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Tibbo Wiegand Converter

Setup Guide
(For Abraxas)

About This Guide

This guide describes how to set up the Tibbo Wiegand Converter for an Abraxas Access Control solution.

This guide contains the following chapters:

- **CHAPTER 1, INTRODUCTION**, page 5
Describes the usage of the Tibbo Wiegand Converter in the Abraxas Access Control Solution and provides an overview of the workflow for setting it up.
- **CHAPTER 2, HARDWARE ASSEMBLY**, page 7
Describes how to assemble the hardware components of the Tibbo Wiegand Converter.
- **CHAPTER 3, FIRMWARE INSTALLATION AND SETUP**, page 15
Describes how to install and set up the firmware required for the Tibbo Wiegand Converter.

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01 INTRODUCTION

This chapter describes the usage of the Tibbo Wiegand Converter in the Abraxas Access Control Solution and the workflow for setting it up.

Introduction

AnyVision's Abraxas Access Control solution enables you to add face recognition to your current Access Control System (ACS).

The vast majority of ACS solutions on the market support the Wiegand protocol as their standard. The Abraxas Access Control solution uses a Wiegand Converter to convert the detection and recognition information that is sent from the AnyVision engine to the ACS.

Various types of Wiegand Converters can be used. This guide describes how to set up the Tibbo Wiegand Converter.

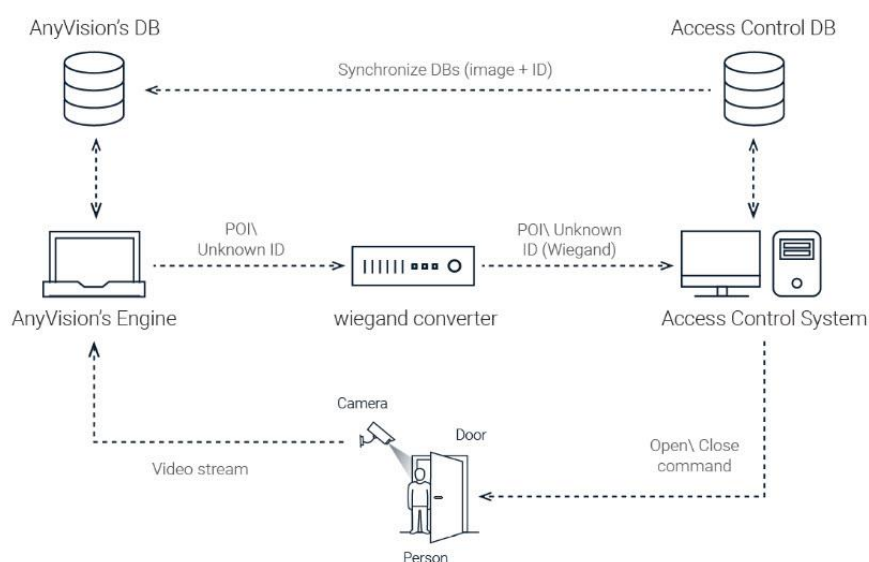
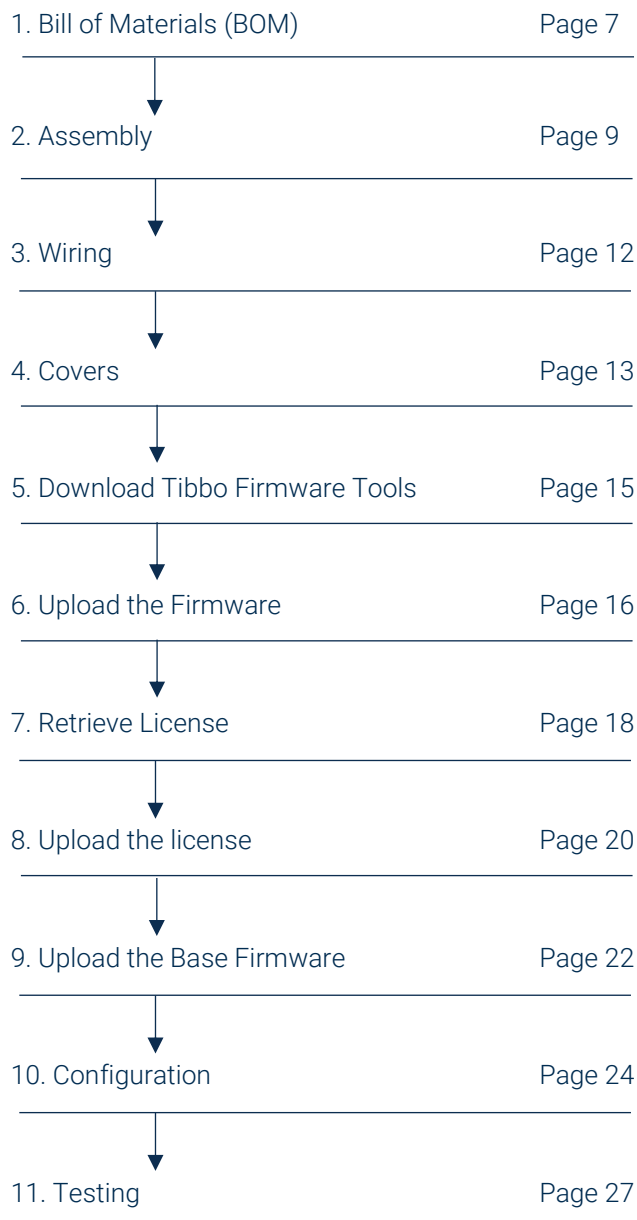


