P68 User Manual

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NOTICE

P68 User manual

Revision History

Rev	Change	Author
0.1	Concept version	S.S.
0.2	Added Vend Settings Tool items	S.S.
0.3	Comments and minor modifications	S.S.

Abbreviation list

Abbreviation	Description
3G	Third Generation (mobile communication system)
CCI	Coffee Credit Interface
DC	Direct Current
DHCP	Dynamic Host Control Protocol
DNS	Domain Name Server
EDGE	Enhanced Data for GSM (Global System for Mobile communication) Evolution
EMV	Europay Mastercard Visa
EVA	European Vending Protocol
GPRS	General Packet Radio Service (mobile communication system)
HSPA	High Speed Packet Access (mobile communication system)
IP	Internet Protocol
LAN	Local Area Network
MDB	Multidrop Bus, Communications bus standard for Vending Machines
PSP	Payment Service Provider
PVP	Payter Vending Protocol
RTP	Remote Terminal Protocol
SAM	Secure Authentication module
SDK	Software Development Kit
SIM	Subscriber Identification Module
USB	Universal Serial Bus
VMC	Vending Machine Controller

Table of Contents

1. Introduction

Thank you for choosing a P68 "The Arc" Payment terminal for your application.
The P68 is designed for use in unattended points of sale such as Food and Beverage vending machines or parking ticket machines, that require no PIN.
With the objective of creating a cost efficient multifunctional payment terminal, the P68 can support many payment schemes and a large variety of host applications.

The P68 can be used as a drop in replacement for your existing application using industry standard interfaces such as Multi Drop Bus (MDB) or potential free pulse contact. Also available are proprietary interface options (RTP, PVP), that uses either Ethernet, USB or RS232 to connect the P68 using a Payter proprietary protocol.

An internet connection, required for transaction processing, can be provided to the P68 terminal by connecting to a LAN network. If no LAN is available, an optional 3G/HSPA Modem can provide a high quality internet connection, ensuring your transaction processing performance will not degrade because of a low internet speed.

The P68 terminal supports reliable remote management functionality for firmware updates and configuration changes. It is highly recommended that you always leave the P68 terminal on and connected to the internet, to ensure that your P68 terminal can be managed properly.

2. Document Scope

This manual is intended for technicians or operators that want to familiarize him/herself with the functionality of the P68 terminal. It is also a good starting point for developers and integrator who intend to integrate the P68 terminal in their(vending)Machine, although additional documents would be required and are available upon request.

3. P68 Terminal Overview

3.1 Front view

Fig. 1 - Front view

Nr.	Item	Description
1	Led Indicators	Transaction status indication
2	Status Display Blue Backlight	Shows transaction information and basic device diagnostics.
3	Contactless Symbol	Location for tapping Contactless Cards
4	Contact Card Slot	Push/Pull type
5	Magnetic Stripe Card Swipe Slot	3 Track Reader
6	Start Button	Multifunction button
	Buzzer	Indicates a successful/failed transaction

Table 1 – Front Item description
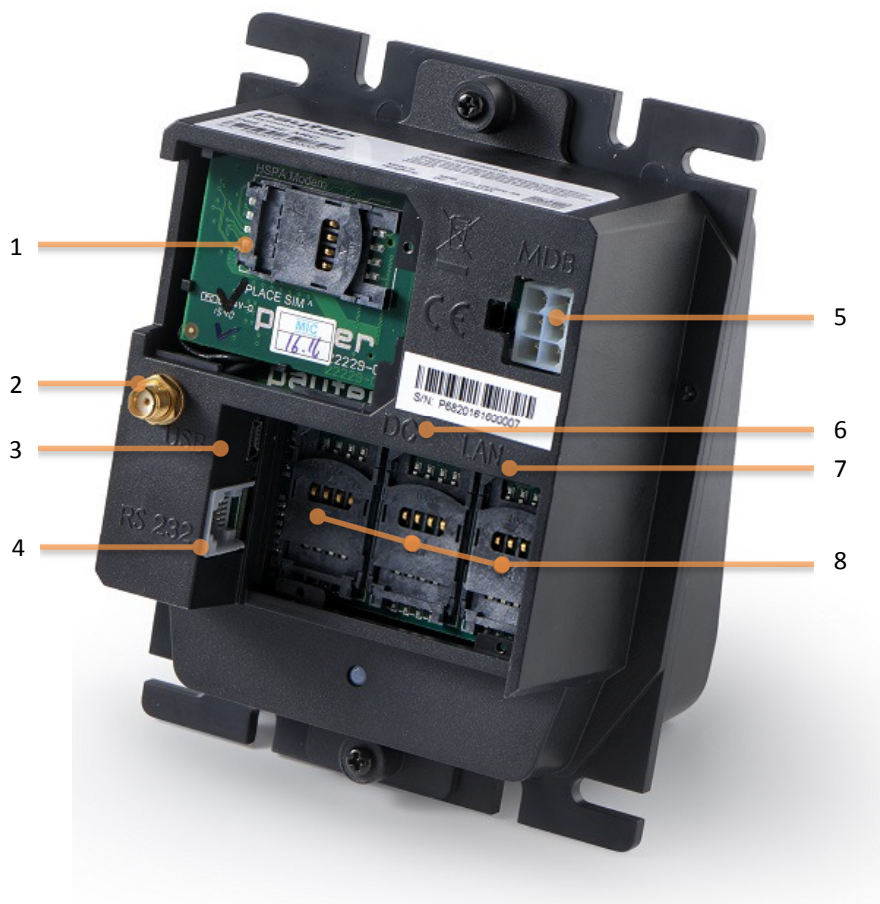
3.2 Rear view

Fig. 2 – Rear View

Nr.	Item	Description
1	3G/HSPA Modem	The Modem is placed behind a hatch labeled MODEM
2	Antenna Connector (SMA-Female)	Connect a suitable 3G/HSPA BAND antenna to this connector.
3	USB port	Host Machine Interface
4	RS232 Port	Host Machine Interface
5	MDB Port	Host Machine Interface
6	DC Input Port	Power Supply Adapter connection.
7	Ethernet Port	Host Machine Interface and/or Internet connection.
8	SAM slots	The SAM slots are located behind a Hatch labeled SAM MODULES.

Table 2 – Rear view item description

4. Basic Connectivity Features

Host Machine Interface	The P68 terminal supports many interfaces available to connect to your host machine. Chapter 4.1 gives an overview on the available machine interfaces.
Internet Connection	Payment transactions that the terminal performs may require online authorization. The terminal will connect with the Payment service provider through an available internet connection. Chapter 4.2 gives an overview on the available methods to connect to the internet.
Terminal Configuration	The P68 terminal requires a Configuration to function properly. This configuration consists of multiple parts and is further detailed in chapter 4.3.

