PaperCut MF - General Elatec TWN Reader Tasks

This document aims to support PaperCut MF customers and resellers when configuring and troubleshooting Elatec TWN readers.

As of writing, this document is accurate for the following reader types:

- Elatec HID-Prox (TWN3)
- Elatec Mifare (TWN3)
- Elatec Mifare NFC USB (TWN4)

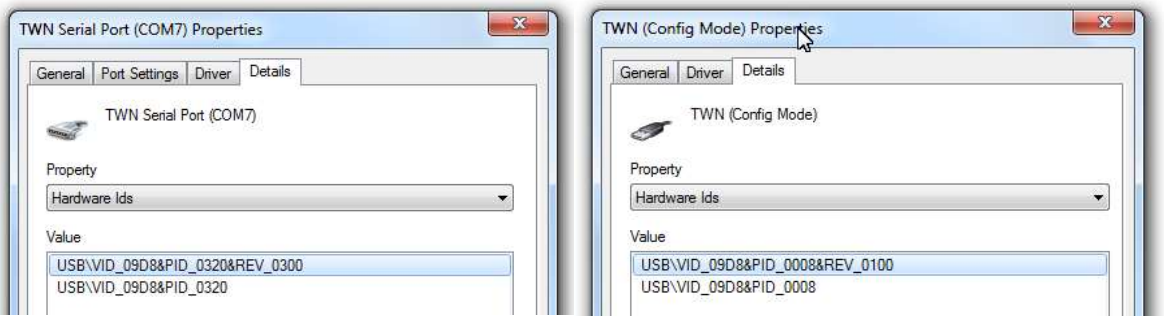
Contents

1 Vendor IDs and Product IDs

All USB card readers will have a Vendor ID (VID) and Product ID (PID). This is used by Windows and by various Copiers to identify the correct driver to use. Some copiers will also whitelist the use of various card readers ensuring that compatibility is not an issue. The table below lists known Vendor IDs and Product IDs in use by Elatec TWN readers.

VID	PID	Firmware	Function	Version on Label
09D8	0008	Standard	Config Mode	…/4.xxGx
09D8	0310	Standard	HID Keyboard Emulation	…/4.xxGx
09D8	0320	Standard	Virtual COM Port	…/4.xxGx
09D8	0323	Custom	Virtual COM Port	…/4.xx.xxTx
09D8	0410	Standard	HID Keyboard Emulation	B/B1.03/KF1.23/STD1.23/P

If your Elatec TWN reader comes with a Custom firmware and was purchased directly from a reseller or Authorized Solution Center, contact them for help. You can find their contact information in your PaperCut Admin interface on the **About** page. For all other areas please contact your vendor. Readers with custom firmware are unlikely to work in the expected manner.



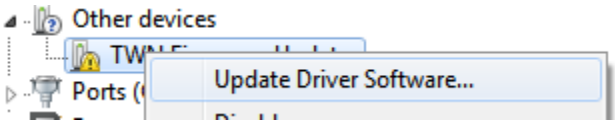
When working with the Elatec TWN Readers you will require the appropriate drivers to be installed, they can be found in the *PaperCut MF - General Elatec TWN Reader Tasks.zip* archive under the Drivers folder.

2 Drivers

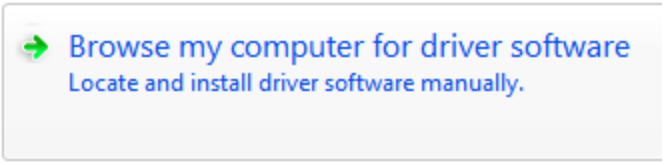
When you first connect an Elatec TWN3 Reader you will almost certainly be prompted to install drivers for the device. For Windows 7 Professional you will see a balloon tip near the system tray indicating the success/failure.

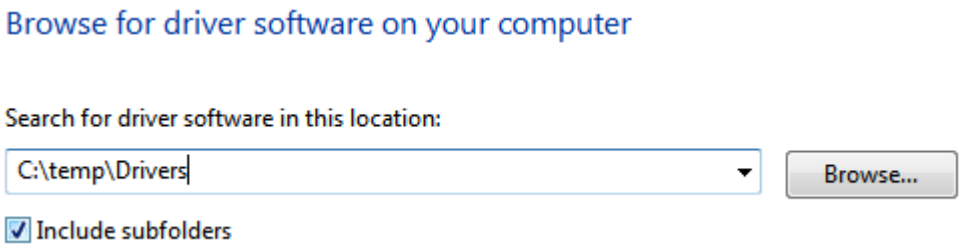
You can download the appropriate drivers from the PaperCut MF Reseller Login (http://www.papercut-mf.com/resellers/) under Downloads & Documentation. Once you have downloaded the *PaperCut MF – General Elatec TWN Reader Tasks.zip* archive, we recommend unzipping it to C:\Temp\

1. If it does not install, simply click Start and search for “Device Manager”, right click on the device without the driver and click “Update Driver Software”



2. Simply then click “Browse my computer for driver software” and then select the path that you expanded the PaperCut MF – General Elatec Reader Tasks.zip to (shown below)





You may need to repeat these steps for each of the modes (Keyboard, COM Port and Config Mode) that the Elatec TWN Reader supports.

