Toshiba Global Commerce Solutions
POS Virtual Serial Driver

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Toshiba POS Virtual Serial Driver User's Guide

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About this guide

The guide describes how to install and configure Version 1.0 of the Toshiba POS Virtual Serial Drivers.

In Version 1.0, the driver only supports the USB MSR.

This driver runs on the following 64 bit operating systems: Windows 7, POSReady 7 and Windows 8.1, and supports both 32 bit and 64 bit application and API.

The 32 bit version of the driver runs on the following 32 bit operating systems: Windows 7 and POS Ready 7.

Who should read this guide

This guide is intended for personnel who are connecting Toshiba Point of Sale (POS) devices to legacy RS232 POS applications.

Summary of changes

April 2015

- Initial release

Chapter 1. Introduction

System Requirements

This section lists the hardware devices that the Virtual Serial Drivers supports.

Hardware Requirements

Supported POS Terminals	TCxWave

Software Requirements

The Virtual Serial Drivers requires the following software environment:

Operating System	One of the following: • POSReady 7 (32-bit and 64-bit) • Windows 7 (32-bit and 64-bit) • Windows 8.1 (64-bit)

Chapter 2. Installing the Virtual Serial Drivers

This chapter describes the Toshiba POS Virtual Serial Drivers Installation for Windows.

Installation Procedure

You have two installation options for the Virtual Serial Drivers: interactive installation and silent installation.

Interactive Installation

1. Run the VCPSetup.exe file and follow the directions on each panel.
2. In the Choose COM Ports Dialog (Figure 1), you can select the number of virtual COM Ports to be created.

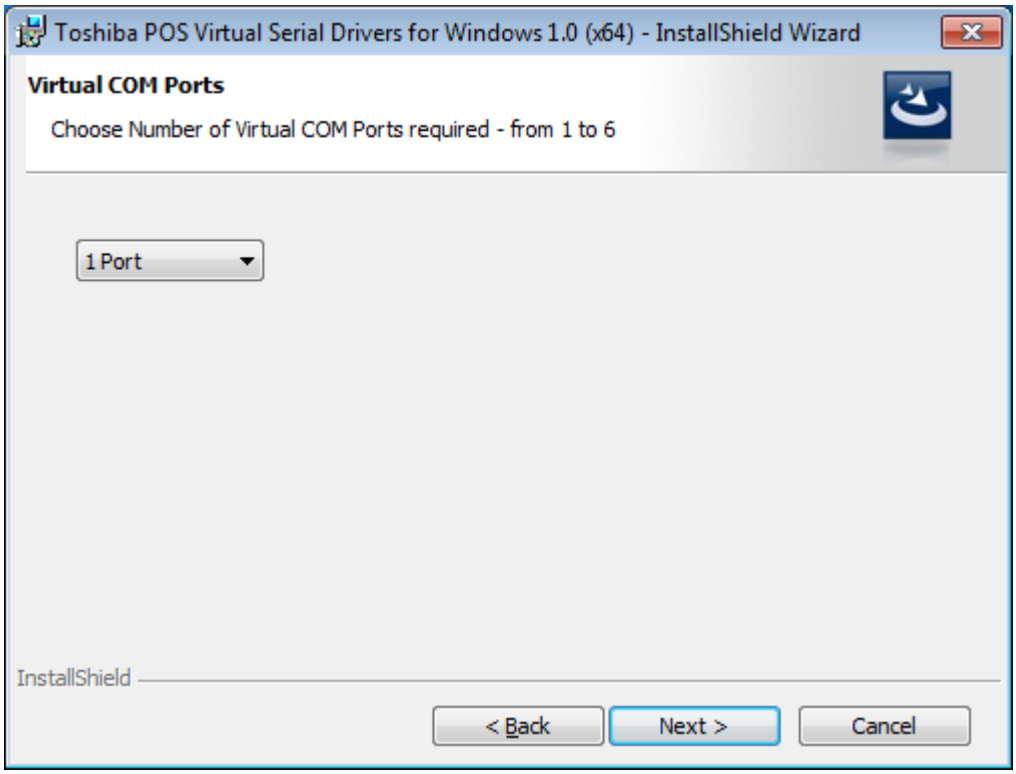

Figure 1 - Choose COM Ports Dialog

3. After the installation is complete, a Toshiba Virtual Serial Port Device is created and can be seen using Windows Device Manager.