Table 3 – Basic Connectivity Features

Fig. 3 - Connectivity Diagram

4.1 Host Machine Interface
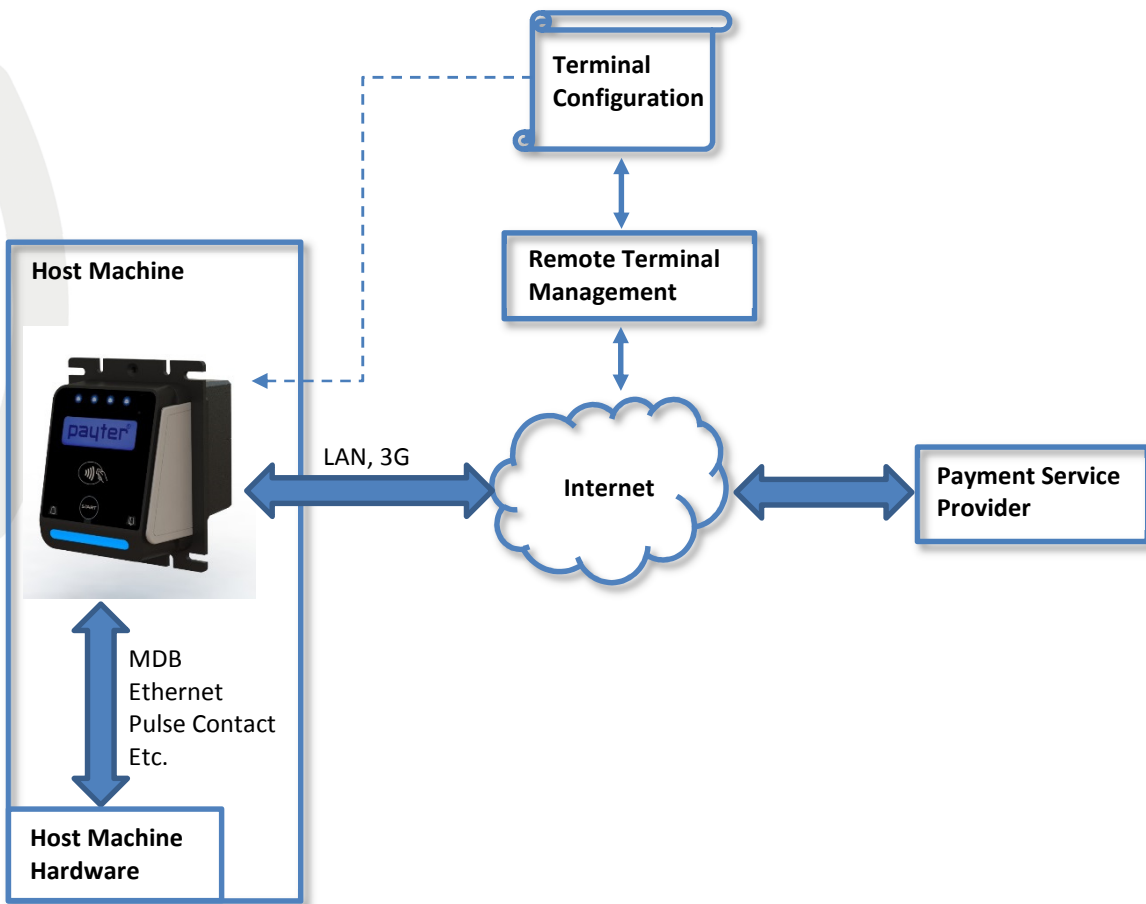
The P68 terminal supports several interfaces to connect to your host machine.
Choosing an interface will largely depend on the interface that is supported by your machine, and the preferred method of powering the terminal. Table 1 gives a summary of available options.

Interface Mode	Description
MDB	The Multi Drop Bus is an industry standard interface for vending machines. If your machine supports an MDB - Cashless Device, then this will require little effort to reach a working solution, provided that the MDB standard is correctly implemented in your machine. An advantage of MDB is that the interface also supplies power to the terminal, requiring no additional power supply.
Potential Free Pulse Contact	A configurable potential free pulse contact is available to signal your application that a payment transaction was successfully processed. In addition, an input port is available to enable/disable the terminal, if for example the machine is out of order. Although a Potential free pulse contact interface is widely used, there is no standardization, and requires attention to electrical details before it can be used.
RTP	Remote Terminal Protocol, is used to control the terminal functionality from anywhere on a LAN, or through USB, directly from your software application.
PVP	This message based protocol provides basic functionality for machine to payment terminal communication, over an RS232 connection.
CCI	This message based protocol is used in certain coffee machines, and communicates over RS232.
Executive	The P68 Terminal can be combined with the VendBox to enable "Executive Node" functionality. The VendBox is sold separately from the terminal and acts as a converter between Executive and MDB.

Table 4 – Available Host Machine interface modes.

4.2 Internet Connection

For most applications, involving the P68 terminal, a stable internet connection is required, the available options described in table 2.

Interface Type	Description
Ethernet	The P68 terminal can be connected to a LAN, through its onboard Ethernet port, and connect to the Internet through the LAN.
3G/HSPA modem	In case there is no access to a LAN network a 3G/HSPA MODEM is optionally available

Table 5 – Available Internet connection

Refer to chapter 7 for more detailed information about configuring internet.

4.3 Terminal Configuration

The Terminal configuration covers multiple aspects that need to be configured before a successful transaction can be performed. Most of the settings are determined when a terminal is ordered for a specific Payment host provider. Settings related to a terminal interface mode or network communication are usually set correct by default, in some cases settings have to be modified for the terminal to function properly.

Configuration	Description
Secure Configuration Files	These files contain the settings that determine the certified terminal configuration and cannot be modified without consulting the manufacturer.
Terminal Settings	These settings need to be configured for each mode in which the terminal is operating, to allow communication with the host Machine and payment service provider. Each chapter gives an overview of the related settings.
Optional SAM	The SAM module contains cryptographic key material that is needed to set up a secure connection, and authenticate the terminal, with the payment service provider.
Optional Data SIM	A 3G/HSPA MODEM option requires a data SIM with access to mobile internet services. A SIM card can be provided by either your local mobile internet provider or by Payter.

Table 6 – Terminal Configuration items

5. Payment Flow

5.1 Description

A Host machine is always responsible for initiating a payment on the terminal, the only exception is Auto Scan mode. This chapter describes how a payment is performed by a user, and how to interpret the feedback that is given by the terminal. Some operational modes can introduce a slight difference in this behavior, these details will be covered in chapter 6 for each respective mode, if applicable.

5.2 Accepted Card types

The terminal accepts one of these tree card types, from one of the supported payment schemes to perform a payment. The terminal can also accept proprietary card types for example for loyalty applications, or a closed user group application.

Card Type		Description
Contactless Card	))))	When prompted to do so, tap the Card on the Contactless Symbol on the front of the terminal. Keep the Card in place until the terminal indicates that the card can be removed.
Contact Chip Card		Insert the Chip Card in the illuminated card slot. Do not remove the card until you are prompted to do so.
Magnetic Stripe Card		The user can swipe a magnetic stripe card through the swipe slot as indicated on the P68 terminal.
Mobile Phone		Phones that are equipped with NFC.

Table 7 - Accepted card types

Fig. 4 – Accepted payment types

5.3 Transaction & Display messaging

When the host machine initiates a transaction, the following display message will prompt user to pay on the terminal:

Fig. 5 – Initiating transaction.

