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FHO Pods

USER'S MANUAL

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SECTION 1

HID POD

1.1. GENERAL

This section describes the HID Pod unit. The unit, connected to the HO PC, enables users to read an HID contactless tag and associate it to a device, used for vehicle or driver identification.

1.2. HID POD DESCRIPTION

The HID Pod unit (see Figure 1-1), connected to the HO PC, enables users to read an HID tag and associate it to a device, used for vehicle or driver identification.

The embedded system, housed in a plastic enclosure, functions as an interface between the FHO PC and the provided 3rd party RFI reader manufactured by HID. The HID reader includes a status indicator (green and red). In addition, an internal buzzer beeps to provide audio feedback. The status of the current operation is indicated as follows:

Positive recognition – Green and a single beep

Negative recognition – Red and three consecutive beeps

Power On is also indicated by a constant red light.

The rear panel includes connectors for LAN communication to the HO PC and for power supply (see Figure 1-2). An external power supply, P/N 811307100 (see Figure 1-3) is provided with the unit.



Figure 1-1. HID Pod, General View

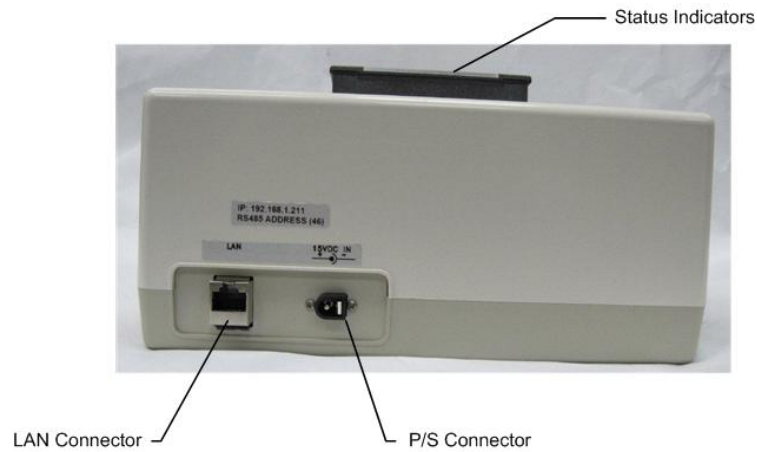


Figure 1-2. HID Pod, Connectors and Indicators



Figure 1-3. External Power Supply

1.2.1. Available Configurations

The HID Pod is available in the following configurations (see Table 1-1):

Table 1-1. HID Pod Configurations

Name	Orpak P/N	Gilbarco P/N
HID Pod	800918200	PA04020010
HID Indala Pod	800918250	PA04020020

1.3. FUNCTIONAL DESCRIPTION

1.3.1. Main Features

The operation is very simple: to start the tag acquiring process, the user waves the tag in front of the unit. After the tag is recognized and validated, it is associated to driver/vehicle from the FHO screens.

The HID Pod is based on advanced technology, implemented by two microcomputer subsystems: one for handling the secure communication protocol with the tag and the other for communication with the HO PC.

1.3.2. Supported Cards/Tags

HID readers supplied can support the following tags:

- HID tags and cards
- HID Indala tags and cards.

The contactless tag is used as a fueling tag at the gas station. When the tag is presented next to the HID Reader, it reads the tag data and transmits it to the Station Controller in the gas station. Upon verification and approval, the Station Controller activates and releases the pump valve, so fuel can be dispensed to the vehicle.

1.3.3. Power Supply

The HID Pod requires 12 - 24 VDC. / 0.5 A power input, supplied by the provided PS.

1.4. SPECIFICATIONS

Table 1-2 lists the specifications for the HID Pod units.