2.1 32bit vs 64bit

It has been PaperCut's experience that configuring Elatec TWN3 readers is best done on a 32bit Windows Vista or Windows 7 machine. Windows Vista 64bit and Windows 7 64bit will still work but may require several attempts to connect to the device in order to change its configuration.

Drivers can be found in the *PaperCut MF – General Elatec TWN Reader Tasks.zip* archive under the Drivers folder.

2.2 Elatec Mifare NFC USB (TWN4)

As of writing (May 2013) the Elatec TWN4 reader does not require drivers for Microsoft Windows 7 – 64bit.

3 Changing Communication Mode

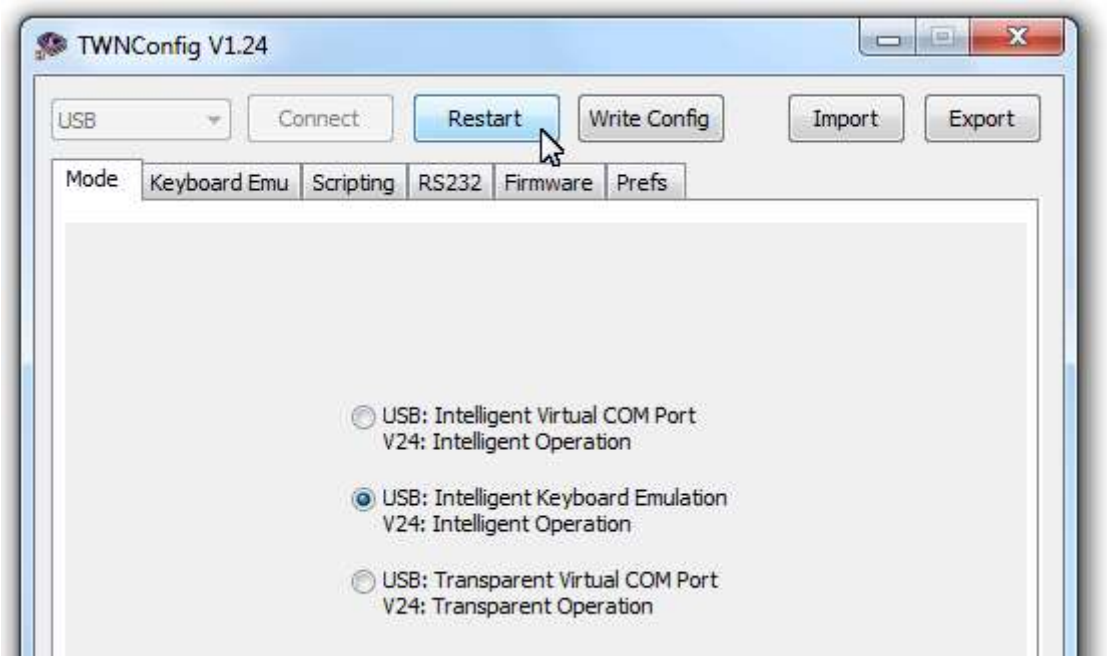
Once you have plugged in your Elatec TWN Reader and installed the drivers, you can then run the *TWNConfig.exe* and "Connect" to the device. When this happens, the PID of the device will change to the Config Mode from Vendor IDs and Product IDs section table.

Once the *TWNConfig.exe* has connected to the Elatec TWN reader successfully you can then change the reader to be one of the three modes:

- USB: Intelligent Virtual COM Port
- USB: Intelligent Keyboard Emulation
- USB: Transparent Virtual COM Port

The Keyboard Emulation is the most commonly used mode.

Simply select the mode you require and click the Restart button prior to unplugging the Elatec TWN Reader from your computer.