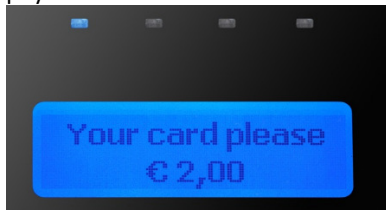| State	Display message	LED indicators	Buzzer sound
Initiating Transaction	"Your card please" + Amount	1	
Contactless Card Presented			
Cards Read OK	"Card read OK remove card"	1,2,3,4	
Authorizing Transaction	"Authorizing remove card"	1,2,3,4	
Transaction Approved	"You have paid"		Success tone
Transaction Declined	"Not accepted pay differently"		Error tone
Contact Chip Card Presented			
Confirm Amount	"Press Start for OK"		
Authorizing Transaction	"Processing please wait"		
Transaction Approved	"You have paid Remove card"		Success tone
Transaction Declined	"Not accepted Remove card"		Error tone
Magnetic Stripe Card Presented			
Authorizing Transaction	"Authorizing"		
Transaction Approved	"You have paid"		Success tone
Transaction Declined	"Not accepted pay differently"		Error tone

Table 8 – Basic pay flow messages.

Some messages may be presented differently for different payment service provider, but in essence the pay flow is the same.

Display message	Description	Possible Solution
"Try another card"	Unable to read contactless card / contactless card not supported.	Try to present card again. If persistent, try a different card.
"You have waited too long"	The transaction initiation timed out	Retry Transaction
"Transaction canceled"	Transaction was canceled by the User	
"One card only"	Two contactless cards were detected by the terminal simultaneously	
"Chip cannot be read"	Unable to read contact card /contact card not supported	Check if contact card is inserted properly.
"Try other interface"	The transaction cannot be Initiated using the current interface.	Use another card interface, for eg. Try contact interface instead of contactless.
"Service Code nnn"	A processing error occurred; the specific error code "nnn" provides details about the error.	Refer to chapter 11.1 for error code details

Table 9 – Additional messages

Error messages
If during the transaction a fault occurs that is not indicated by one of the previous messages a result code may be returned. Refer to chapter 11.1 for the meaning of the result code.

6. Modes of Operation

6.1 MDB mode

6.1.1 Description

This mode of operation is commonly used for vending machines.
The vending machine controller(VMC) and the terminal are physically connected using a single cable for power and communication. The VMC is the BUS master and instructs the terminal when to initiate a transaction.
All electrical and datalink aspects are covered by the MDB standard, this simplifies the integration of the terminal to a plug and play experience. With only a few settings that require attention. The terminal is classified as an MDB Cashless Device, and supports Level 3 functionality including "always idle mode" from the MDB specification v4.2.
For a detailed description on the MDB interface, consult the MDB v4.2 specification documentation.

6.1.2 Connecting the terminal

Note: Always Turn off the vending machine when installing a new MDB device!

Connect the P68 terminal to the VMC using the supplied MDB Cable. Power up the vending machine, the terminal should power up as well. After boot-up has completed the terminal should automatically register with the VMC.
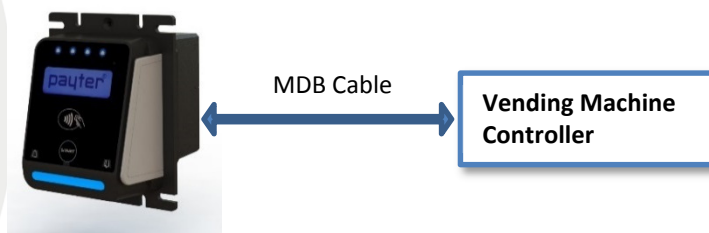

MDB Cable

Vending Machine Controller

Fig. 6 – P68 Terminal VMC connection.

6.1.3 Pay flow

Depending on the type of vending machine, there are two possible ways to initiate a vend cycle. If the vending machine supports MDB feature level 3 "always idle mode", the user can initiate a vend cycle by selecting a product. When "always idle mode" is not supported the vend cycle can be initiated by pressing the "Start Button" on the terminal, and then selecting a product.
After product selection the user will be prompted to pay as described in chapter 5.
After a successful payment the product will be dispensed. With most machines the payment is canceled if the vend is unsuccessful, but support for this depends on the features of the vending machine. Contact your vending machine supplier for details.

6.1.4 Applicable Settings

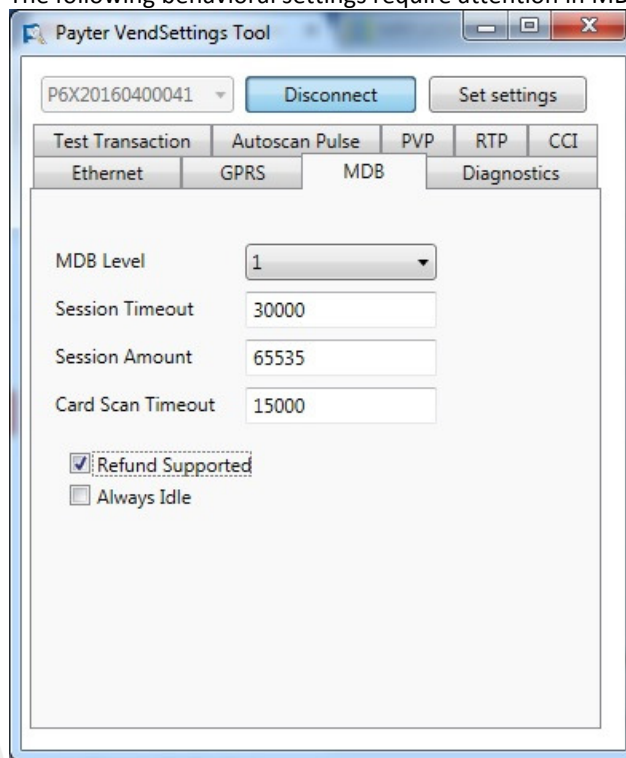The following behavioral settings require attention in MDB mode:

Fig. 7 – MDB settings

Setting	Description
MDB Level	[1,3] determines the capability level reported to the vending machine. Should be left at 3 unless the terminal and vending machine do not register correctly. *Note that level 2 is not supported by the terminal.*
Session Timeout	Indicates the time period, in ms, for selecting a product after the START button is pressed. *Note this is only applicable when not in "always idle" mode.*
Session Amount	The amount, in cents, that the Terminal provides as Credit to the vending machine at the start of a session. *Note this is only applicable when not in "always idle" mode.*
Card Scan Timeout	Is the time period, in ms, that the terminal scans for a card after the user was prompted to pay.

Table 10 - MDB settings

6.2 Potential Free Pulse Contact (Autoscan mode)

6.2.1 Description

Connecting the P68 terminal to existing, coin mechanism only, applications can be challenging. To be able to integrate the P68 Terminal in these existing applications, a potential free pulse contact was added to the terminal features. Allowing the terminal to replace the coin mechanism or be used in parallel.

A potential free pulse contact can signal your machine that a payment was performed successfully, the concept is similar to a pulse output on a coin mechanism interface.

In addition, the P68 terminal has an inhibit input that can be used to enable/disable payments on the terminal, for example when the Host machine is out of order.

6.2.2 Connecting the terminal

Implementing this mode of operation requires attention to electrical details to which this interface is bound. The pulse output is highly configurable in polarity, pulse width, pulses per transaction etc. For a detailed description of the potential free pulse contact features, please inquire with your local supplier about "Pulse I/O" documentation. This documentation describes the electrical properties and the settings that are important for integration with your device.