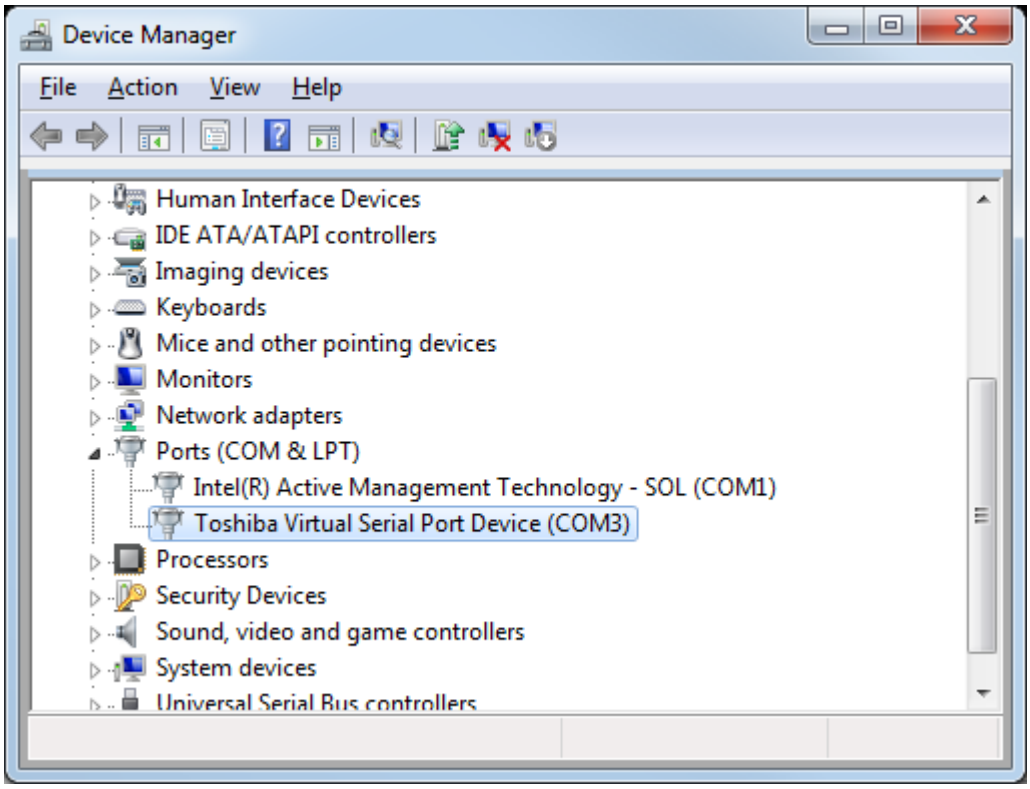

Figure 2 - Toshiba Virtual Serial Port Device

4. Restart your system for the configuration changes to take effect.
5. Configure the Virtual Serial Drivers (see Chapter 3. Configuring the Virtual Serial Drivers) before usage.

Silent Installation

To do a silent (unattended) installation, enter the following in the Windows Command Prompt:

```
setup.exe /s /v"/qn NUMBER_OF_REQ_COM_PORTS=<number_of_req_com_ports>"
```

For example, to install one Virtual COM Port the following is entered:

```
setup.exe /s /v"/qn NUMBER_OF_REQ_COM_PORTS=1"
```

The valid values for NUMBER_OF_REQ_COM_PORTS are: **1, 2, 3, 4, 5 and 6**.

Silent Uninstallation

To execute the silent uninstallation, enter the following in the Windows Command Prompt:

```
setup.exe /s /x /v/qn
```

Note: Replace setup.exe with the name of the installer

Chapter 3. Configuring the Virtual Serial Drivers

Configuration Tool

The configuration utility is found inside the “BIN” folder in the installation directory. A shortcut to the tool is also created in the Windows Start Menu. The utility has to be run with Administrator rights if the settings are to be changed.