Table 1-2. HID Pod Specifications

Scope	Specifications
User Interface	<ul style="list-style-type: none">• Dual-LED green and red indicators• Buzzer
Communication Interface	LAN
Card Reader	<ul style="list-style-type: none">• HID Reader• HID Indala Reader
Physical (Including HID reader)	Height: 4.45" Width: 8.74" Depth: 6.02" Weight: 2.862 lb
Power	Operating voltage - 12-24 V DC. Operating current - 0.2A
Environmental	Operating temperature: 0°C - +40°C (32 °F – 158 °F) Storage temperature: -10°C - +70°C

	(-10°F – 158°F) ☒ Humidity: Operating: 20% to 80% Storage: 10% to 90%
--	---

1.5. STANDARDS

1.5.1. Communication Standards

The HID Pod communicates over the following standard:

- ☒ LAN

1.5.2. HID Reader Security Standards

The embedded reader and the cards require matching keys to function. All RF data transmission between the card and reader is encrypted, using a secure algorithm (extremely secure 64-bit authentication keys). The key management system reduces the risk of compromised data or duplicated cards.

1.6. SETUP

In order to install the HID Pod and configure the unit in FHO, proceed as follows:

1. Place the HID Pod in the office next to the HO PC
2. Connect HID Pod to power supply. The Pod connectors are shown in Figure 1-2. HID Pod, Connectors and Indicators
3. Connect the HID Pod to the PC, utilizing a LAN cable
4. Browse to FHO and select: Administration → Setup → General tab (see Figure 1-4)
5. Select the **Tag Acquire Device** checkbox
6. Select the **TCP/IP** radio button
7. Enter the default IP address: 192.168.1.211
8. Enter default Port: 3000
9. Select the **HEX** radio button
10. Enter the hexadecimal address assigned to the Pod: 46
11. Click on the **Save** button.



NOTE

The FHO's PC cannot communicate to both the HID POD and Mifare TAG POD at the same time.

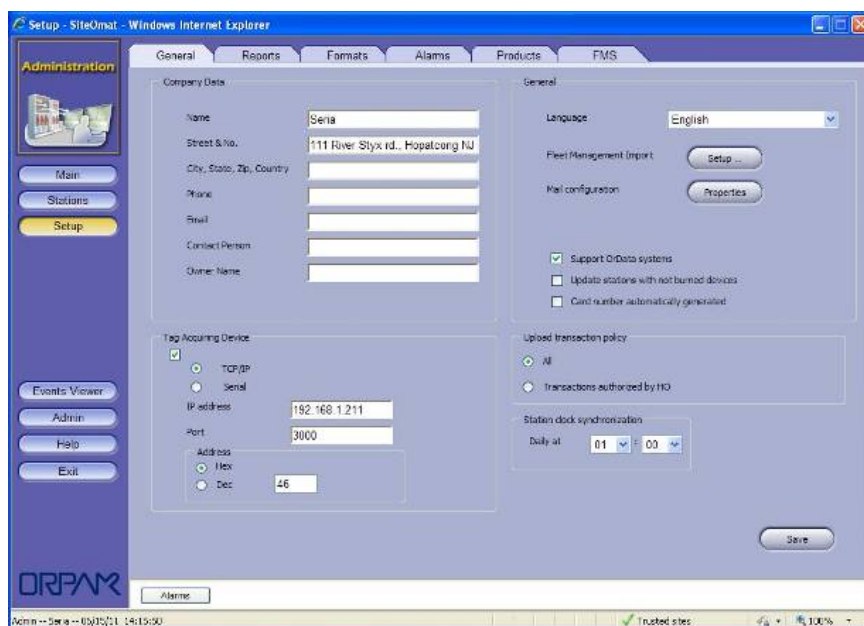


Figure 1-4. Setting the HID Pod in FHO Administration Setup – General Screen

1.7. OPERATION

Please refer to paragraph 2.7

1.8. MAINTENANCE

This section provides general maintenance and troubleshooting instructions for the HID Pod.

1.8.1. Changing the HID Pod Default IP Address

In order to change the HID Pod IP address, as it may be required, proceed as follows:

1. Power ON the unit
2. Connect the HID Pod to a PC (LAN Connection)
3. Set the PC's IP address to the HID default IP
4. Open the Web browser, and enter the default IP address of the HID Pod as it appears on the label on the unit's rear panel. The Setup Main Screen is displayed (see Figure 1-5)