6.2.3 Pay flow

When the terminal is powered up, it will automatically start scanning for cards. Every time a card is presented, a transaction is performed for the indicated amount, and a pulse is given for each successful transaction. It is the responsibility of the host machine to capture all the pulses that are send by the terminal. When the host machine is not able to capture pulses or provide the service for which is to be paid, the terminal should be disabled. By either powering down the terminal or through enabling the terminal inhibit input. When the host machine functionality is restored the terminal can be enabled again to resume operation.

6.2.4 Applicable Settings

The following settings control the behavior of the Autoscan Pulse mode.
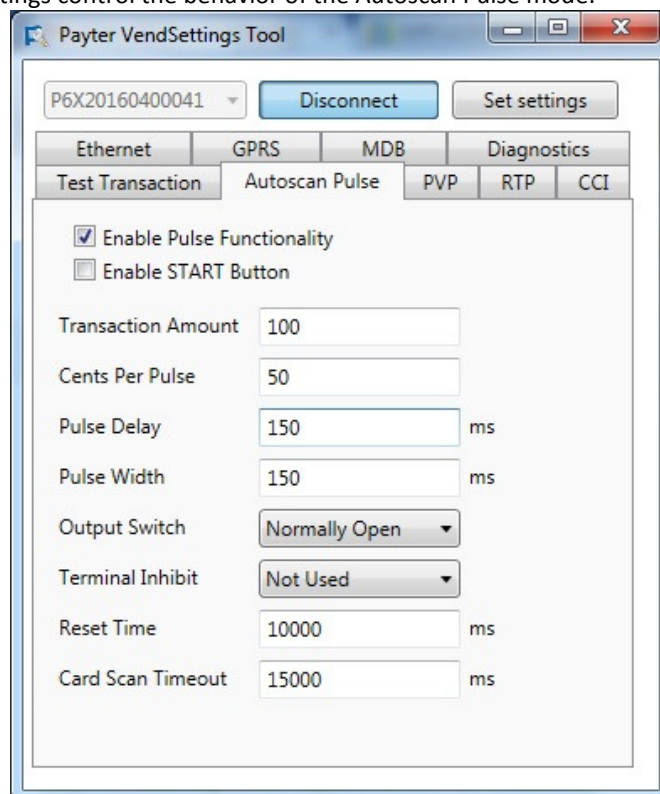

Fig. 8 – Autoscan Pulse settings

Setting	Description
Enable Pulse Functionality	This checkbox enables/disables the Pulse Functionality.
Enable START button	• Enabled: Each button press will initiate a transaction. • Disabled: The terminal will perform transactions automatically when a card is presented.
Transaction Amount	The amount, in cents, for each transaction.
Cents Per Pulse	This setting determines the number of cents for each pulse given on the Pulse output. If the Cents Per Pulse matches the transaction amount one pulse is given, half the amount two pulses, one third three pulses are given etc. *Note: If the Transaction Amount does not divide by Cents Per Pulse without remainder the terminal will report an error during boot.*
Pulse Delay	Time, in ms, between consecutive pulses given on the pulse output.
Pulse Width	Time, in ms, that the pulse is in the active state.
Output Switch Mode	Configure the Pulse Output potential free Switch position: • Normally Open: Switch closes when pulse it active, and open when idle. • Normally Closed: Switch opens when pulse it active, and closes when idle.
Terminal Inhibit	This setting configures the pulse input as an inhibit input, to temporarily disable the terminal. • Not used: The terminal is always enabled • Input High: A high level on the input enables the terminal, a low level disables the terminal. • Input low: A low level on the input enables the terminal, a high level disables the terminal.
Reset Time	Indicates the delay between the transaction result and the start of a new transaction.
Card Scan Timeout	Is the time period, in ms, that the terminal scans for a card after the user was prompted to pay.

Table 11 - Autoscan Pulse settings

6.3 RTP Mode

6.3.1   Description

The Remote Terminal Protocol (RTP) is a proprietary protocol used to interface with Payter terminals from host systems such as Cash Registers or other PC applications. To integrate the P68 Terminal functionality in your application, a dotNET SDK is available that can be used to perform transactions.
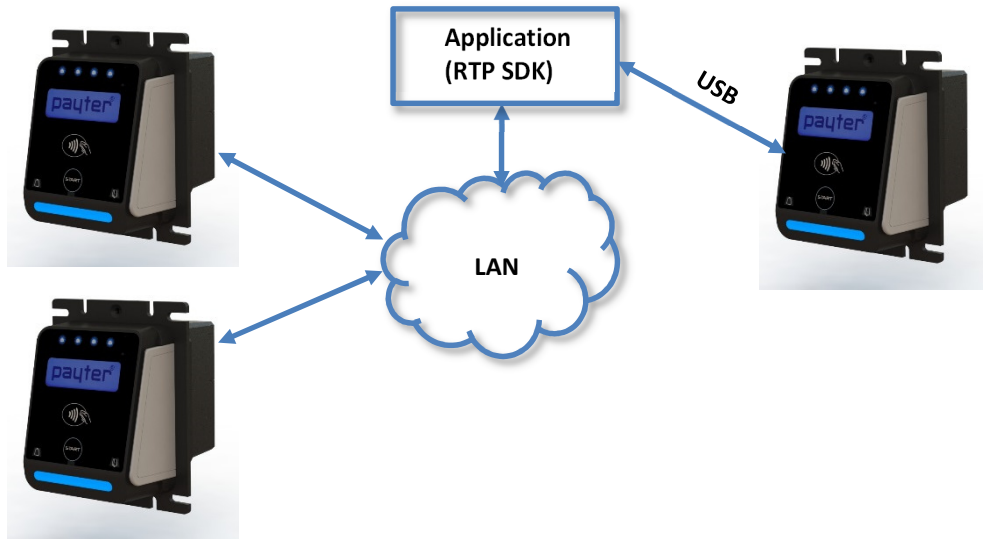

Fig. 9 - RTP mode of operation, over either LAN or USB

This mode of operation is very specific and dependent on how the P68 Terminal is integrated in the host machine application. Refer the host machine documentation for operational details. Refer to the dotNET SDK documentation on a detailed description how to integrate the terminal in an application.

6.3.2   Applicable Settings

RTP settings are covered in the RTP documentation.

6.4 CCI Mode

6.4.1   Description

Some Coffee machines are equipped with a CCI interface this interface is a message based protocol over an RS232 connection, that enables the communication of certain types of coffee machines with the P68 terminal.

6.4.2   Connecting the Terminal

Always power off the host machine and terminal when connecting the RS232 Cable to the terminal and the host machine devices. Power up the machine and the terminal, make sure the correct payment device is selected in the host machine.

6.4.3   Pay flow

CCI protocol is not able to notify the terminal that a vend was successful/unsuccessful therefore transactions cannot be canceled.