Figure 2: Abraxas Solution Data Flow

Abraxas Access Control Setup – Workflow

The following is an overview of the workflow for setting up the Tibbo Wiegand Converter for the Abraxas Access Control solution.



02 HARDWARE ASSEMBLY

This chapter describes how to assemble the hardware components of the Tibbo Wiegand Converter.

Bill of Materials (BoM)

These components are to be provided by the customer or business partner. AnyVision does not supply hardware. The same BoM can also be found on Tibbo website. <http://tibbo.com/store/tps/custom.html>-->Anyvision-Wiegand-G1.

Table 1: BOM

Quantity	Image	Part
1		PM01P1055-01: Bottom cover for TPB2 and TPB2L.
1		PM01P1054: Top cover for TPB2.
1		DMK1000: DIN Rail Mounting Kit
1		PM01P1049: Right wall for TPB (all sizes).
1		PM01P1050: Left wall for TPB (all sizes).

1		PM06P1004: LED light guide for TPB (all sizes).
2		PM12P1001-03A: C1 Tibbit shell, orange, blank version.
4		SM3R5 + 32SPBC: Main Screw For TPB (all sizes). Quantity
1		TPP2(G1): Size 2 Tibbo Project PCB, Gen. 1.
1		#09  Low power 5V supply, 12V input.
4		#11  Four open collector outputs M1S Order from IDP – Four open collector outputs.
2		#20  Nine terminal blocks C2 Order from IDP – Nine terminal blocks.
1		#18  Power input C1 Order from IDP – Power jack and two terminal blocks.

Assembly

The following describes how to assemble the Tibbo Wiegand Converter.



To assemble the Tibbit:

- 1 Insert #09 Low-power 5V supply, 12V input in S11 with the text Tibbit outside:



- 2 Insert #11 four open collector outputs M1S in S1 with the text Tibbit outside:



- 3 Insert #11 four open collector outputs M1S in S3 with the text Tibbit outside:



- 4 Insert #11 four open collector outputs M1S in S5 with the text Tibbit outside:



- 5 Insert #11 four open collector outputs M1S in S7 with the text Tibbit outside:



- 6 Insert #20 nine terminal blocks C2 in S2-->S4 with the text Tibbit outside:



- 7 Insert #20 Nine terminal blocks C2 in S6-->S8 with the text Tibbit outside:



- 8 Insert #18 Power input C1 in S12 with the text Tibbit outside:



- 9 Insert PA-PCB-P2164: MD/RST button PCB for TPB on top of the reset buttons (rest on rest):



- 10 Insert PM12P1001-03A: C1 Tibbit shell, orange, blank version on S13 and S10:



Wiring



Each Terminal Block has nine ports to be wired, as follows:

Table 2: Terminal Block Ports

Port #	Use for	Value	Color	Tibbit
1	D0	Data	White	
2				
3	D1	Clock	Green	
4				
5	GND	–	Black	
6	D0	Data	White	
7				
8	D1	Clock	Green	
9				
1	D0	Data	White	
2				
3	D1	Clock	Green	
4				
5	GND	–	Black	
6	D0	Data	White	
7				
8	D1	Clock	Green	
9				

Covers

To handle the covers:

- 1 Insert PM06P1004: LED light guide for TPB in the holes:



- 2 Insert PM01P1049 right wall for TPB in the holes:



- 3 Insert PM01P1050 left wall for TPB in the holes:

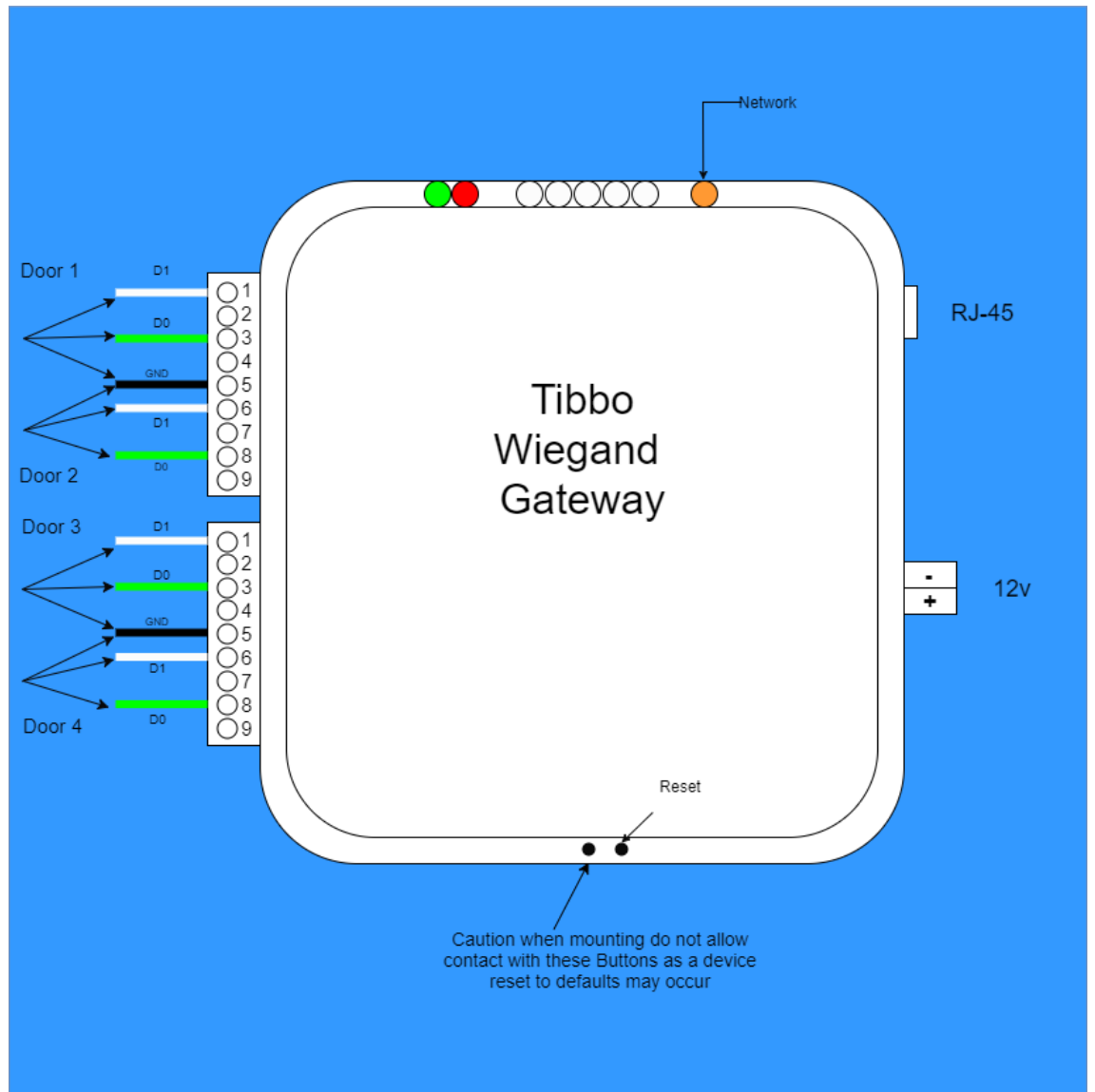


- 4 Close the parts together and insert the screws: SM3R5+32SPBC: Main screw for TPB in the holes:



Congratulations the stage is now done!

At the end, the Tibbo should look as follows:



FIRMWARE INSTALLATION AND SETUP

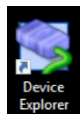
This chapter describes how to install and set up the firmware required for the Tibbo Wiegand Converter.

Download Tibbo Firmware Tools

To download Tibbo firmware tools:

- 1 Use the following link in order to download the Tibbo Device Explorer:

<http://tibbo.com/downloads/open/tide/tdevexplore-5-03-04.exe>



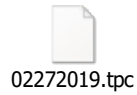
- 2 Use the following link in order to download the Tibbo Device Manager:

<http://tibbo.com/support/downloads/tdst.html>



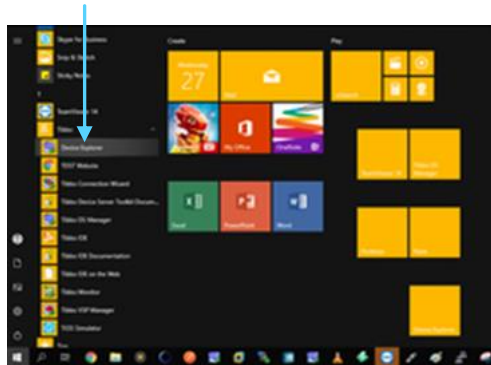
Upload the Firmware

Use the firmware file named 02272019.tpc, which is embedded here:

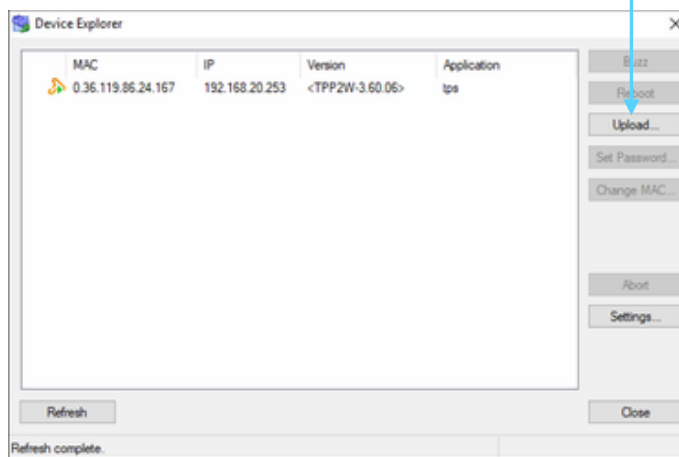


To upload the firmware file named 02272019.tpc:

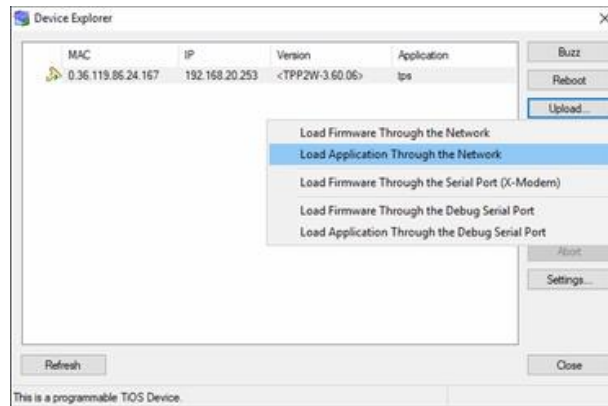
- 1 Click the Windows button and click the **Tibbo** folder → **Device Explorer**, as shown below:



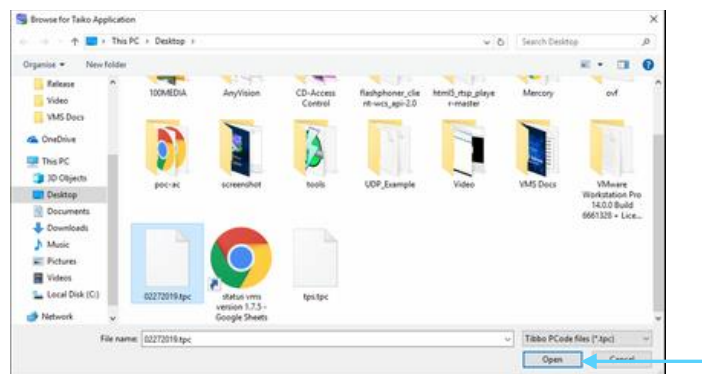
- 2 Select the Tibbo device from the list and click the **Upload** button:



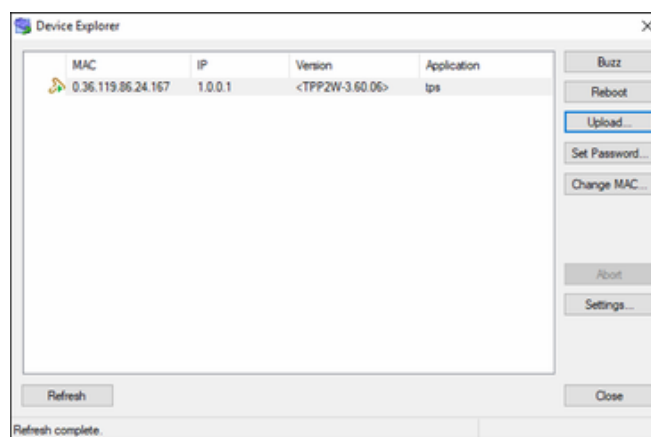
The following displays:



- 3 Select the **Load Application Through the Network** option.
- 4 Select the **02272019.tpc** file and click **Open**, as shown below:



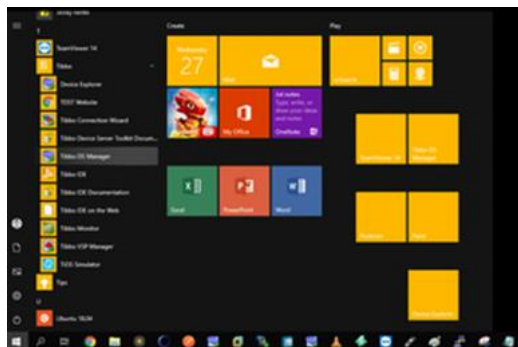
- 5 Click **Refresh** → **Close** button, as shown below:



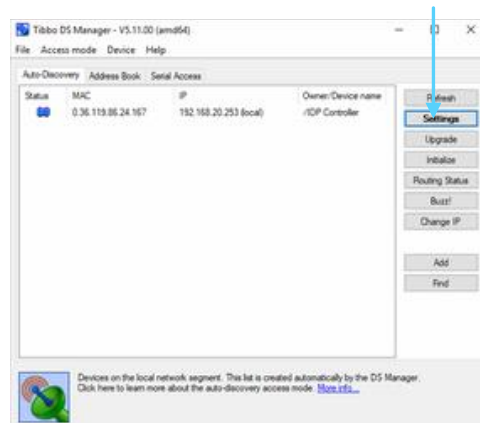
Retrieve License

To retrieve license for the Tibbo Wiegand Converter:

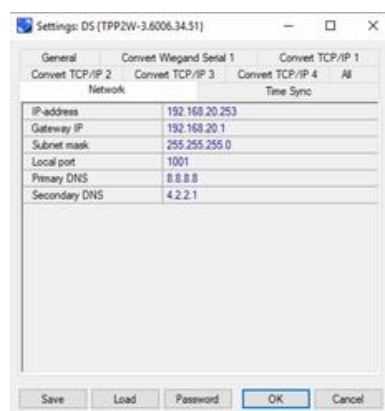
- 1 Click the **Windows** button and click the **Tibbo** folder → **Tibbo DS Manager**:



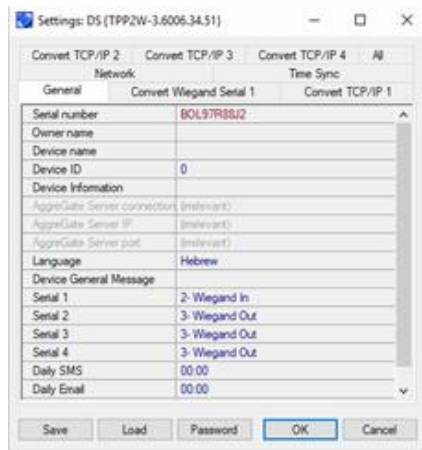
- 2 Choose the Tibbo device from the list and click the **Settings** button:



- 3 In the **Network** tab, configure the network parameters (do not change the **Local Port** field):



- 4 Click **OK**.
- 5 In the **General** tab, copy the Serial Number (marked in red) and submit it to AnyVision support/ contact person to receive a license for your Tibbo device.

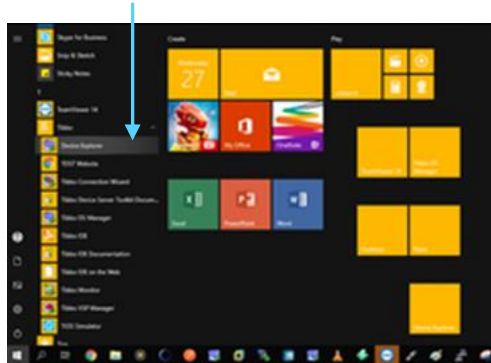


Upload the License

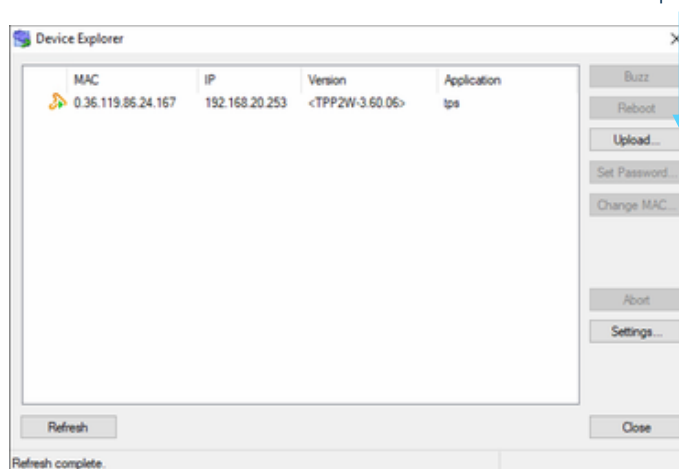
Use the license file you received. The file should be named as follows: <Serial Number>.tpc,

To upload the license file

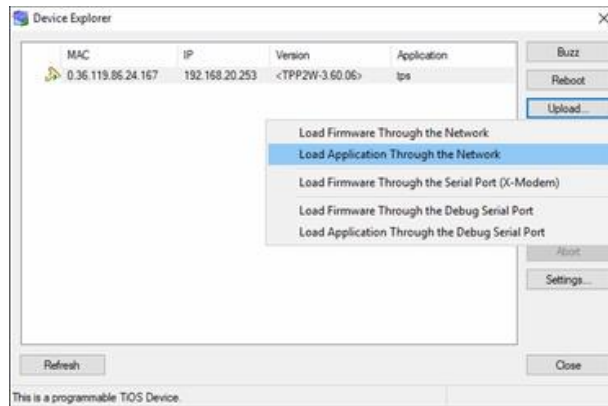
- 1 Click the Windows button and click the Tibbo folder → Device Explorer, as shown below:



- 2 Select the Tibbo device from the list and click the Upload button:

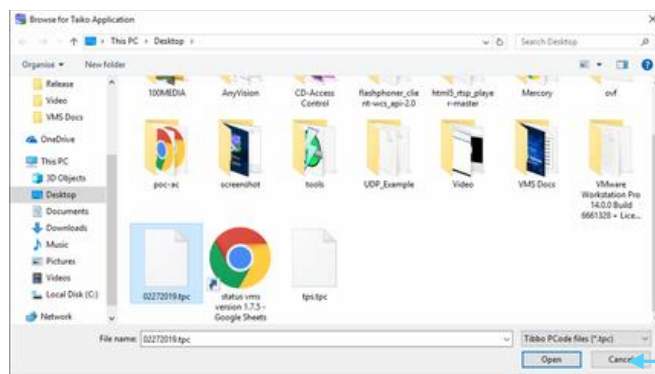


The following displays:

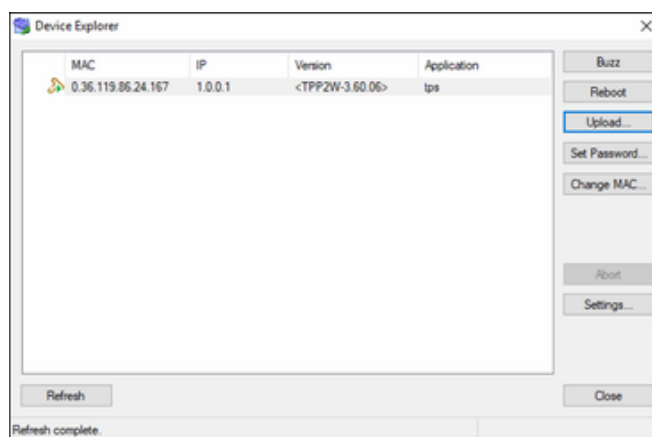


3 Select the Load Application Through the Network option.

4 Select the <Serial Number>.tpc, file and click Open, as shown below:



5 Click Refresh & Close button, as shown below:



Upload the Base Firmware

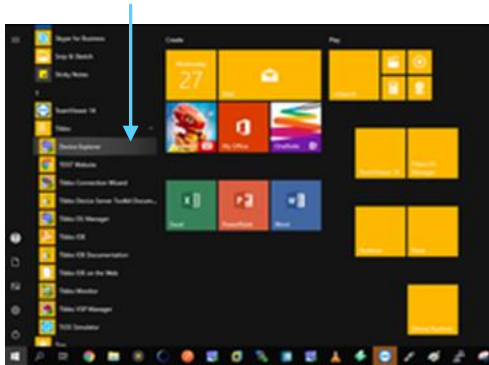
Use the base firmware file named tps-BASE-12052019.tpc, which is embedded here:



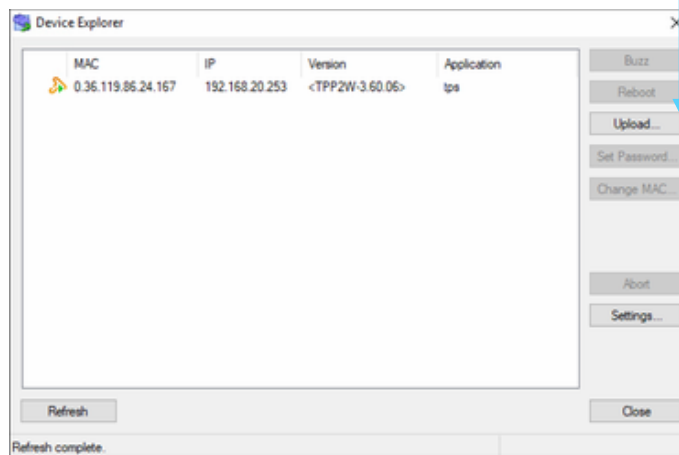
.tps-BASE-12052019
tpc

To upload the firmware file named tps-BASE-12052019.tpc:

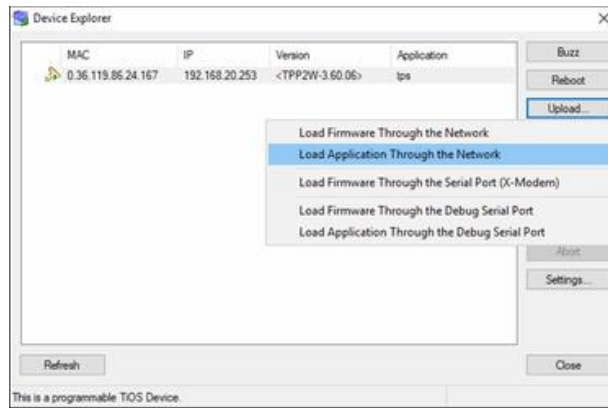
- 1 Click the Windows button and click the Tibbo folder → Device Explorer, as shown below:



- 2 Select the Tibbo device from the list and click the Upload button:

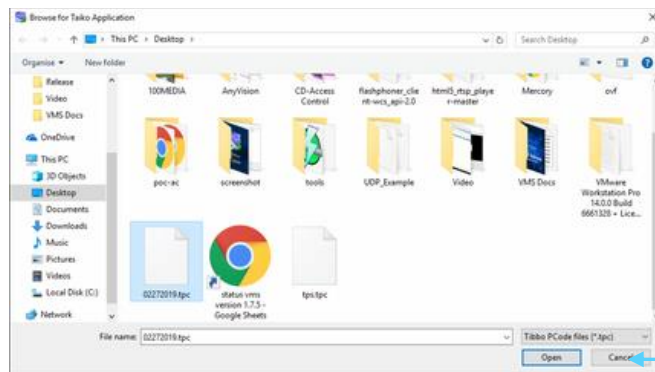


The following displays:

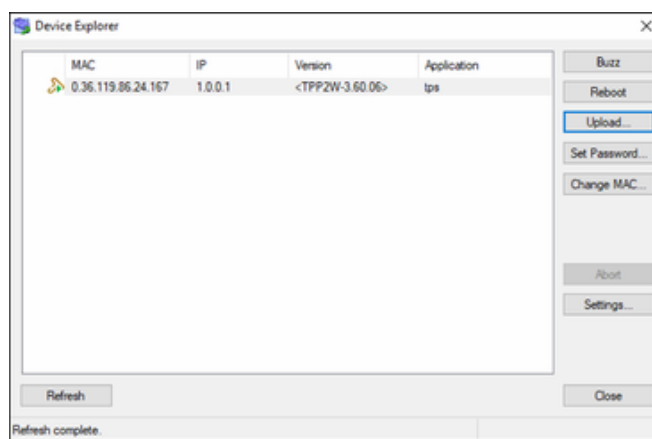


3 Select the Load Application Through the Network option.

4 Select the tps-BASE-12052019.tpc file and click Open, as shown below:



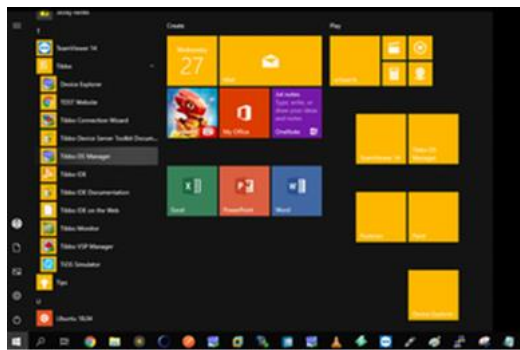
5 Click Refresh Close button, as shown below:



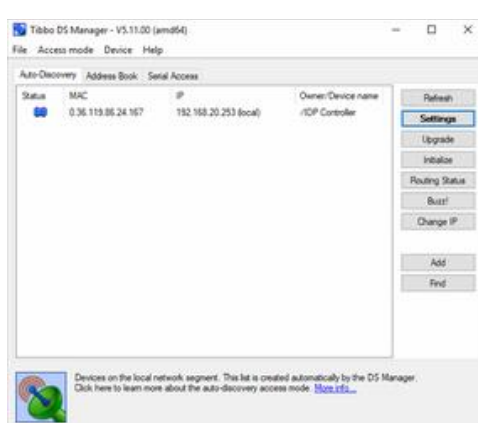
Configuration

To configure the Tibbo Wiegand Converter:

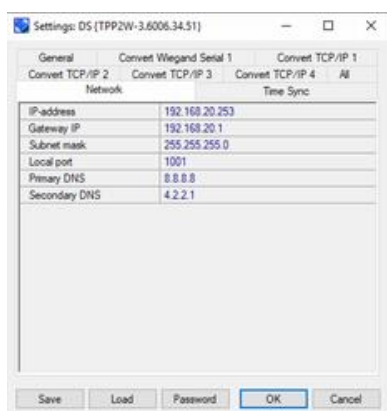
- 1 Click the Windows button and click the Tibbo folder ▢ Tibbo DS Manager:



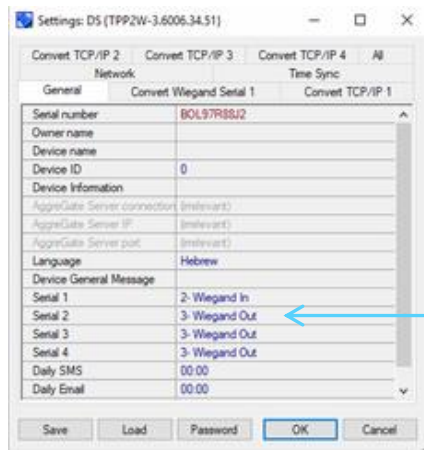
- 2 Choose the Tibbo device from the list and click the **Settings** button:



- 3 In the **Network** tab, configure the network parameters (do not change the Local Port field):



- 4 Click OK.
- 5 In the **General** tab, set all the **Serial** options **Serial 1**, **Serial 2**, **Serial 3** and **Serial 4** to **3-Wiegand Out**, as shown below:

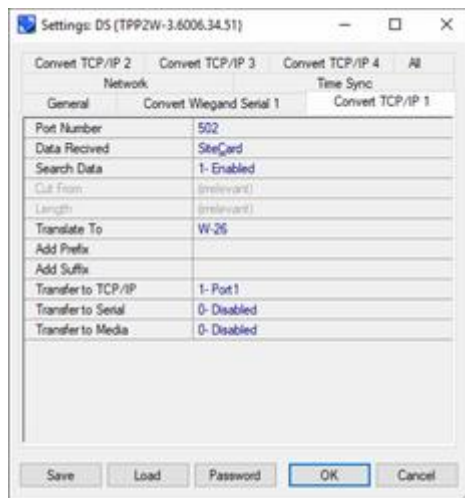


Note Serial 1 is on the left side, when the yellow cube is up.



