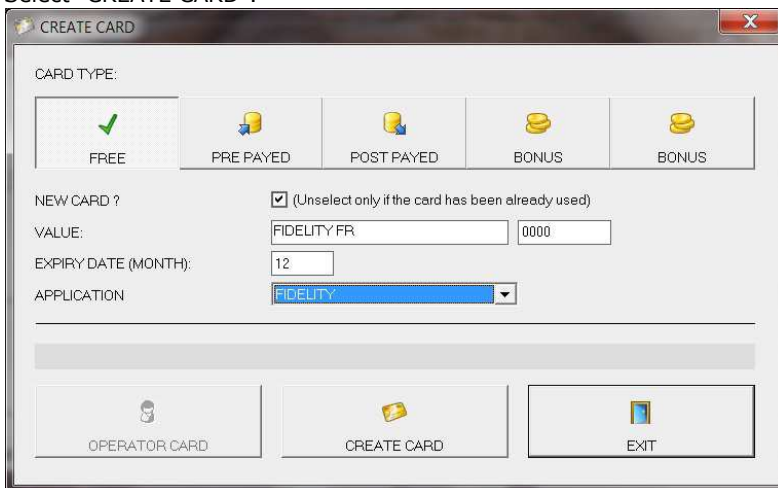
- Mark "NEW CARD?" if you want to write on a CARD that is never been written.(NOT PROTECTED)
  Do not mark NEW CARD? if you want to write on a CARD previously written. (PROTECTED).

  Select FREE or PREPAID or SUBSCRIPTION.
  You can write an 11 characters text.
  Insert the VALUE and the EXPIRY DATE (month) from the actual date.

- To write, place the CARD in front of PAYM and press CREATE CARD.
  At the end of the writing appears "WRITE SUCCESFULL".
  If an error appears "WRITE ERROR".

6

6.0 HOW TO CREATE A CUSTOMER DATABASE
As #5.0 this activity request the use of a IDPAYM or IDPAYF near the PC.

Be sure to have set "ENABLE CUSTOMER MANAGEMENT" in the "PROGRAM OPTIONS" window.
To assign a CARD to a specific CUSTOMER follow this procedure:

- Select "CUSTOMER MANAGEMENT" and press "NEW".
- Insert data of new CUSTOMERS (one or more) in the boxes and press "SAVE".

- EXIT and press "CREATE CARD" in IDONE-PAY window.
- Press "SELECT CUSTOMER" and choose the desired CUSTOMER that will be swon in the CUSTOMER box.
- Create a Card as detailed in #3.2.

Other functions permit:
-FIND USER FROM CARD
-ADD NEW CUSTOMER
-VIEW CUSTOMER CARD STATUS
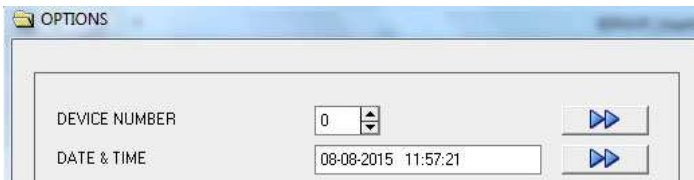-MODIFY, DELETE a CUSTOMER record.

7.0 HOW TO CREATE A BLACK LIST

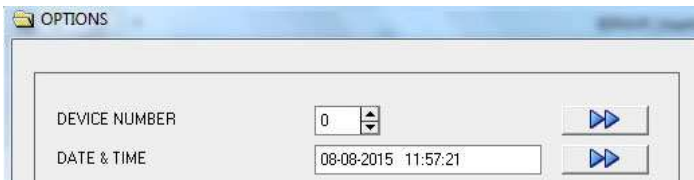Is possible to send to the READER a BLACK LIST of CARDS to avoid a misuse of them.
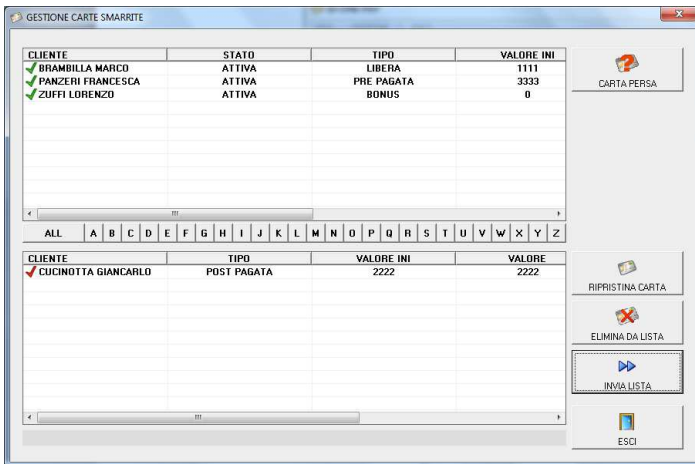
8.0 SET CURRENT DATE ON A READER
Press the arrow in "DATE &TIME" to update the READER date.

