

Toshiba Global Commerce Solutions  
Toshiba Display Inventory Driver

**TOSHIBA**

# Toshiba Display Inventory Driver User's Guide

## Contents

Contents.....	2
About this guide.....	3
Who should read this guide? .....	3
Summary of changes.....	4
November 2021 .....	4
August 2023 .....	4
Chapter 1. Introduction .....	5
Supported Hardware.....	5
Chapter 2. Installation and Removal Instructions.....	6
Installation .....	6
Silent Installation .....	6
Silent Removal .....	6
Chapter 3. Configuring the Driver.....	7
Logging.....	7
Firmware Tools .....	9
Chapter 4. Data Provided by Display Inventory Driver .....	10
Chapter 5. Accessing the Display Information .....	12
Enumerating Instances .....	12
Trademark.....	13

## About this guide

The guide describes how to install, configure, and use the Toshiba Display Inventory Driver v1.7.

### *Who should read this guide?*

This guide is intended for personnel who will be using the TCx<sup>®</sup> Displays information provided by Display Inventory Driver (DID) on a system management environment.

## Summary of changes

### *November 2021*

This release is including software deployment support on the following POS Systems:

- TCx® 810 6201-2xx/Exx
- TCx® 810E 4828-T2x/E2X

### *August 2023*

- Added support for: Toshiba TCx® 900 4901-91x/E1x/C1x.

## Chapter 1. Introduction

The Display Inventory Driver is designed to only extract information from the supported external displays attached to the POS system using USB bus and populate it using the CIM standard.

### *Supported Hardware*

Toshiba Display Inventory Driver can be deployed in the following POS systems<sup>1</sup>:

- Toshiba SurePOS 500 4852-x7x
- Toshiba SurePOS 500 4852-x8x
  
- Toshiba TCx® Wave 6140-100
- Toshiba TCx® Wave 6140-120
- Toshiba TCx® Wave 6140-A30
- Toshiba TCx® Wave 6140-14x (where 'x' could be 'C' or '5')
- Toshiba TCx® Wave 6140-15x (where 'x' could be 'C' or '5')
  
- Toshiba TCx® 300 4810-3x0/3x1
- Toshiba TCx® 700 4900-7x6/7x7
- Toshiba TCx® 800 6200-1xx
- Toshiba TCx® 810 6201-2xx/Exx
- Toshiba TCx® 810E 4828-T2x/E2x
- Toshiba TCx® 900 4901-91x/E1x/C1x

It will be capable of provide information of the following external display models<sup>2,3</sup>:

- SurePoint 4820-21x/51x
- SurePoint 4820-2Lx/5Lx
- TCx® Display 6149-5SR/5SD/5NR
- TCx® Display 6149-5CR/5CD
- TCx® Display 6149-Bxx/Wxx

Older monitors do not have the functionality to provide systems management information.

---

<sup>1</sup> The Display Inventory driver will retrieve information only from external supported displays, and it will not work on built-in displays.

<sup>2</sup> All monitors should be connected to USB 12v port and to any of the supported video ports (VGA, DP and USB-C) before use The Display Inventory driver.

<sup>3</sup> Each time you connect any of the supported displays, restart the [Display Inventory service](#).

## Chapter 2. Installation and Removal Instructions.

This chapter describes the process to deploy the Toshiba Display Inventory Driver in the system.

### *Installation*

For normal installation (User Interface) just double click on the `setup.exe` and follow the setup instructions.

### **Silent Installation**

To do a silent (unattended) installation, open Window Command Prompt as Administrator and enter the following:

```
setup.exe -q
```

Note: For silent installation an automatic reboot is programmed to be done after the process finishes, to avoid this, please type the following command in the command prompt:

```
setup.exe -q -norestart
```

### **Silent Removal**

To execute the silent-uninstall, open Windows Command Prompt as Administrator and enter the following:

```
setup.exe -q -uninstall
```

Note: To run the silent install/uninstall, you must be in the directory where the `setup.exe` is located at.

## Chapter 3. Configuring the Driver

The Toshiba Display Inventory Driver includes configuration files for its operation, please refer to this section to know about this configuration.