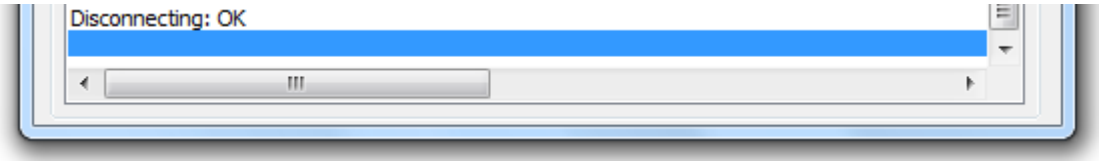


3.1 Unplugging the reader while in Config Mode

If you unplug the Elatec TWN Reader from your computer while it is in Config Mode it is very unlikely to communicate with your computer, PaperCut Fast Release TCP Converter or copier/MFP in question.

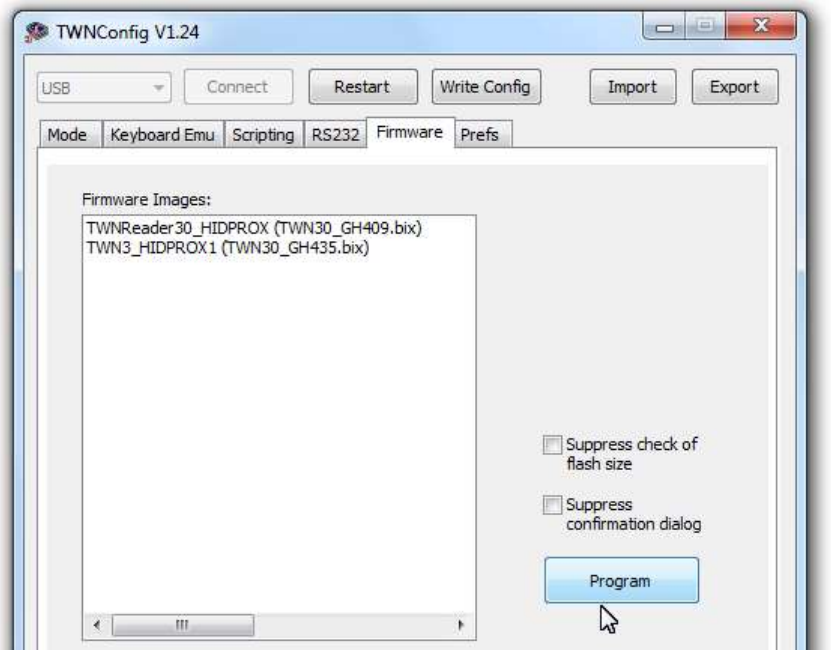
You will need to click the Restart button prior to unplugging the Elatec TWN Reader.

The TWNConfig.exe will show the following message when it has successfully restarted the device. The PID of the device will also change to one of the PIDs in the Vendor IDs and Product IDs section table



4 Firmware updates / changes.

As of writing, it is unlikely that you will need to change the firmware that is on an Elatec TWN Reader. However, the Standard firmware for various readers is located in the same directory as the *TWNConfig.exe* and has a suffix of .BIX.



4.1 Toshiba eB3 devices

Older Toshiba eB3 devices may not support the use of newer Elatec card reader firmwares. If this is the case you will need to obtain an older firmware (e.g. TWN30_THA412.bix) and an older version of the TWNConfig.exe. Unfortunately PaperCut software cannot provide these resources.

5 Scripts

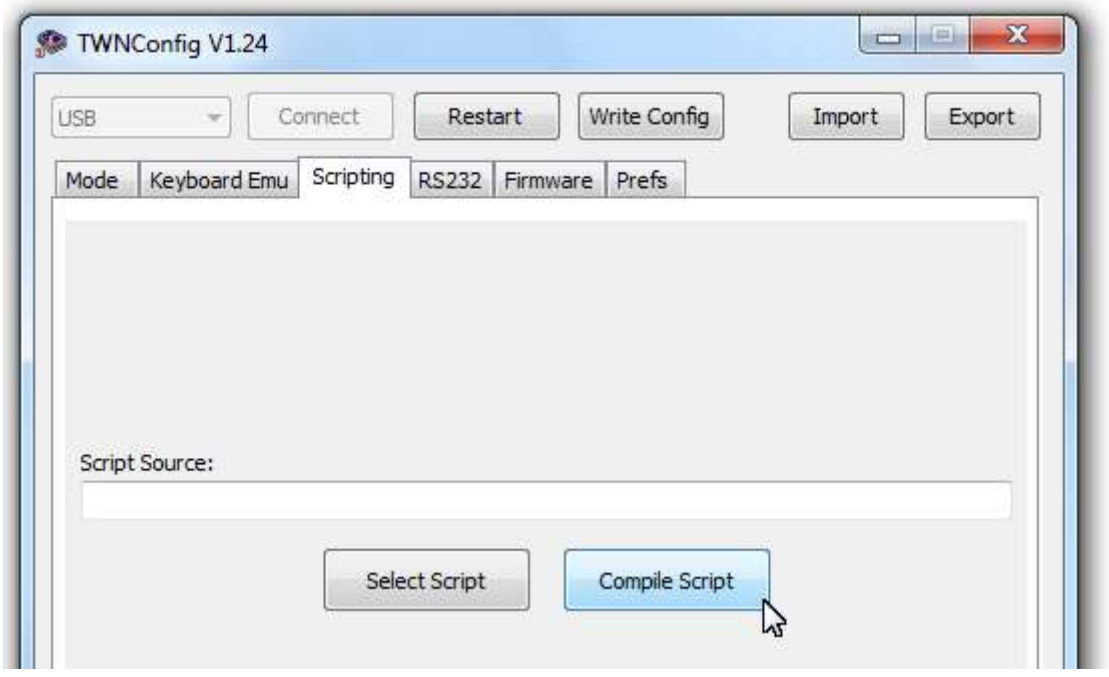
Elatec TWN Readers have scripting capabilities that allow for customization of how the card reader behaves. This includes modifying the number being returned i.e. faculty number with parity, without parity, id and faculty only etc along with different volumes for beeps, different LED light behavior. Elatec provide a default script which is suitable in most occasions, it is available in *PaperCut MF - General Elatec TWN Reader Tasks.zip* under the Scripts folder and is called "*standard.v3.twn.c*"