9.0 SET A DEVICE NUMBER INTO A READER
Set the DEVICE NUMBER to send to the READER. Press the arrow.
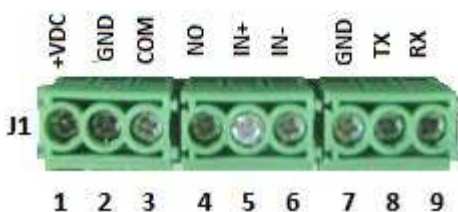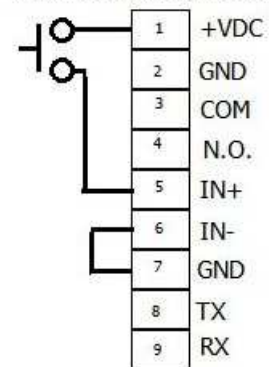

10.0 READER CONNECTIONS
A 6 wire cable 0,25mm2 so composed:

- Pin1 V+   9 to 14VDC stabilized
- Pin2 GND   0VDC
- Pin3 COM   RELAY CONTACT OUT COM max Current 1,5A at 24VDC
- Pin4 NO   RELAY CONTACT OUT   "
- Pin5 IN+   BAR STATUS OPTOCOUPLER INPUT +
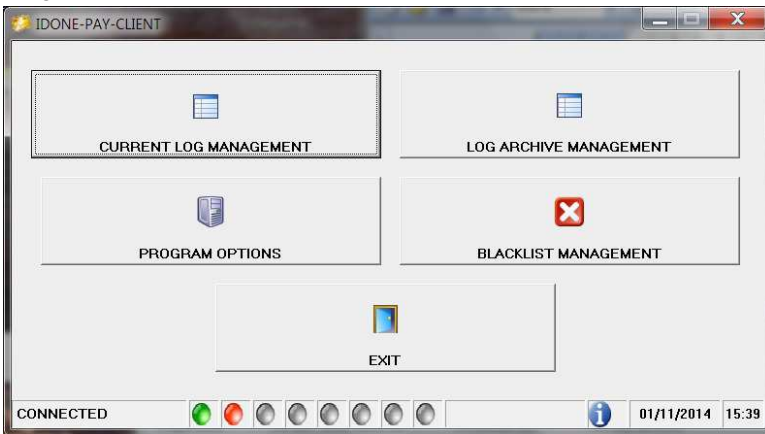- Pin6 IN-   BAR STATUS OPTOCOUPLER INPUT -

8

11.0 HOW TO REDUCE IDONE-PAY
Normally the end user application don't use all the functions available on IDONE-PAY.
For this reason the user can use a reduced version named IDONE-PAY-CLIENT that use the Database created using IDONE-PAY.

To install this reduced version on the PC of your CUSTOMER follow this procedure:

Copy our folder **IDPAYM_CD** into your PC.

INSTALL USB DRIVER
1) Copy into the PC the folder [MCP2200WindowsDriver].
2) In folder [DriverInstallationTool] select the folder [X64] for 64Bit or [X86] for 32bit.
   Launch "MCP2200DriverIstallationTool.exe". Press "Install" and wait to the end of drivers installation.
INSTALL USB ON PC
1) Turn off the READER. Insert the USB plug and turn on.
2) The PC begin the new device install. Wait for the complete install of the assigned COM PORT.
INSTALL RADIO-PEN-UHF ON PC
1) Insert the RADIO PEN UHF into the USB connector of the PC.
2) The PC begin the new device install. Wait for the complete install of the assigned COM PORT.
INSTALL IDONE-PAY ON PC
Dowload the IDONE_PAY_CLIENT setup from the site:www.zetanetweb...............................
Launch "IDONE_PAY_CLIENT_40x_Setup" and follow the instructions to end.
Into your PC (WINDOWS7) will be created by default this specific folder:
- C:/ProgramData/ZETANET/IDONE-PAY-CLIENT/Database Files/idone-pay-client.mdb. The application Database.
  IMPORTANT: Don't erase or rename this file.