To enable the settings, click the *Apply* button on the individual tabs where the change has been made. The Virtual Serial Drivers services will be restarted, when the tool is closed, if any of the settings have been changed and applied.

COM Port Configuration

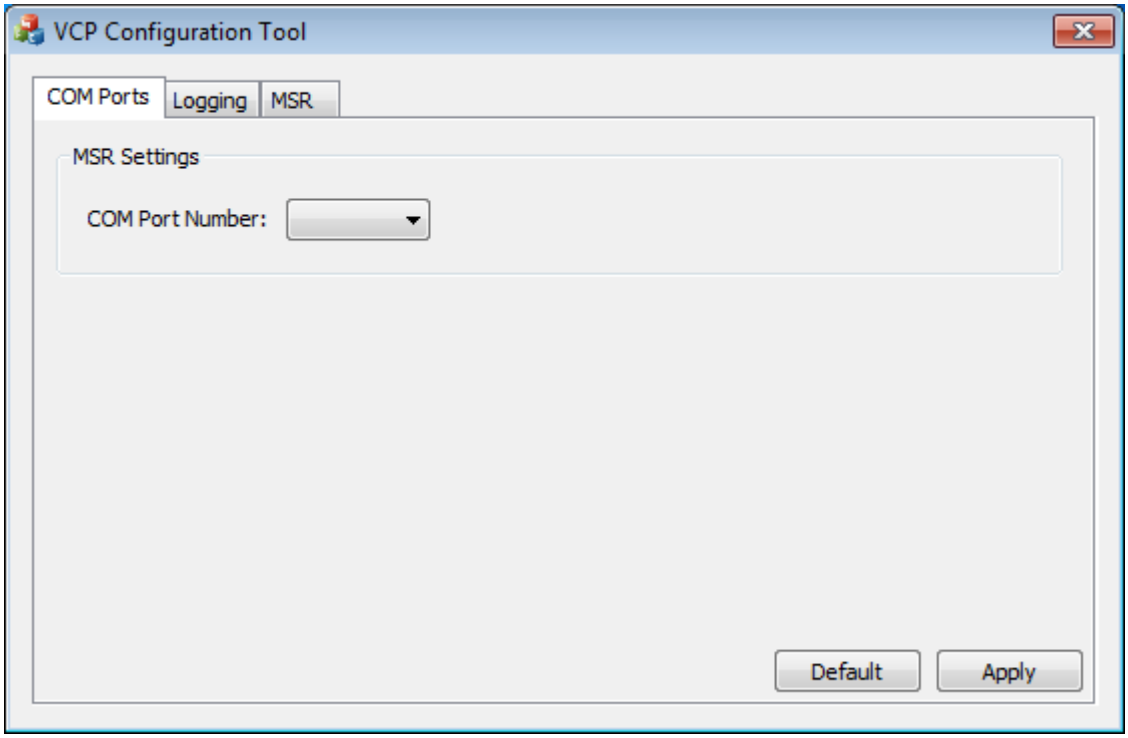

Figure 3 - COM Ports Dialog

Select the COM Port that is to be used for the device. If the COM Port Number is not selected, the device will not work. Only virtual serial ports created by the installation are available for selection.