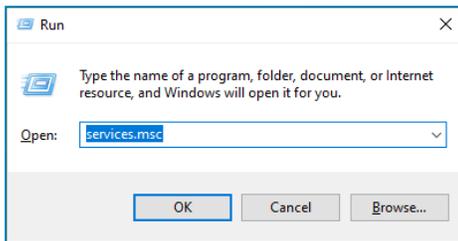
### Logging

The driver logs abnormal conditions to `<install_dir>\Toshiba\DSPDRV\LOGGER\dspdrv.log`. For normal production usage there is no need to change this behaviour. In fact, it is not recommended.

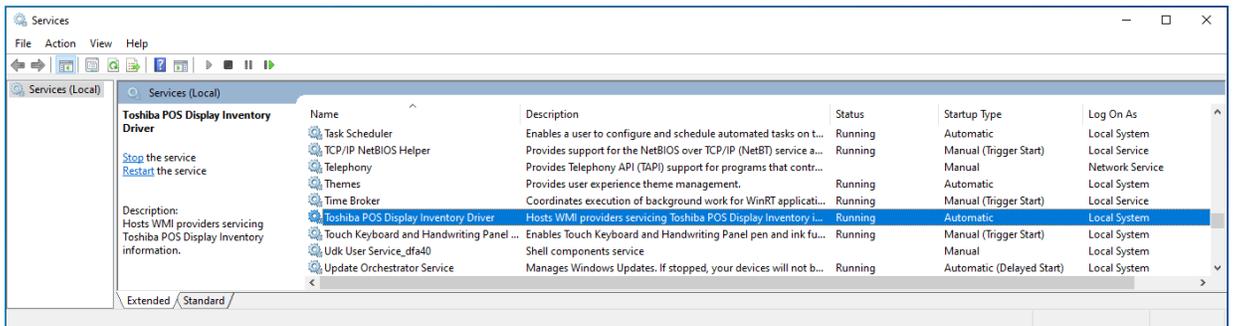
However, if any problem arises, additional information might be required logging for support purposes.

To enable detailed logging:

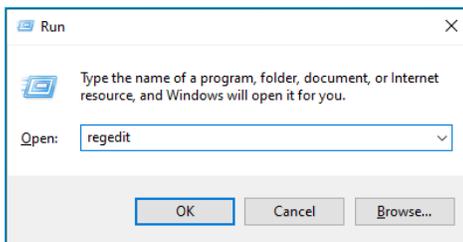
1. Open `services.msc` by pressing “Windows Key + R”



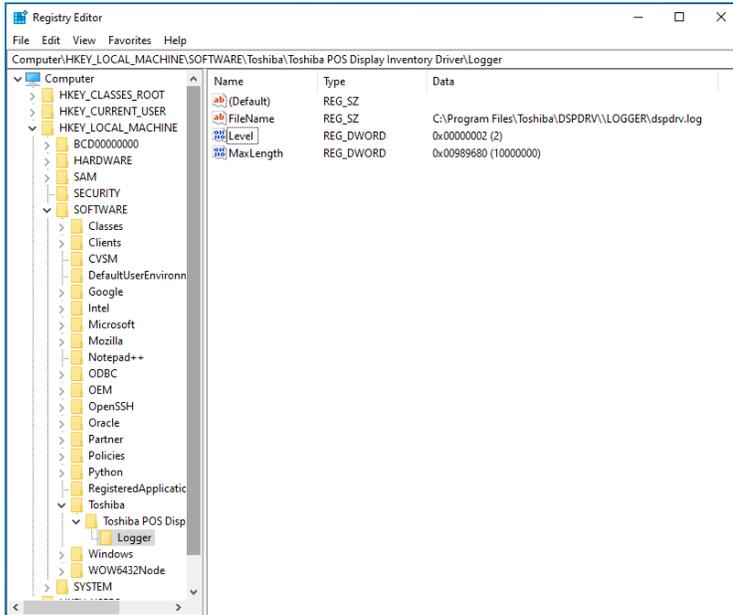
2. Stop `DSPDRVWsv` service in Windows application `services.msc`.