6.4.4   Applicable Settings
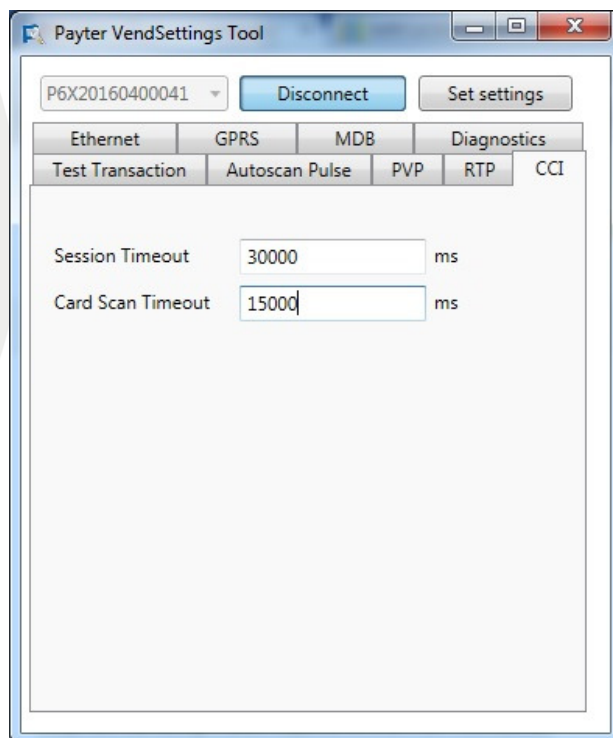
Fig. 10 – CCI Setting

Setting	Description
Session Timeout	Indicates the time period, in ms, for selecting a product after the START button is pressed. *Note this is only applicable when not in "always idle" mode.*
Card Scan Timeout	The time period, in ms, that the terminal scans for a card after the user was prompted to pay.

Table 12 - CCI settings

6.5 PVP Mode

6.5.1 Description

The Payter vending protocol is a message based protocol over a RS232 connection, that allows basic functionality needed for vending machines and terminal communication. It can handle scenarios most common for vending machines. Refer to PVP documentation for in depth information about this interface.

6.5.2 Connecting the Terminal

Always power off the host machine and terminal when connecting the RS232 Cable to the terminal and the host machine devices. Power up the machine and the terminal,
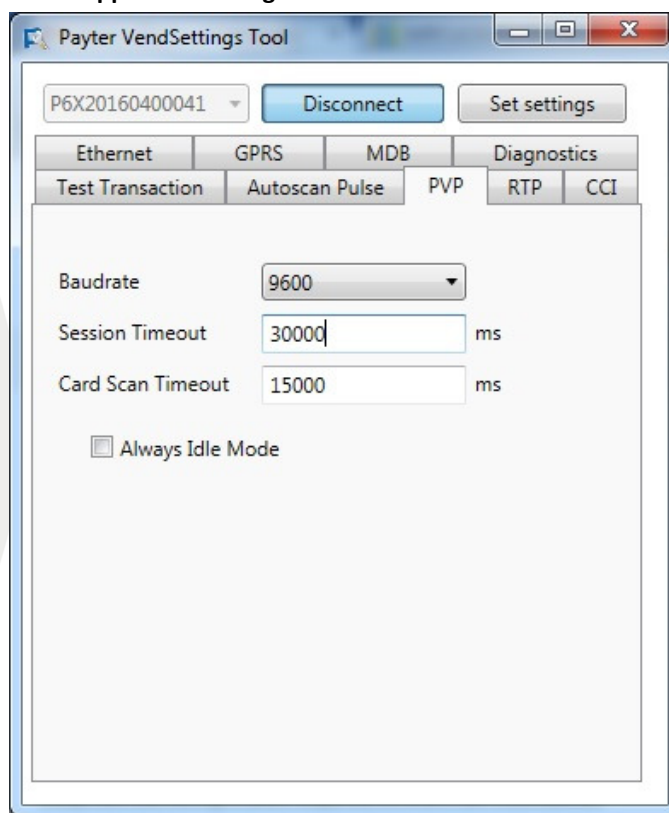
6.5.3 Applicable Settings

Fig. 11 – PVP Setting

Setting	Description
Baud rate	The baud rate of the serial port can be set between 4800 – 115200 and all standard baud rates in between.
Session Timeout	Indicates the time period, in ms, for selecting a product after the START button is pressed. *Note this is only applicable when not in "always idle" mode.*
Card Scan Timeout	Is the time period, in ms, that the terminal scans for a card after the user was prompted to pay.
Always Idle Mode	Allow product selection without pressing start on terminal. *Note the vending machine must support this mode to work.*

Table 13 - PVP settings

7. Setting Up Internet

The internet connection of the P68 terminal is necessary to perform features such as online verification of payments, remote management functionality or telemetry.

During boot the terminal will check the connection to all configured payment host. If during this check the payment host cannot be reached an error will be displayed indicating which host was not reachable. This must be resolved before regular operations are attempted with the terminal.

The following options are available to connect to the internet.

7.1 LAN connection

The P68 terminal can be connected to a LAN network using the onboard Ethernet port, with either a dynamic or static IP address. The available LAN infrastructure is used by the terminal to connect to the internet. The Firewall settings should allow the terminal to connect to the PSP and other destination host addresses needed for correct functioning. This type of internet connection is preferred and when the infrastructure is optimally configured, the best transaction performance can be achieved.
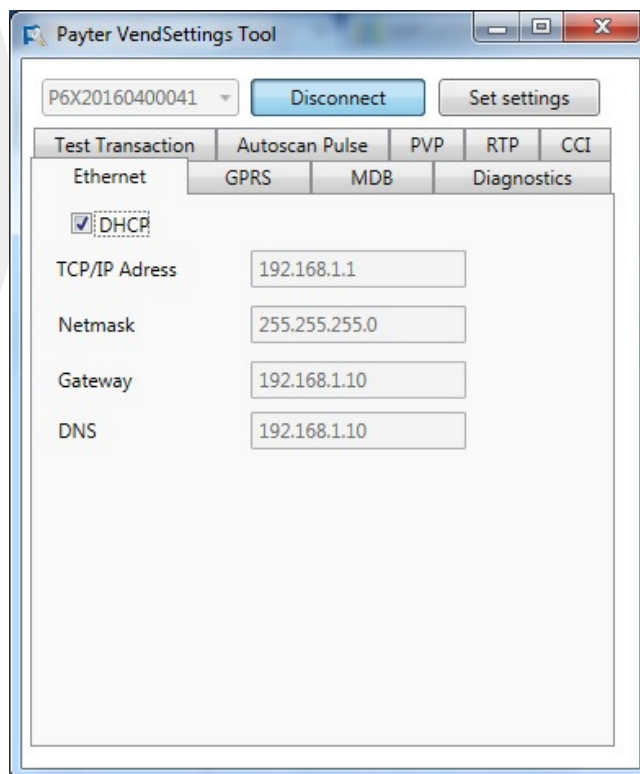
7.1.1 Applicable Settings

Fig. 12 – Ethernet Settings

7.2 GPRS/EGDE/3G/HSPA MODEM

When no LAN connection is available a mobile internet connection can be established with an optional 3G/HSPA modem. A HSPA network connection allows a good transactions processing performance. In case the 3G/HSPA network service is not available a 2G fallback mechanism is in place, but at a cost of transaction performance.