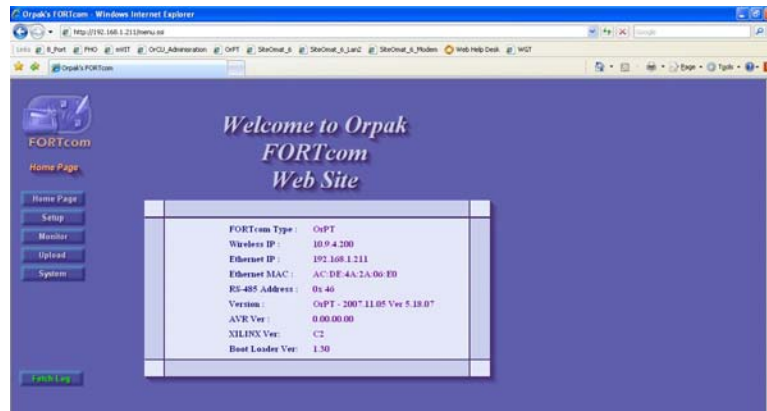


Figure 1-5.– FortCOM Web Site - Welcome Screen

5. Click on the **Setup** navigation button. The following login dialog appears (see Figure 1-6)



Figure 1-6. FortCOM Web Site – Login Dialog Box

6. Enter user credentials, which are required to navigate to all Setup pages: Default username: advanced, default password: orpaklab
7. Select the **Ethernet** tab. The following screen appears (see Figure 1-7):

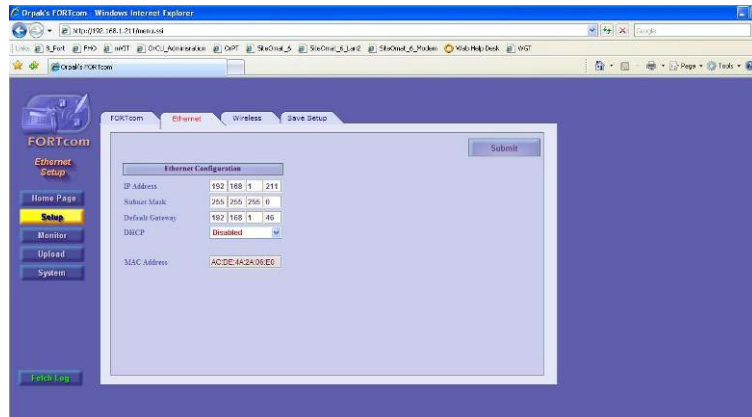


Figure 1-7.– FortCOM Web Site – Ethernet Setup Screen

8. Enter the new **IP Address**
9. Click on the **Submit** button to save the changes
10. Select the Save Setup tab. The following screen appears (see Figure 1-8)

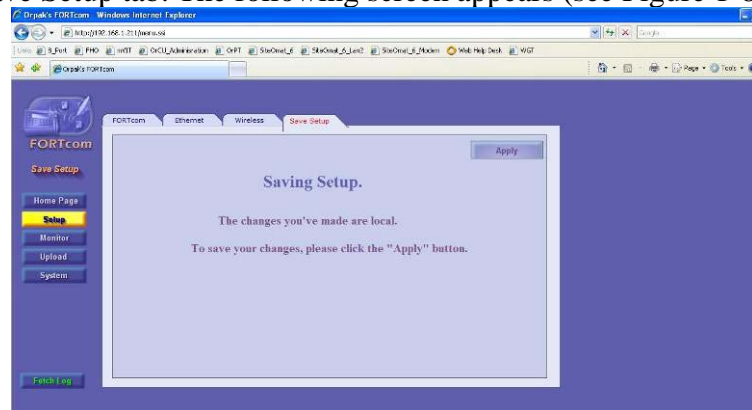


Figure 1-8.– FortCOM Web Site – Save Setup Screen

11. Click on **Apply** to apply the changes
12. The website displays a confirmation message. Click **OK**. The data is saved into the Flash memory chip
13. Once the Flash memory has successfully stored the setup and configuration data, a pop-up message requires restarting the system. This procedure is recommended. Click **OK**
14. Set newly changed IP address in FHO (refer to paragraph 1.6)



NOTE

It is highly recommended to replace the existing IP Address label with a new label indicating the current IP Address.

1.8.2. Cleaning



CAUTION

Do not use any solvents such as thinner or benzene.