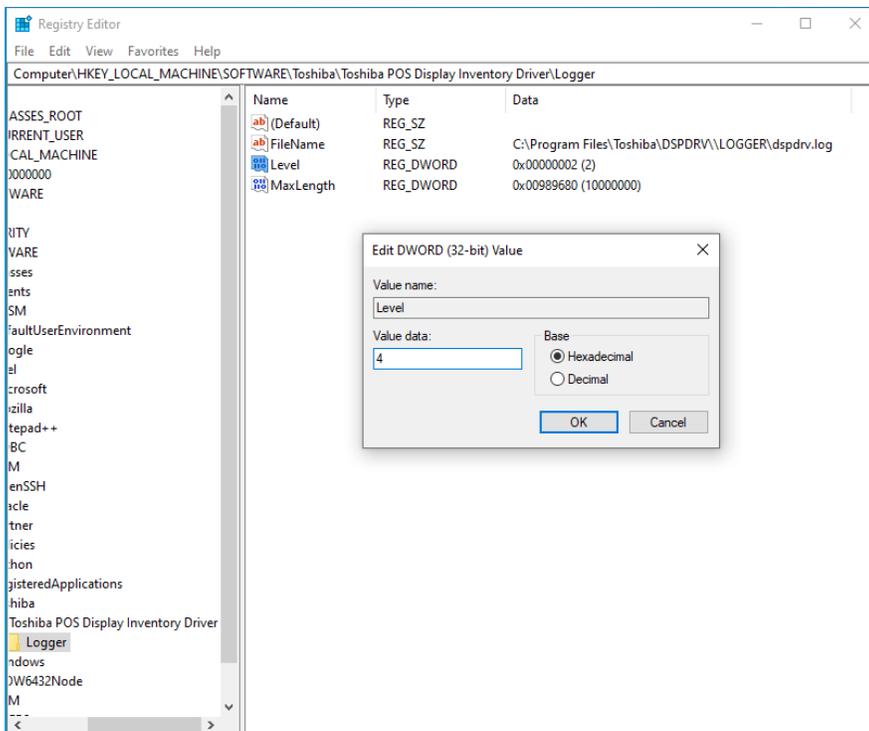
3. Open the Windows `regedit` application:



4. Navigate to 'HKEY\_LOCAL\_MACHINE\SOFTWARE\Toshiba\Toshiba POS Display Inventory Driver\Logger':



Under Logger, change the registry 'Level' to 3 or 4 for a detailed trace logging by double-clicking on it.



Log Levels:

- 0 - Off
- 1 - Error
- 2 - Information (production default)
- 3 - Debug
- 4 - Trace

It may also be required to increase the log file size by adjusting the '**MaxLength**' value if logging for an extended period.

*MaxLength=10000000* (production default)

Notes:

- Digits should not be separated.
- When reaches to MaxLength no more logging is recorded.

5. After you set up the log configuration, restart the '**DSPDRVWsvc**' service.

### *Firmware Tools*

There is a configuration file <install\_dir>\Toshiba\DSPDRV\BIN\dspdrv.ini which contains the names of firmware update utilities named:

- **EloDownload.exe,**
- **4820MonUtil.exe,**
- **aipflash.exe,**
- **dspenum.exe,**
- **MON\_COM.exe**

The purpose of this list is to inhibit the Monitor Inventory driver from accessing the monitor while any one of these programs is running a video or touch firmware update. The values should not need changing.

## Chapter 4. Data Provided by Display Inventory Driver

Property	Description
BUS	Shows the bus of how the display is connected to the POSS default must be "USB"
<b>Device Category</b>	Shows the device category
<b>Firmware Revision</b>	Shows firmware version
<b>Manufacturer Date</b>	When the display was built
<b>Manufacturer Name</b>	Who built the display
<b>Mechanical Revision</b>	Mechanical revision
<b>Physical Device Name</b>	Device Model Name
<b>Model name</b>	Device model
<b>Serial Number</b>	Device serial number
<b>Horizontal Screen Size</b>	Display horizontal screen size (mm)
<b>Vertical Screen Size</b>	Display vertical screen size (mm)
<b>Horizontal Resolution</b>	Horizontal resolution px
<b>Vertical Resolution</b>	vertical resolution px
<b>Refresh Rate</b>	Display Frequency
<b>Supported Resolution and Refresh Rate</b>	It describes the supported resolution and refresh rates supported by the monitor
<b>Preferred Resolution and Refresh Rate</b>	It is the preferred resolution and refresh rate in which the monitor will perform at its best
<b>Display Technology</b>	Indicates the technology the display is built with: 0 – Unknown 1 – Other 2 - Passive LCD Matrix 3 – Active LCD Matrix 4 – Cholesteric LCD 5 – Field Emission 6 – Electro Luminescent 7 – GAS Plasma 8 - LED
<b>Scan Mode</b>	The mode of scan for the Display 0 – Unknown 1 – Other 2 – Single 3 – Dual