As part of the MODEM option a suitable antenna, is supplied with the terminal.
The antenna performance should be satisfactory for most applications, provided of course there is sufficient coverage of the network operator. It is encouraged that a signal quality measurement is performed at the intended installation location. Antenna mounting position and location is key in achieving a good signal quality. Place the antenna on top of your application/vending machine, not inside, the metal surroundings will degrade the signal quality.

7.2.1 Connection Setup

The modem option is installed during manufacturing and cannot be installed by a user. Always remove the power from the P68 Terminal before accessing the modem compartment, or when removing/placing an antenna.
Remove the hatch on the back of the terminal labeled "MODEM" to access the MODEM compartment. This allows access to the SIM Card Slot.

The Antenna can be connected to a dedicated connector on the back of the terminal

Fig. 13 - Modem Compartment

For the modem to connect to a mobile internet service properly it needs a data SIM with internet services enable. The data SIM can optionally be ordered with your terminal, it is also possible to use your own data SIM card, provided you configure the correct APN settings for accessing the local network.

The bars show the signal strength of the 3G/HSPA connection. When the terminal is connecting the 'i' will be blinking. As soon as the 'i' is on the connection has been established with the 3G/HSPA network and the modem is working properly.

Fig 14 – Signal strength icon

7.2.2   Applicable Settings
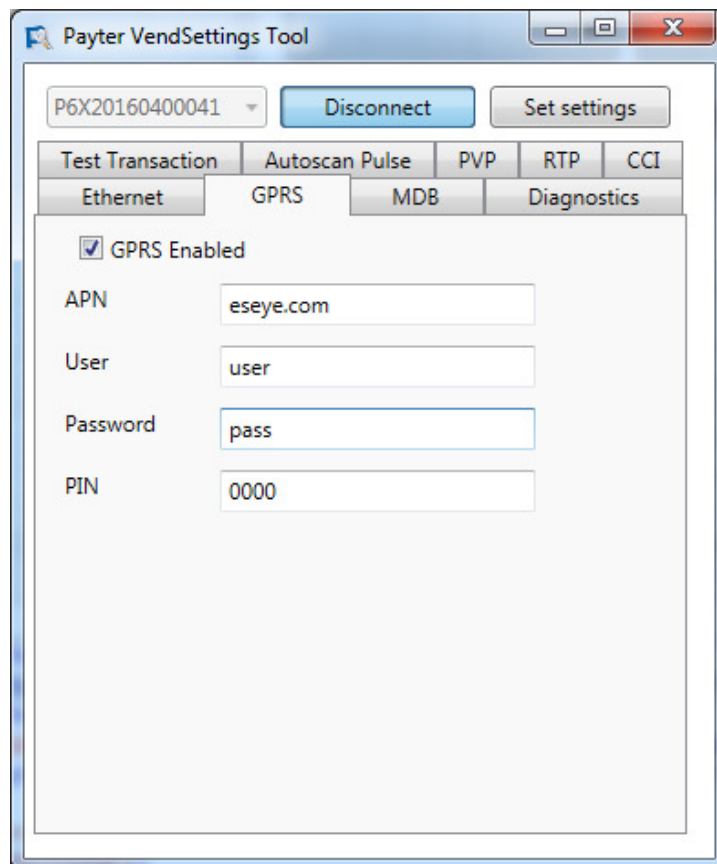
Fig 15 – Mobile Internet Settings

Setting	Description
GPRS Enabled	Enables/Disables Mobile Internet, only if the option is already installed.
APN	The Access Point Name is provided by the Mobile internet provider.
User	Provided by Mobile internet provider
Password	Provided by Mobile internet provider
PIN	Use this setting only when the SIM is configured with a PIN Code. If no PIN is configured on the SIM this setting has no effect.

It can be useful to configure no PIN or PIN 0000 on the SIM cards to avoid having to configured this code individually on each terminal.

Note that the terminal will attempt this code at each boot. If not configured correctly this may block the SIM card requiring it to be unlocked using the secondary PIN (PUK) code. |
| | |

Table 15 - Mobile Internet settings

8. Terminal Configuration

8.1 Installing Vend Settings Tool

Download the Vend Settings Tool from the www.payter.com.
Install the program by clicking on the install package.
Please follow the installations instructions on the screen to successfully finish the install process.

8.2 Connecting to the terminal

Use a USB mini B to USB A cable to connect the P68 terminal to a computer.
Power up the terminal and wait until the terminal has finished the boot up process.
In the meantime, open the Vend Settings Tool and press connect, as soon as the serial number appears in the top left of the screen.
Press the button again to disconnect.
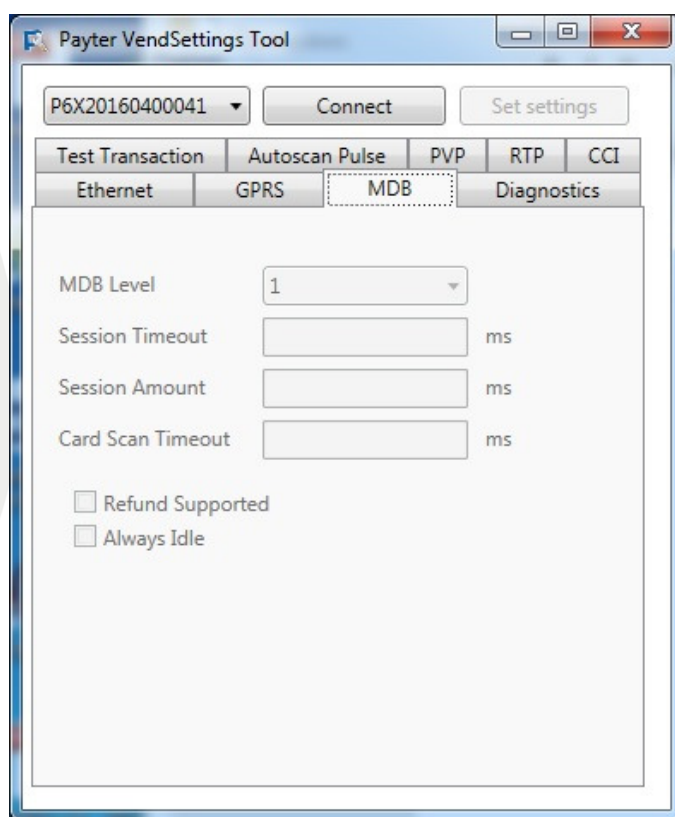
Fig 16 – Vend Settings Tool

When successfully connected to the terminal the settings, under different tabs, become available for editing. Refer to the respective interface mode chapter for the settings under each mode.

9. Dimensions & Mounting

There are two mounting options available:
1. Weld studs placed around the opening on the machine, fig XX.
2. Mounting frame if no weld studs are available

Mounting the P68 terminal requires a device opening that complies to the EVA EPS – Standard door model measurements.

Fig. 17 – Dimensions of opening and welded studs(mm)

If no weld studs are available an optional mounting frame, with weld studs, can be ordered. Drill Mounting holes of XXmm on the same positions as the indicated weld studs to allow mounting of the frame.