The HID Pod should be cleaned periodically, in order to ensure proper operation.

The cleaning purpose is to remove any dust or foreign body that may harm the reader and consequently prevent the completion of the tag acquisition process.

Clean the HID Pod with a damp cloth only.

1.8.3. Troubleshooting

Table 1-3 lists the recommended procedures for troubleshooting the HID Pod.

Table 1-3. Troubleshooting

<i>No.</i>	<i>Symptom</i>	<i>Troubleshooting Procedure</i>	<i>Recommended Action</i>
1	Power On indicator is off	Check DC Voltage power supply output	Replace DC Voltage Power Supply
		Check the proper connection between the Power Supply and HID Pod	Connect the PS connector anew
2	No communication between HID Pod and the HO PC	Check LAN connection between the HID Pod and the HO PC	Replace HID Pod
3	LEDs are not operating	Check DC Voltage power supply output	Replace DC Voltage Power Supply

SECTION 2 MIFARE POD

2.1. **GENERAL**

This section describes the MiFare Pod unit. The unit, connected to the HO PC, enables users to read an RFID contactless tag and associate it to a device, used for vehicle or driver identification.

2.2. **DESCRIPTION**

The FHO Pod - P/Ns: 800910980 is a standalone reader unit for contactless tags intended for vehicle or driver tag identification in gas stations and other applications.

The reader consists of a clean panel, which includes two indicators (green and red) and a large LCD. In addition to the LCD, an internal buzzer beeps to provide audio feedback. The status of the current operation is indicated by the green and red indicators (see Figure 2-1).

Two LEDs on the MiFare Pod front panel indicate the recognition status of the tag:

- Green: ✓ - Positive recognition
- Red: ✗ - Negative recognition

The rear panel includes connectors for communication and for power supply.