<b>Supports Color</b>	This is a Boolean value to identify if the display supports color or not.
<b>Supported Video Sources</b>	The Different Supported Video Sources the Display can support
<b>Current Video Source</b>	The current video source in which the Display is connected to the POS system
<b>Light Source Type</b>	This will indicate the light source type of the display 0 – Unknown 1 – Other 2 – LED 3 – Cold Cathode
<b>Light Source Illumination Type</b>	The type of illumination the monitor has built in.
<b>Light Source Count</b>	The number of light sources the display has
<b>Recommended Brightness Level</b>	The recommended brightness level to set the monitor to properly work
<b>Current Brightness level</b>	The current Brightness level the display has
<b>Backlight state</b>	Whether if the backlight is on or off, 1 for On and 0 for Off
<b>Hours Powered Count</b>	The time in hours that the display has been powered on
<b>Current Backlight POH</b>	The time in hours that the backlight has been powered on
<b>Power Management Modes</b>	The Power management modes the display supports

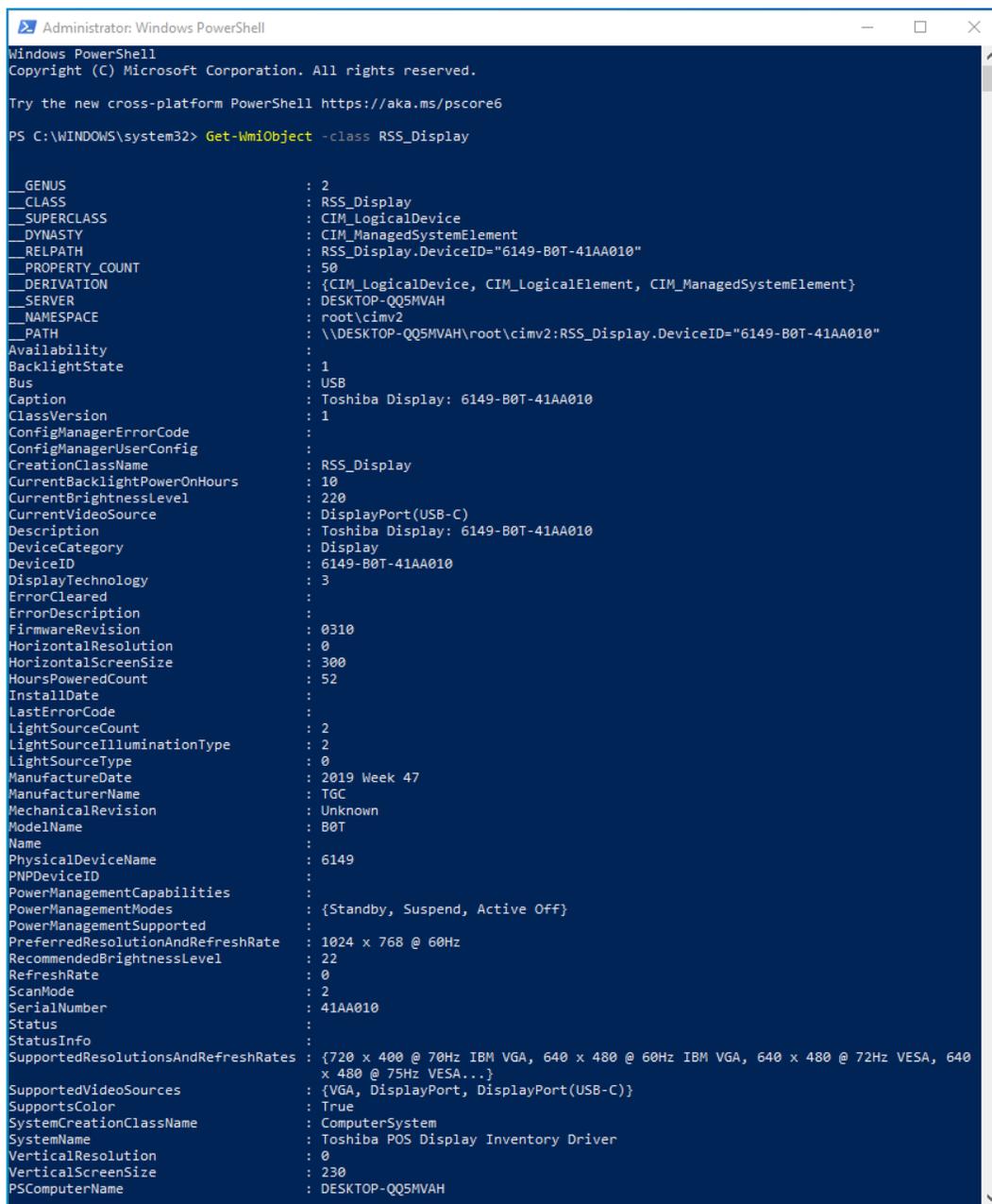
## Chapter 5. Accessing the Display Information

In this section we discuss how to retrieve information and how to interact with what the Display Inventory Driver provides.