10. Technical Specifications

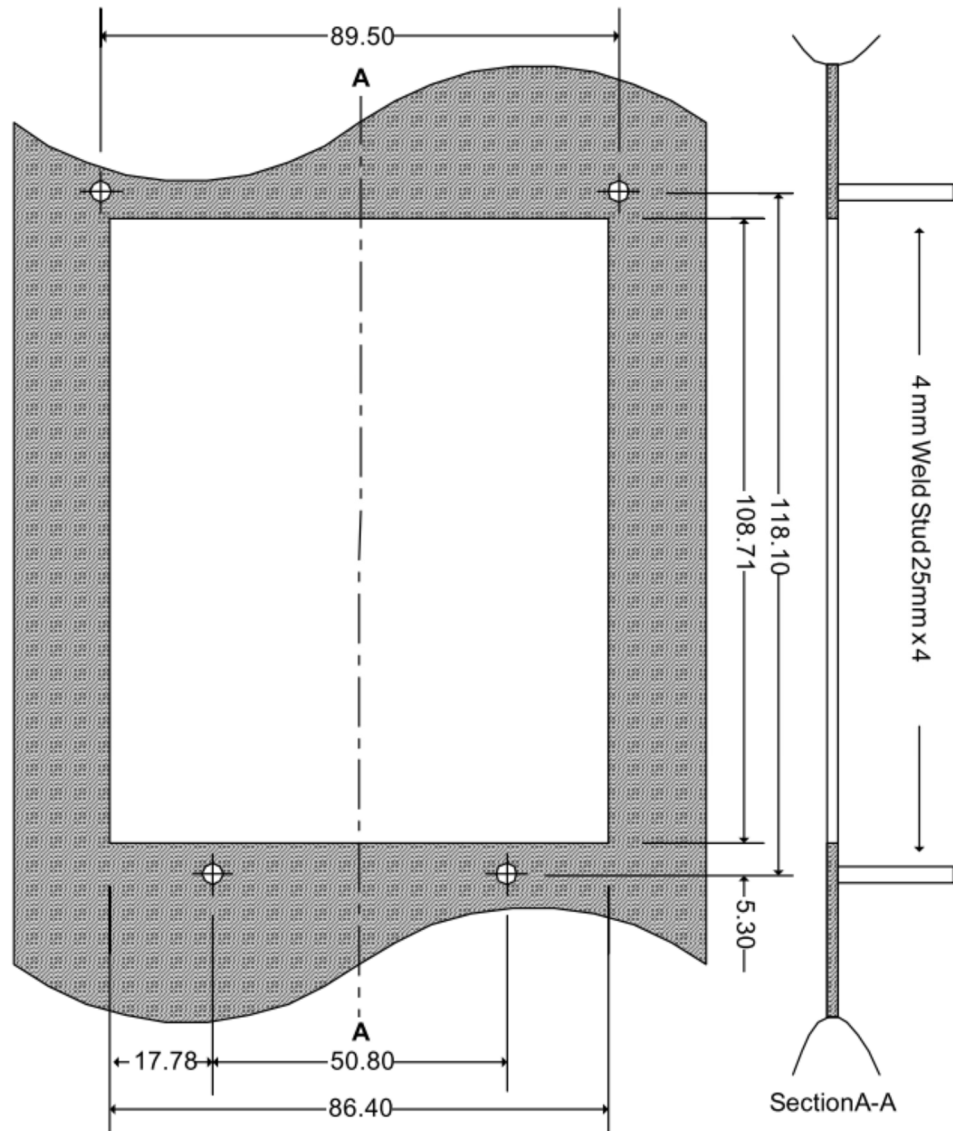| Contactless Interface	EMVCo. L1 v2.5 Certified	Integrated MSR	3 Track
	ISO14443 Type A & B (T=CL)	Contact Card Interface	EMV L1 v4.3 Certified
	Mifare Classic protocol	SAM Card Interface	3 SAM Slots, IS07816 T=O and T=1
	Desfire protocol	Human Interface	4 Blue LEDs
	ISO18092: Support NFC Protocol		128x32 dot matrix graphical LCD with Blue backlight
Operating Distance	Depending on the token up to 10cm from Reader		Buzzer
CPU	ARM7 Processor, 32-Bit	Dimensions	European Vending Association Compliant Casing
Memory	16 MB SDRAM	Color	Black
	16 MB FLASH memory	Compliances	CE, FCC, RoHS, WEEE
Host Machine Interfaces	MDB with support for Level 3 functionality		EMVCo, MasterCard, VISA, SRED
	Executive Protocol I.C.W. the VendBox	Power	110 – 230VAC, Power Supply Adapter with 1.5m cable.
	CCI		MDB port 12–24VDC
	Potential Free Pulse Contact	Environmental	Operating temperature 0 - 50°C
	EVA DTS for telemetry		Storage Temperature -15 - 70°C
	Remote Terminal Protocol[1] over Ethernet (100BASE-TX, 10base-10) or Full speed USB 2.0		Humidity 10 – 90%RH Non-condensing
	Payter Vending Protocol over RS232		
Network Connections	Ethernet (100BASE-TX, 10base-10) network connection		
	GSM/GPRS/EDGE/3G/HSPA MODEM (optional)		

Table 16 – Specifications Overview
[1]An dotNETSDK is available

11. Troubleshooting

11.1 Result Codes

Result Codes	Description
00 - 199	Terminal Internal errors
500 - 799	"
200 - 299	Network infrastructure related errors
300 - 399	Transaction related errors
400 - 499	Contactless interface related issues

Table 17 - Result code categories.

Result Codes	Description	Category
02	Initialization Failed	
10	Wrong terminal mode, the terminal is configured in the wrong mode. (Change to mode 5 RTP)	
18	Crypto error, during loading of secure configuration, Probably wrong configuration file.	
24	Hash Failed, check hash setting in terminal !!!!!!!!!!	
101	No SAM Found, the SAM module is not detected or cannot be read. Please check if SAM module is properly placed in one of the slots.	
105	Applet not found on the SAM module. 1 The Settings for APLET ID are not correct. 2 The SAM is not provisioned correctly, request a new SAM	
2XX	Network Infrastructure related error please perform network troubleshooting for LAN or Mobile internet.	
203 & 204	Connection to the host is OK, but host responses were not received correctly. Contact Host service provider to resolve this issue	
216	HTTP module Fault	
217	SOAP module fault	
218	Web Service not ready	
219	SSL Certificate expired, contact local supplier on how to solve this issue.	
220	SSL Certificate revoked, contact local supplier on how to solve this issue.	
221	SSL Certificate CN mismatch, contact local supplier on how to solve this issue.	
222	SSL certificate is self-signed or not signed by a trusted CA, contact local supplier on how to solve this issue.	
223	SSL Version not allowed, contact local supplier on how to solve this issue.	
224	SSL Certificate Error, contact local supplier on how to solve this issue.	
3XX	This error range covers transaction related errors 1. Perform network trouble shooting 2. Try reloading the terminal configuration files	

301	Transaction host error, this fault code indicates a specific issue that occurred while the Host was processing a transaction.
4XX	This error range covers errors related to the contactless interface. Perform a test with another contactless card or token to validate that the card is not the cause of the problem. If
XX 1XX 5XX 6XX 7XX	Terminal internal error. If the result code is not specifically listed, but falls in one of these categories then the terminal has an internal error, contact your local supplier for assistance.