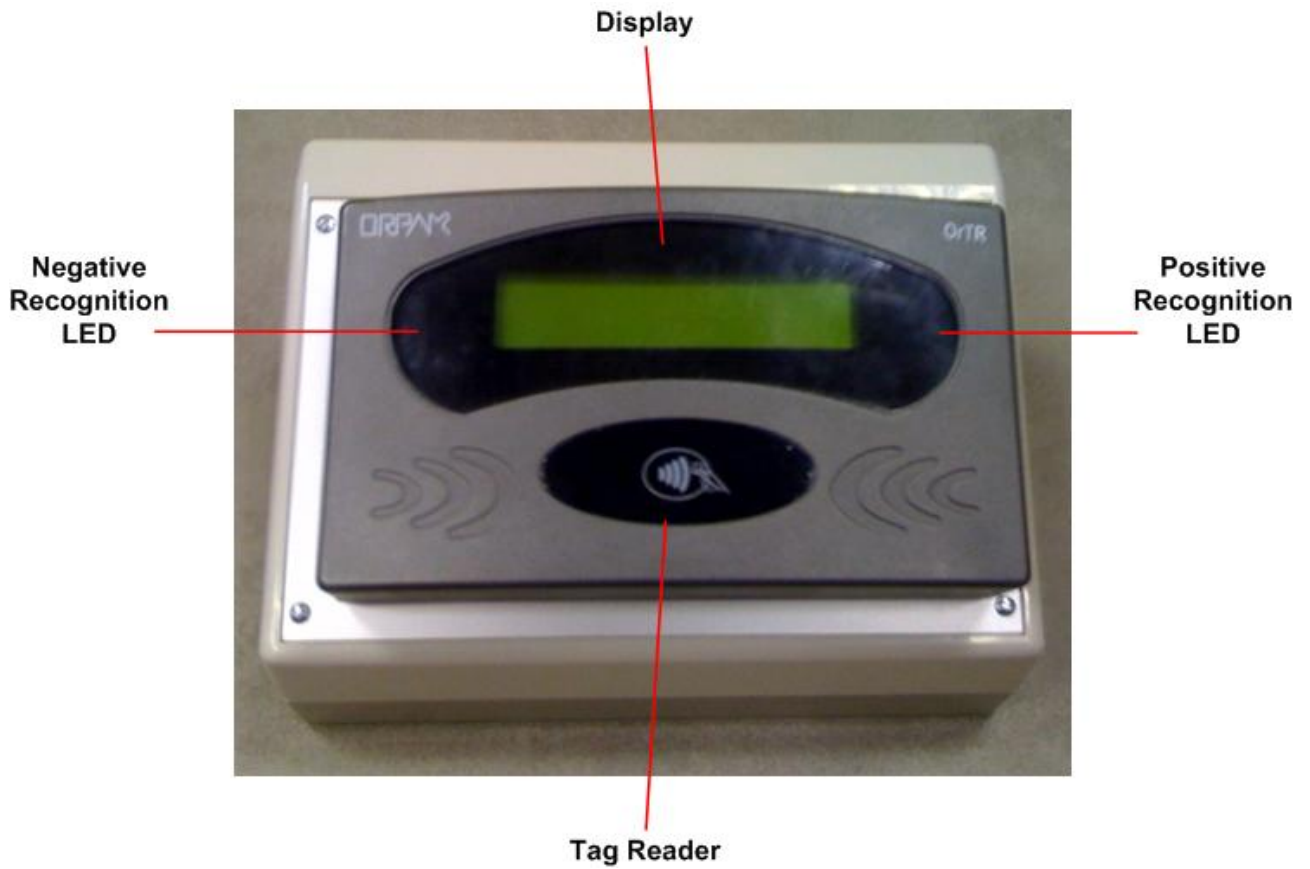


Figure 2-1. MiFare Pod – Front View

2.3. FUNCTIONAL DESCRIPTION

2.3.1. Main Features

The operation is very simple: to start the tag acquiring process, the user waves the tag in front of the unit. After the tag is recognized and validated, it is associated to driver/vehicle form the FHO screens.

The MiFare Pod is based on advanced technology, implemented by two microcomputer subsystems: one for handling the secure communication protocol with the tag and the other for communication with the HO PC.

The FHO Pod includes a power supply and an RS-232 harness.

2.3.2. Supported Tags

MiFare Pod can support MiFare Tags.

MiFare is a contactless tag that can be used as a fueling tag at the gas station (see Figure 2-2). When the tag is presented next to the Tag Reader, it reads the tag data and transmits it to the Station Controller in the gas station. Upon verification and approval, the Station Controller activates and releases the pump valve, so fuel can be dispense to the vehicle.

Four types of MiFare tags are recognized:

- **Driver card:** Used to identify a specific driver. Can be used on parallel to vehicle identification means, like the vehicle's Fuel Ring
- **Vehicle card:** Used to authorize fuel dispensing and charging per vehicle
- **Attendant tag:** Allows operation of any fuel nozzle from the Tag Reader, by a station attendant



Figure 2-2. MiFare Tag, General View

2.3.3. Power Supply

The Tag Reader requires 12 - 24 VDC. / 0.5 A power input, supplied by the provided PS.

2.3.4. MiFare Pod Housing

The MiFare Pod enclosure is made of rugged plastic, in the form of a small box, mounted on an inclined plastic base for the ease of operation. The devices in its front panel are sealed to prevent humidity and dust penetration.

The overall dimensions are: H x W x D: 5.19" x 8.74" x 6.02" (see Figure 2-3).

