

PCDMonitor Users Guide

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PCDMonitor Users Guide

Introduction

The PCDMonitor program is a small utility that captures some of the event signals generated generated by PC-DMIS and then will broadcast this information to other software.

The program PCDMonitorRemote is an example of a program that can display the broadcasted data. The PCDMonitorRemote program appears identical to the PCDMonitor program except it is designed to only display the existing captured data.

The PCDMonitorRemote program can be run on GNU/Linux, OS X, Windows, and suitable Android devices. The program PCDMonitor is only suitable for Windows since PC-DMIS only works on this operating system.

The PCDMonitor and PCDMonitorRemote programs communicate through an Ethernet connection. In order for this to function both ends must be reachable through an TCP/IP connection.

PCDMonitor Overview

The PCDMonitor program captures the event data from PC-DMIS during normal use of the software. For example, when a part program is opened or closed an event message is sent from PC-DMIS when this happens. When a program is running each executed command generates a separate event. There are events generated by PC-DMIS for a variety of actions including button presses on the execution dialog. For the purpose of this utility only the program and command execution events are monitored.

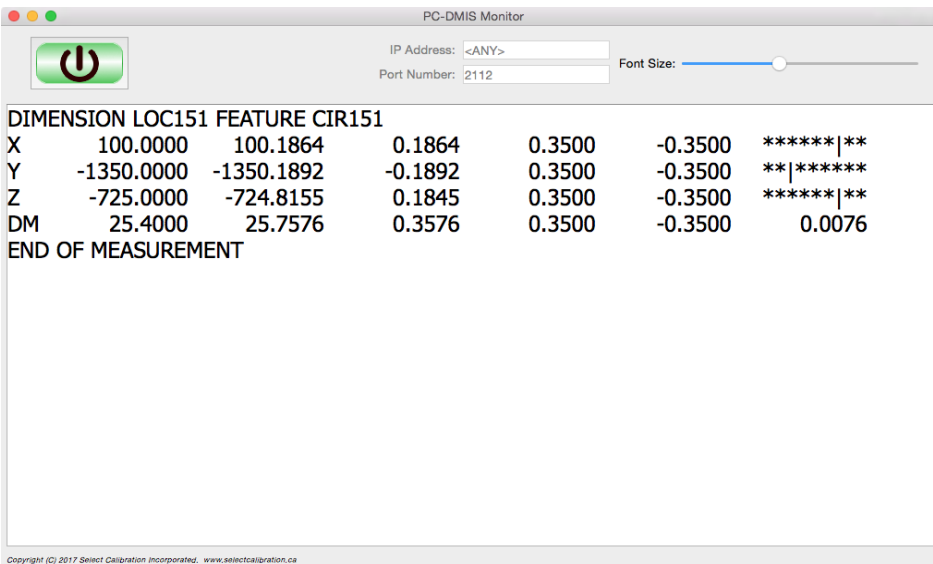




Illustration 1: The PCDMonitor program showing an executed location dimension command.

The configuration options are automatically determined for the majority of the program. The only configurable options are shown in the upper toolbar section of the PCDMonitor program.

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Option	Description
	Power button. Pressing this button will start or stop the monitoring of events from PC-DMIS. The background color indicates the state where grey is idle, green is running, and red indicates an error has occurred.
IP Address: <input type="text" value="<ANY>"/> Port Number: <input type="text" value="2112"/>	Ethernet connection. This program does not require an Ethernet connection to capture events but will forward all events to any connected remote devices. The PCDMonitor program will watch the indicated port number for new connections.
Font Size: 	Font Size. All data displayed by the program can have the font size adjusted using this slider. The allowed range should be suitable for pretty much any situation.

Display Information

The data that is of interest is from all dimensions and feature measurement events. All measured features will be displayed as they are measured regardless if they are dimensioned or not. For point and plane features the measurement profile value (T value in PC-DMIS) is automatically calculated and displayed.

PCDMonitorRemote Overview

The PCDMonitorRemote program displays the event data captured by the PCDMonitor program. This utility can be run on any computer or device that has a reachable Ethernet connection to the computer running the PCDMonitor program.