Table 18 – Result code description

| Display message	Description	Possible Solution
"Wait for network"	No active network connection detected.	Perform LAN or mobile internet trouble shooting
"Recover network"	Network connection Lost	Perform LAN or mobile internet trouble shooting
"NO SAM"	No SAM module detected during startup.	
"Invalid Arguments"	No valid configuration is present	
"Initializing"	If the terminal remains in this state it is not receiving commands from the vending machine.	Check the settings for MDB/PVP/CCI.

Table 19 – Display message description

11.2 LAN troubleshooting

When a network connection cannot be established, perform the following checks:

		Solution
No Network connection	**1**	Check the LAN cable is connected properly, on the terminal connector the orange and the green LEDs should indicate link-up and activity. If not double check if the cable is connected properly in the terminal and the patch outlet.
	2	Validate the network settings with the Local IT administrator. - Dynamic or static IP - Subnet mask - DNS - Gateway
Host not reachable	**-**	Verify, with the local IT administrator, whether below ports and URL's are accessible Transaction processing Creditcall / Elavon https://live.cardeasexml.com (port 443) Transaction processing PayPlaza https://89.221.178.190 (port 1445) Transaction processing CCV https://oltp.ccvpay.nl (port 10037) To verify whether the network is correctly setup. Connect a laptop using the same cable, outlet and network settings and using a browser try to connect to the URL's listed.

Table 20 – LAN Troubleshooting
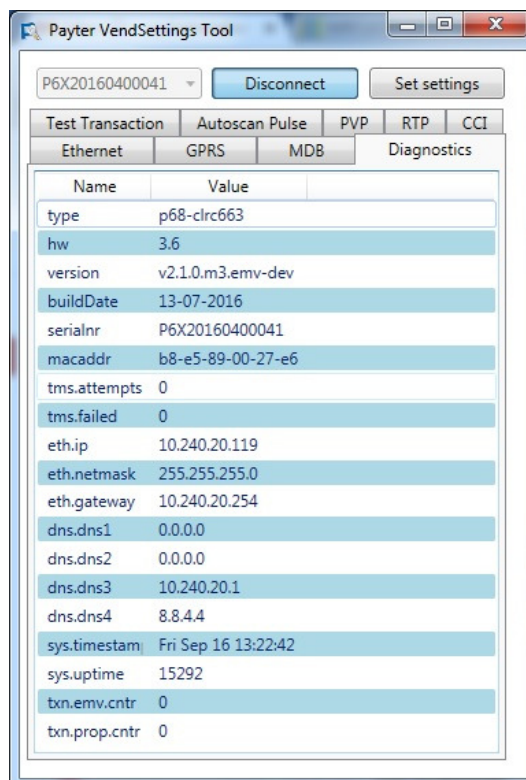
Use the Diagnostics features of the Vend Settings Tool to see if and how the terminal is connected to the network.

Fig. 18 - LAN status information

11.3 Mobile Internet troubleshooting

		Solution
'….' Icon Blinking (No GSM signal)	**1**	Verify whether the data SIM card is placed.
	2	If the data SIM card has a PIN code, set it up in the terminal, or remove the PIN.
	3	Check whether the data SIM card is activated with the provider.
	4	Verify if the external antenna is correctly connected to the terminal.
	5	Check the antenna placement. Relocate the antenna preferably outside the host machine, do not enclose the antenna in metal.
'i' Does not appear (not connected to Mobile Internet)	-	Obtain the correct mobile internet settings: 1. APN 2. Username 3. Password And set the terminal up accordingly.
Payment speed has decreased.	-	The terminal will automatically fall back to the GPRS(2G) service if the 3G/HSPA service is not available, causing a possible slowdown in transaction speeds. Consult with your mobile internet service provider if this happens regularly.

Table 21 – Mobile Internet troubleshooting
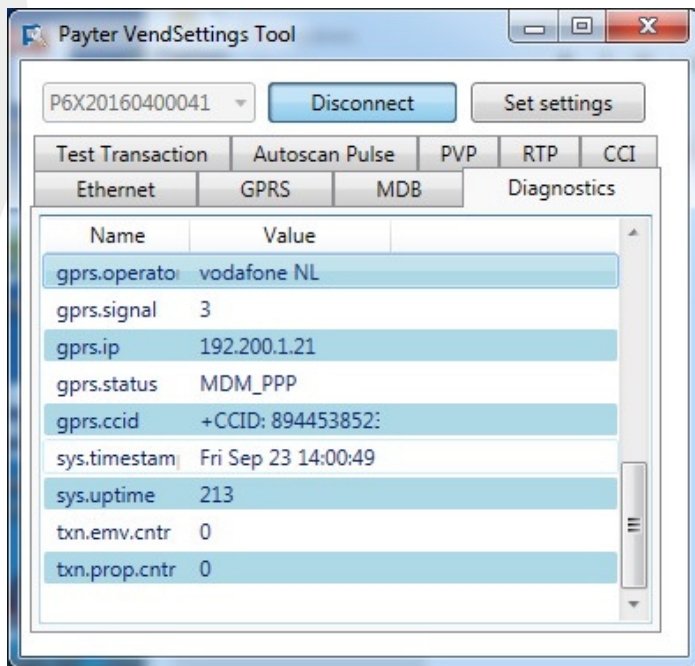
Fig. 19 - Mobile Internet Status Information

12. Contact

Payter B.V.
Rozenlaan 115
3051 LP Rotterdam

t +31 (0)8 54 01 23 80
f +31 (0)8 40 03 86 50

info@payter.nl

Warranty Certificate

Payter B.V. warrants to the original purchaser that this product is free from defects in material or workmanship for the period of one year from the date of purchase. This warranty does not apply to damage incurred due to misuse; unapproved repairs or alterations.

13. FCC Compliance Statement

This device does not contain any user serviceable parts, under no condition are modifications to this device allowed. Any modifications made without permission of a responsible party can lead to non-compliant behavior.
The 3G/HSPA antenna should always be installed at least 20cm away from human body parts.

FCCID: **2AHPP P68001**

NOTE: This equipment 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 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/TV technician for help.

14. CE Declaration of Conformity

Declaration of Conformity

Manufacturer Name: Payter B.V.
Manufacturer Address: Rozenlaan 115
                       3051LP Rotterdam
                       The Netherlands

Hereby declares that the product,

Product Name: P68 "The Arc"
Product Description: 3 in 1 payment terminal
Product Model Number(s):   P68.X.XX
Product Model Options: All

Is in conformity with the essential requirements of the R&TTE Council Directive 1999/5/EC, in accordance with the listed EMC, Safety and ERM standards:

R&TTE & Safety art. 3.1(a)

- EN 60950-1-2006+A11:2009+A1:2010+A12:2011+AC:2011

R&TTE & EMC art. 3.1(b)

- EN 301 489-1 V1.9.2 2011-09
- EN 301 489-3 V1.4.1 2002-08
- EN 301 489-7 V1.3.1 2005-11

R&TTE & EMC Radio spectrum Matters art. 3.2

- EN 302 291-1 V1.1.1 2005-07
- EN 302 291-2 V1.1.1 2005-07
- EN 301 511 V9.0.2 2003-03

06-05-2016

Remco J. Willemse
Managing Director

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15.1 LWIP

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15.2 SPIFFS

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