Will be created an icon on your desktop.

To operate with this version need to replace the application Database created by the IDONE-PAY-CLIENT installation (idone-pay-client.mdb) with that create developing the application by IDONE-PAY (ex.)

13.0 AVAILABLE MODELS

EK20-IDPAYFP   Model with USB and RADIO UHF.

For other option: BLUETOOTH-WIFI contact us.

RADIO PEN UHF

The RADIO PEN UHF is quoted a part.

14.0 TECHNICAL SPECIFICATION

RFID FREQUENCY	13.56Mhz MIFARE 1K-ISO14443A
LOG MEMORY	Circular buffer of 2500 records
DISPLAY LCD	2 row x 16 chars White-Blue
ACOUSTIC WARNING	Buzzer
LED	LED RED (CLOSED) LED GREEN (OPEN)
ACTUATOR	RELAY OPENING COMMAND 30VDC 1,5A max 2A RELAY AUXILIARY SEMAPHORIC 30VDC 1,5A max 2A
BAR SENSOR	OPTOISOLATED INPUT 1500V max current 30ma. Procted against polarity inversion.
POWER SUPPLY	9 a 14VDC stabilized Current max 200mA
DATA TRANSMISSION 19200-8-N-1	USB2.0 , RADIO UHF
DIMENSIONS WEIGHT	
OPERATING TEMPERATURE	-20'C to +65'C

## 15.0   HOW TO UPGRADE THE FIRMWARE AND LANGUAGE ON READER

The upgrade on the FIXED units can be made using the RADIO UHF without open the box.

- Uncheck "USE RADIO" in the window "COMMUNICATION PARAMETERS".
  To avoid problems, make attention that no other READER with the same DEVICE NUMBER is turned on.

- Turn on the READER.
- Wait for:

<div align="center">

APPROACH
THE CARD

</div>
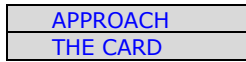
- Click the icon [icon] of the program **EK20-UPLOADER** found in the folder "IDPAYF_CD".
- Select the RADIO COM PORT and the bitrate at 19200.
- Click UPLOAD PROGRAM.
- Take the file IDPAYFP*.BIN
- Select the READER address.
- Click START and wait the end of programming "Upload OK".
- Turn off the READER.

To upgrade the LANGUAGE repeat the same procedure but click "UPLOAD LANGUAGE" and taken the file IDPAYFP*.txt
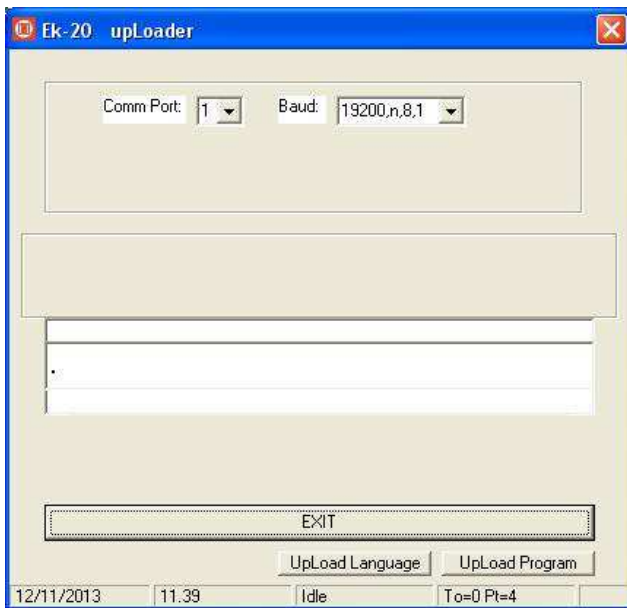
IDONE_CLOUD
Another solution is to be supported by an INTERNET CLOUD having the function to: Collect the LOGS via RADIO in real time.
- Transmit to the SERVICE CENTER in your Personal Area.
- Offer a full protected access by a personal Password.
This operation need an Internet Access Point in your location and a MicroServer to collect the Logs from IDTRC.