Logging Configuration

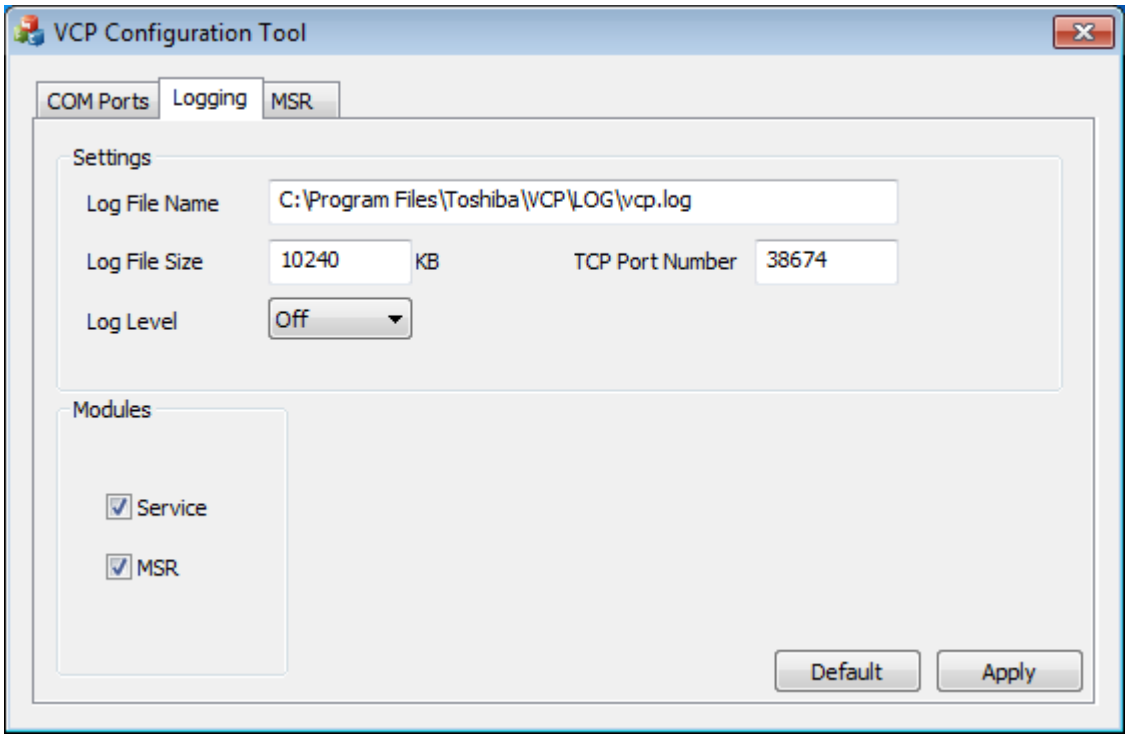

Figure 4 - Logging Dialog

The Logging Configuration affects where the log files are stored and what level of logging is supported. These are used for determining and resolving problems.

The various settings are:

- Log File Name: Full file path of the log file.
- Log File Size: Maximum log file size. Once the maximum file size is reached, a new log file will be created, and the old log file will be saved in the same directory.
- TCP Port Number: TCP Port Number that the modules uses to send the log details to the logging service.
- Log Level: Logging level. 6 levels are supported. They are “Off”, “Error”, “Warning”, “Info”, “Verbose” and “Trace”.
- Modules: The various modules that will be logged. In Version 1.0 there are two modules, Service (for the Toshiba POS Virtual Serial Driver Framework service) and MSR.