PaperCut provides a custom script for its Fast Release product and that is available on any PaperCut NG or PaperCut MF installation under *[app-path]\providers\hardware\elatec\twn3-script.twn.c*. This script is designed to be used with the Fast Release product as it outputs more information during startup and also modifies the behavior of the LED lights.

5.1 Installing a script

Please follow below steps to configure an Elatec TWN Reader to use a new script

1. Plug the Elatec TWN Reader into your computer
2. Confirm the driver is installed correctly.
3. Open *TWNConfig.exe* and click Connect
4. Once connected, click the Scripting tab
5. Choose your script via the "Select Script" button.
6. Once done, click Compile Script (needs to be done each time you configure the reader)
7. As always, click Write Config and then Restart.



5.2 Custom Scripts

From time-to-time, PaperCut can provide custom scripts. These are contained in *PaperCut MF - General Elatec TWN Reader Tasks.zip* under the Scripts folder.

Script filename	Date created	Primary use
Elatec TWN - standard.v3.twn		Default script provided by Elatec
Elatec TWN - papercut_hid_stamp.twn.c	16th May 2012 (20120516)	This script is designed to read the ID stamped on the face of a 26bit HID Prox card. The ID is read without parity.
Elatec TWN - raw.v3.twn.c	8th Aug 2012 (20120808)	This script is designed to read the raw information from the card. This should only be used when requested by your reseller or Authorized Solution Center.
Elatec TWN - hex.twn.c	9th Aug 2011 (20110809)	This script is designed to output a card number in Hex.
Elatec TWN - hex reversed.twn.c	9th Aug 2011 (20110809)	This script is designed to output a card number in Hex but reversed
Elatec TWN - decimal.twn.c	9th Aug 2011 (20110809)	This script is designed to output a card number in decimal.
Elatec TWN - decimal reversed.twn.c	9th Aug 2011 (20110809)	This script is designed to output a card number in

		decimal but reversed.
Elatec TWN - standard.legic.kal.v1.twn.c	30th October 2012 (20121030)	This script is designed for use in a singular case where a card has two chips, a legic and mifare. This script reads the legic chip and ignores the mifare.
Elatec TWN - standard.mifare.kal.v1.twn.c	30th October 2012 (20121030)	This script is designed for use in a singular case where a card has two chips, a legic and mifare. This script reads the mifare chip and ignores the legic.

If you require custom scripts, contact your reseller or Authorized Solution Center for help with this. You can find their contact information in your PaperCut Admin interface on the **About** page. Development costs may apply.

5.3 PaperCut card number convertors

Added in PaperCut version 12.3 (Build 17963) to help support a wider range of card reader we now include a set of built-in card number converters for common operating such as converting hexadecimal card number to decimal form. Using the converters in PaperCut at the software-level is often quicker than reprogramming hardware card readers.

The use of custom JavaScript files to further manipulate the card number is also possible.

From time-to-time, PaperCut can provide custom scripts. These are contained in *PaperCut MF - General Elatec TWN Reader Tasks.zip* under the Scripts folder.

Script filename	Date created	Primary use
PaperCut card number convertor - staggered_reverse.js	15th May 2013 (20130515)	Reverse Hex byte calues in card number. Can be used as “script.js|hex2dec” to convert byte-reversed-Hex into decimal.