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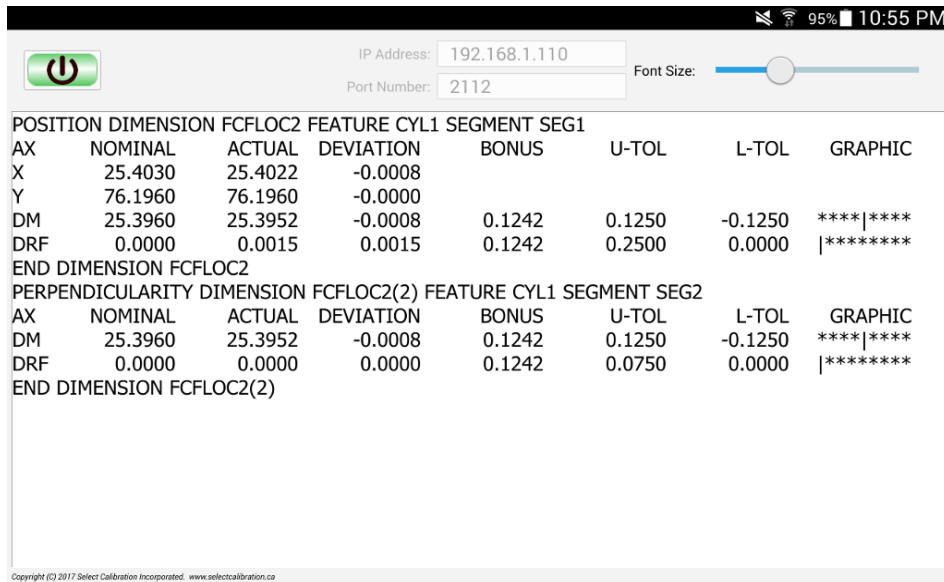




Illustration 2: PCDMonitorRemote program running on an Galaxy Tab4 with an Android operating system.

The appearance of this program is identical to the PCDMonitor but the function is very different. The options for the PCDMonitorRemote program are as follows:

Option	Description
	<p>Power button. Pressing this button will attempt to connect to the running PCDMonitor program. The background colour indicates the state where grey is idle, green is running, and red indicates an error has occurred.</p>
<p>IP Address: <input type="text" value="192.168.1.110"/></p> <p>Port Number: <input type="text" value="2112"/></p>	<p>Ethernet connection. The IP address and port number for the computer running the PCDMonitor program.</p>
<p>Font Size: </p>	<p>Font Size. All data displayed by the program can have the font size adjusted using this slider. The allowed range should be suitable for pretty much any situation.</p>

In addition to these controls the Android *Menu Key* will show or hide this toolbar. The settings toolbar is always visible unless hidden by pressing the menu key.

The Android menu key is to the left of the home button. On OS X the command key performs the equivalent function.

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Android APK Installation

The Android version of the PCDMonitorRemote program has been signed (self signed by SCI) and can be loaded without using the Google Play Store or other remote application utility. To install this program it is necessary to place the installation APK file on the device and click on it to install.

PCDMonitor Troubleshooting

There are a few situations that may be encountered when running the PCDMonitor program:

Error *PC-DMIS is not running*

In order to access the events PC-DMIS must be running first. This is necessary so that the proper version can be identified and used.

Error *CoCreateInstance: Status 0x800702e4*

If PC-DMIS is running with administrative privileges then PCDMonitor must also run with the same elevated permissions. If the privileges are mismatched then this error is reported. The complete description of this error from Windows is *The Requested Operation Requires Elevation*.

Error *CoCreateInstance: Status 0x80080005*

If PC-DMIS is running with user privileges then it may not be accessible by other users depending on the security policy. This error will take up to 120 seconds to be returned to the program.

An example of a server error as reported on Windows 7 x64 event logs:

Event Log:

```
Unable to start a DCOM Server: {ECA6CD05-7A02-480D-9B75-E6C5680B215D}. The error:
"740"
Happened while starting this command:
C:\Program Files (x86)\WAI\PC-DMIS 2012 MR1\PCDLRN.exe -Embedding
```

There are two solutions to this:

1. Run both PC-DMIS and PCDMonitor with administrator privileges.
2. Change the DCOM permissions of the PC-DMIS Automation Server to allow users to access the software. This is set through the *Windows Component Services* section of the control panel. Essentially this software is configured to not allow other users to access it.

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Revision History

<i>Date</i>	<i>Version</i>	<i>Changes</i>
Jan 6, 2017	1.0	New Program