MSR Configuration

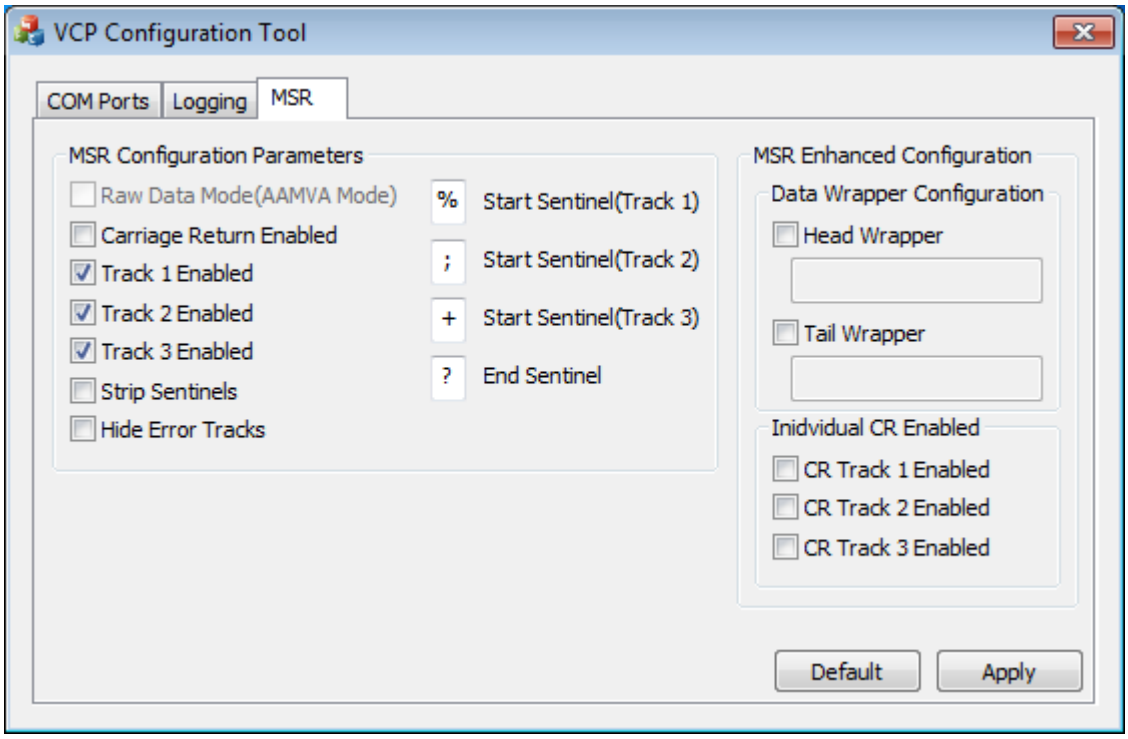

Figure 5 - MSR Dialog

The MSR Configuration provides a mechanism by which the MSR can be configured. Configuration has to be done before using the MSR.

Table 1 and Table 2 explains the MSR Configuration Options and MSR Enhanced Configuration Options respectively.

Table 1 - MSR Configuration Options

Options	Default Settings	Description
Raw Data Mode (AAMVA Mode)	Disabled	When enabled, the MSR returns raw data from each read track. No manipulation of start/stop sentinels is performed. Note: This setting is not supported by the Virtual Serial Drivers
Carriage Return Enabled	Disabled	A carriage return is appended to each track of data.
Track 1 Enabled	Enabled	Returns Track 1 (if present) from a swiped card.
Track 2 Enabled	Enabled	Returns Track 2 (if present) from a swiped card.
Track 3 Enabled	Enabled	Returns Track 3 (if present) from a swiped card.
Strip Sentinels	Disabled	Strips start and stop sentinels from data returned after a card swipe.
Hide Error Tracks	Disabled	When an error occurs while reading a track from a card, an “E” is returned for that track. Enabling this option prevents the “E” from being sent in response to an error.
Start Sentinel (Track 1)	%	Character which is pre-pended to the start of the returned Track 1 data (if present).
Start Sentinel (Track 2)	;	Character which is pre-pended to the start of the returned Track 2 data (if present).
Start Sentinel (Track 3)	+	Character which is pre-pended to the start of the returned Track 3 data (if present).
End Sentinel	?	Data which is appended to the end of each returned track of data.

Table 2 - MSR Enhanced Configuration Options

Options	Default Settings	Description
Data Wrapper	Empty	Configuring the head data wrapper or/and tail data wrapper for each data track. Able to configure supported ASCII code from 032 to 127, including non-text characters. Total data wrapper length is 14-characters for configured head, tail or both data wrapper.
Individual CR Enabled	Disabled	A carriage return is appended to each track of data, individually.

Chapter 4. MSR Data Received Format

This chapter describes the incoming data for the 3-track MSR.

Table 3 shows the default MSR data format of the track data sent to the application. The expected output can be different if the configuration parameters are modified by the Configuration Tool.

Table 3 – MSR Data Format

Mode	Data	Format
Successful Read (Serial)	SS Card Data ES	Start Sentinel (SS) character = ASCII % for track 1 Start Sentinel (SS) character = ASCII ; for track 2 Start Sentinel (SS) character = ASCII + for track 3 End Sentinel (ES) character = ASCII ? for all tracks
Unsuccessful Read (Serial)	Error	ASCII E