The Tibbo Wiegand Converter has four ports, each which has its own configuration tab. These tabs are named **Convert TCP/IP 1** , **Convert TCP/IP 2** , **Convert TCP/IP 3** and **Convert TCP/IP 4**. For each port, do the following:

- In the **Data Received** field, select **SiteCard**.
- In the **Transfer To** field, select **W-26** (or any other supported Wiegand type).
- In the **Transfer to Serial**, select **Serial 1** for port 1, **Serial 2** for port 2, **Serial 3** for port 3 or **Serial 4** for port 4.



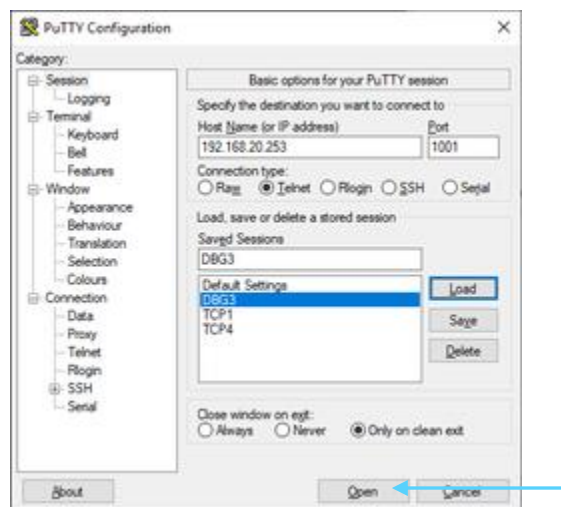
6 Click **OK** to finish.

The Tibbo resets and beeps after reboot.

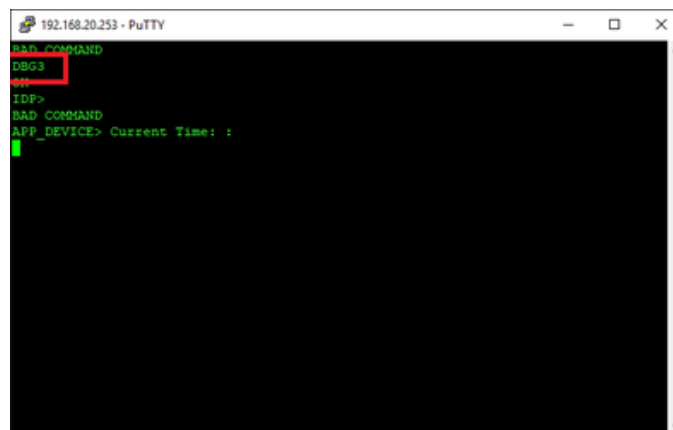
Testing

To test the Tibbo Wiegand Converter:

- 1 Download the **Putty** app from --
<https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html>
- 2 Run the app.
- 3 Fill in the **IP** and **Port 1001** fields and select **Telnet**.
- 4 Click the **Open** button.

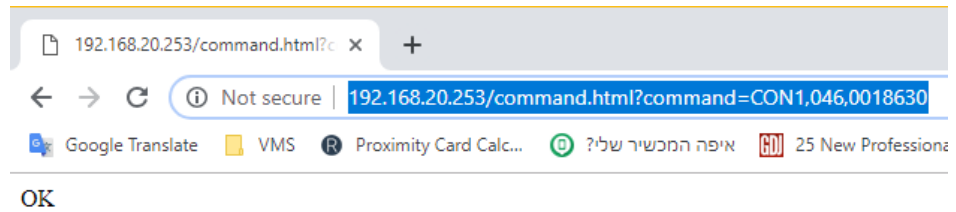


- 5 Type **DBG3** to go in to debug mode:



- 6 Navigate to the browser and type the following:
<http://192.168.20.253/command.html?command=CON4,046,18630>
[http://\(Tibbo-IP\)/command.html?command=CON\(TCP_number\),\(facility_code\),\(card_number\)](http://(Tibbo-IP)/command.html?command=CON(TCP_number),(facility_code),(card_number))

A blank page is displayed showing the word **OK**, as shown below:



- 7 The Putty displays the binary Wiegand number and the lent (Wiegand bit) comments on below:



In this case:

- Facility Number: 046
- Card Number: 18630
- Wiegand Binary: 10010111001001000110001100

It can be converted as follows:

- 1 - check bit
- 0010 1110 = 46
- 0100 1000 1100 0110 = 18630
- 0 - check bit