### *Enumerating Instances*

To querying the WMI (Windows Management Instrumentation) class “RSS\_Display” and get information from the supported displays you can use `Get-WmiObject` command in *PowerShell (as Administrator)*, to do so, please run the next command:

```
> Get-WmiObject -class RSS_Display
```



```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\WINDOWS\system32> Get-WmiObject -class RSS_Display

    __GENUS                : 2
    __CLASS                 : RSS_Display
    __SUPERCLASS            : CIM_LogicalDevice
    __DYNASTY               : CIM_ManagedSystemElement
    __RELPATH               : RSS_Display.DeviceID="6149-B0T-41AA010"
    __PROPERTY_COUNT       : 50
    __DERIVATION            : {CIM_LogicalDevice, CIM_LogicalElement, CIM_ManagedSystemElement}
    __SERVER               : DESKTOP-QQ5MVAH
    __NAMESPACE            : root\cimv2
    __PATH                 : \\DESKTOP-QQ5MVAH\root\cimv2:RSS_Display.DeviceID="6149-B0T-41AA010"
    Availability            :
    BacklightState         : 1
    Bus                    : USB
    Caption                : Toshiba Display: 6149-B0T-41AA010
    ClassVersion           : 1
    ConfigManagerErrorCode :
    ConfigManagerUserConfig :
    CreationClassName      : RSS_Display
    CurrentBacklightPowerOnHours : 10
    CurrentBrightnessLevel : 220
    CurrentVideoSource     : DisplayPort(USB-C)
    Description            : Toshiba Display: 6149-B0T-41AA010
    DeviceCategory         : Display
    DeviceID               : 6149-B0T-41AA010
    DisplayTechnology      : 3
    ErrorCleared           :
    ErrorDescription       :
    FirmwareRevision       : 0310
    HorizontalResolution   : 0
    HorizontalScreenSize   : 300
    HoursPoweredCount     : 52
    InstallDate            :
    LastErrorCode          :
    LightSourceCount       : 2
    LightSourceIlluminationType : 2
    LightSourceType        : 0
    ManufactureDate        : 2019 Week 47
    ManufacturerName       : TGC
    MechanicalRevision     : Unknown
    ModelName              : B0T
    Name                   :
    PhysicalDeviceName     : 6149
    PNPDeviceID            :
    PowerManagementCapabilities :
    PowerManagementModes   : {Standby, Suspend, Active Off}
    PowerManagementSupported :
    PreferredResolutionAndRefreshRate : 1024 x 768 @ 60Hz
    RecommendedBrightnessLevel : 22
    RefreshRate            : 0
    ScanMode               : 2
    SerialNumber           : 41AA010
    Status                 :
    StatusInfo             :
    SupportedResolutionsAndRefreshRates : {720 x 400 @ 70Hz IBM VGA, 640 x 480 @ 60Hz IBM VGA, 640 x 480 @ 72Hz VESA, 640
    x 480 @ 75Hz VESA...}
    SupportedVideoSources  : {VGA, DisplayPort, DisplayPort(USB-C)}
    SupportsColor          : True
    SystemCreationClassName : ComputerSystem
    SystemName             : Toshiba POS Display Inventory Driver
    VerticalResolution     : 0
    VerticalScreenSize     : 230
    PSComputerName         : DESKTOP-QQ5MVAH
```

## Trademark

The following are trademarks or registered trademarks of Toshiba, Inc. in the United States, or other countries, or both:

Toshiba  
The Toshiba logo

The following are trademarks of Toshiba Global Commerce Solutions in the United States, or other countries, or both:

AnyPlace  
SureMark  
SurePoint  
SurePos  
TCx® Wave  
TCx® Printer

Other company, product, or service names may be trademarks or service marks of others.