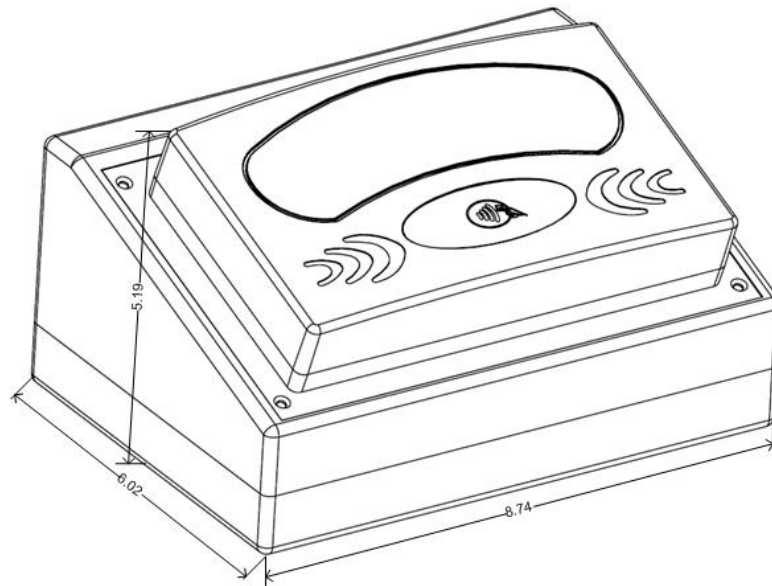


Figure 2-3. MiFare Pod – Dimensions

2.4. SPECIFICATIONS

Table 2-1 describes the operational, physical, electrical and environmental specifications are applicable to the MiFare Pod:

Table 2-1. MiFare Pod Specifications

Scope	Specifications
User Interface	Backlit alphanumeric LCD with 5×7 dot matrix display units, 2 rows of 16 characters each Dual-LED green and red indicators Piezoelectric speaker
Reader	Contactless MiFare reader
Physical	Height: 5.19" Width: 8.74" Depth: 6.02" Weight: 1.852 lb.
Power Supply:	12-24 VDC 0.5 A
Operating Temperature:	-40 °C to +70 °C
Storage Temperature:	-40 °C to +70 °C
Humidity:	95% RH
Communication Interface:	RS-232

2.5. STANDARDS

2.5.1. Communication Standards

The MiFare Pod communicates over the following standard:

- RS-232 link

2.5.2. Security Standards

MiFare Pod has a Security Authentication Module (SAM) used to decrypt the tag data.

2.6. SETUP

This section provides setup and configuration instructions for the MiFare Pod.

2.6.1. Tools and Accessories

The MiFare Pod is provided with an installation kit, described in Table 2-2.

Table 2-2. MiFare Pod Installation Kit Items

<i>Orpak P/N</i>	<i>Name</i>	<i>Quantity</i>
811010980	MiFare Pod Unit	1
811307100	Power Supply 115/230V-15V-1A	1
819302950	Power Cable, 115V	1
819136700	RS-232 Harness	1

2.6.2. Installation Instructions

The MiFare Pod is linked to the FHO PC. The following paragraph provides step by step instructions for the installation of the MiFare Pod.

1. Place the MiFare Pod in the office next to the HO PC
2. Connect MiFare Pod to power supply. The Pod connectors are shown in Figure 2-4



Figure 2-4. MiFare Pod – Connectors

The MiFare Pod displays the following message (see Figure 2-5):

N o H o s t C o m m u n i c a t i o n
--

Figure 2-5. MiFare Pod Display – No Communication Message

3. Connect the MiFare Pod to the PC, utilizing the RS-232 harness, to an available COM Port. The MiFare Pod displays the application version installed and the serial address (hexadecimal) assigned to the device (see Figure 2-6)

O r T R A P P 2 3 2 V e r X . X X . X X (3 A)

Figure 2-6. MiFare Pod Display – No Communication Message

4. Set the communication channel to the FHO in Administration → Setup → General tab (see Figure 2-7):
 - a. Select the Tag Acquire Device checkbox
 - b. Select the **Serial** radio button
 - c. Enter the **COM port** in use
 - d. Select the HEX radio button
 - e. Enter the hexadecimal address assigned to the Pod, as it appears on the display

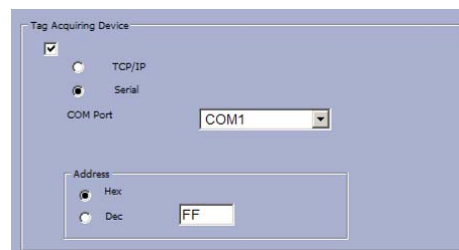


Figure 2-7. General Tab – Tag Acquiring Device Section

5. Click on the **Save** button. The MiFare Pod displays a Welcome message (see Figure 2-8)

We l c o m e P r e s e n t Y o u r T a g

Figure 2-8. MiFare Pod Display – Welcome Message

The MiFare Pod is now ready for use.

2.7. OPERATION

This section provides operation instructions for the MiFare Pod.

2.7.1. Acquiring a Tag Number

To acquire a tag number and associate it to a device in the FHO system, proceed as follows:

1. Wave the tag in front of the unit reader
2. In cases where the MiFare Pod recognizes the tag, the green LED turns on, a beep is emitted and the tag number appears on the display
3. Click on the **Acquire** button on the Format tab in the FHO Device Properties dialog box (see Figure 2-9)
4. The tag number appears in the **Card Number** text box
5. Click OK to apply the changes and associate the tag to the driver/vehicle

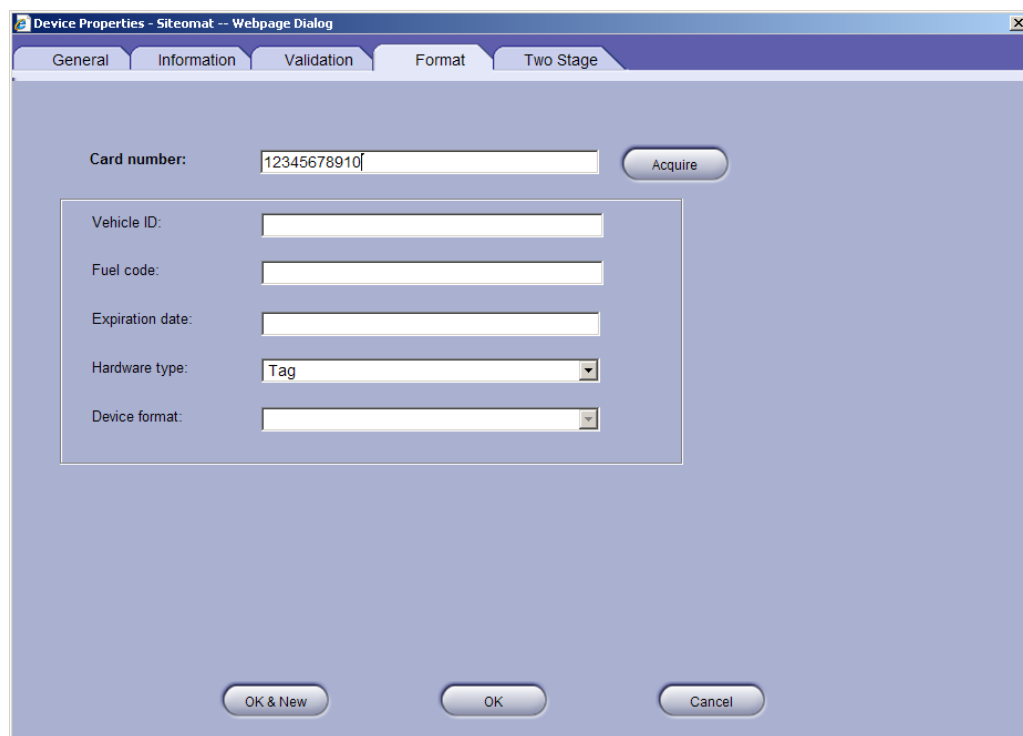


Figure 2-9. Device Properties – Format Tab

2.8. MAINTENANCE

This section provides general maintenance and troubleshooting instructions for the MiFare Pod.

2.8.1. Cleaning



CAUTION

Do not use any solvents such as thinner or benzene.

The MiFare Pod should be cleaned periodically, in order to ensure proper operation.

The cleaning purpose is to remove any dust or foreign body that may harm the reader and consequently prevent the completion of the tag acquisition process.

Clean the Tag Reader with a damp cloth only.

2.8.2. Troubleshooting

Table 2-3 lists the recommended procedures for troubleshooting the MiFare Pod.

Table 2-3. Troubleshooting

<i>No.</i>	<i>Symptom</i>	<i>Troubleshooting Procedure</i>	<i>Recommended Action</i>
1	Display is off	Check DC Voltage power supply output	Replace DC Voltage Power Supply
		Check the proper connection between the Power Supply and MiFare Pod	Connect the PS connector anew
2	No communication between MiFare Pod and the HO PC	Check RS-232 connection between the MiFare Pod and the HO PC	Replace MiFare Pod
3	LEDs are not operating	Check DC Voltage power supply output	Replace DC Voltage Power Supply