

## System Port Connectivity Issues with some Windows 10 (or later) Personal Computers

*The AcraDyne® Generation IV ACE Platform Controllers utilize a commonly used device known as an RNDIS/Ethernet Gadget as a means to connect a PC to the controller. This device in essence allows a USB port to connect to a device in a similar manner as an Ethernet Port.*

*Since the advent of the WINDOWS 10 Operating system, there have been updates and configurations outside the control of AcraDyne (and many other peripheral device makers) which has caused this connectivity to lose functionality.*

*The AcraDyne® engineering team has found a means to restore this functionality should a user currently find themselves unable to connect.*

**Symptom:** When cable connection between PC **USB Port** and Controller **SYSTEM PORT** is made, Device Manager will assign the connection as a **COM Port** versus a **USB Ethernet/RNDIS Gadget** as it should.

**Solution:** The solution outlined below is in 2 steps. The first step in the process forces the computer to stop assigning the connection on its own. The 2<sup>nd</sup> step in the process installs the device driver to the connection. Once these steps have been completed, they will no longer be needed unless a future Windows update makes changes we have no ability to predict

### 1<sup>st</sup> Half of Process

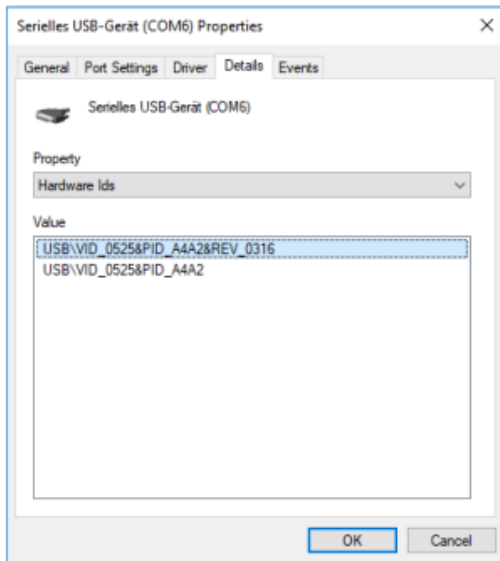
- Right click on **Windows icon**  (lower left corner on most desktops)
- Click on **Device Manager**




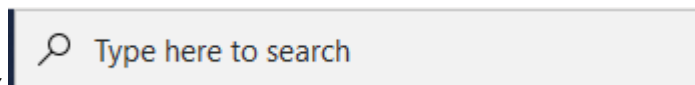
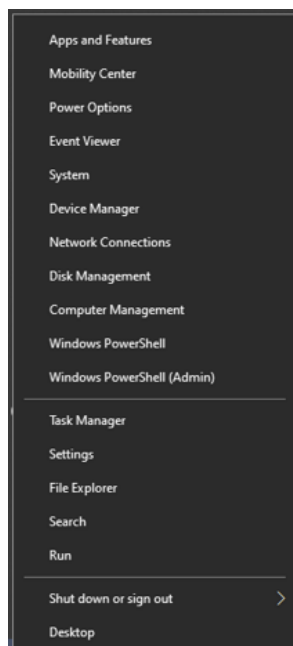
- **Find device** current assigned as a COM port. Typically, it will appear under Ports (COM & LPT and look something like



- **Confirm device** is the correct one by disconnecting the cable. The COM port identified device will disappear from the list when cable is removed. Upon re-installation of the cable, the COM port will reappear on the list. This confirms that it is the correct one to work with
- Right Click on the Device (identified as a COM port as above) and select **PROPERTIES**



- Select the **DETAILS** tab and in the **Property** drop down, select **Hardware Ids**
- The **Value** window will appear and contain one or more values.
- Copy **ONE** of the values shown to your clipboard (**right click, COPY**)
- Now, run Local Group Policy Editor by:
- Right click on **Windows icon**  (lower left corner on most desktops)
  - Click on **Search**



- Type into **Search** box
  - **Gpedit.msc** and hit **Enter**
  - If Gpedit.msc is reachable (Windows 10) skip to page 6. Otherwise continue as follows

- In the event you are using **Windows 11** or **Windows 11 Home** version, you may not be able to find **Gpedit.msc**. In this case additional steps are necessary to reach that programming.

- **Windows 11 / Windows 11 Home**

- Copy the code below (exactly) and paste it in Notepad. Save the file with the .BAT extension like **Script.BAT** or **GPEDIT.BAT**, the name doesn't matter.

```
@echo off
```

```
pushd "%~dp0"
```

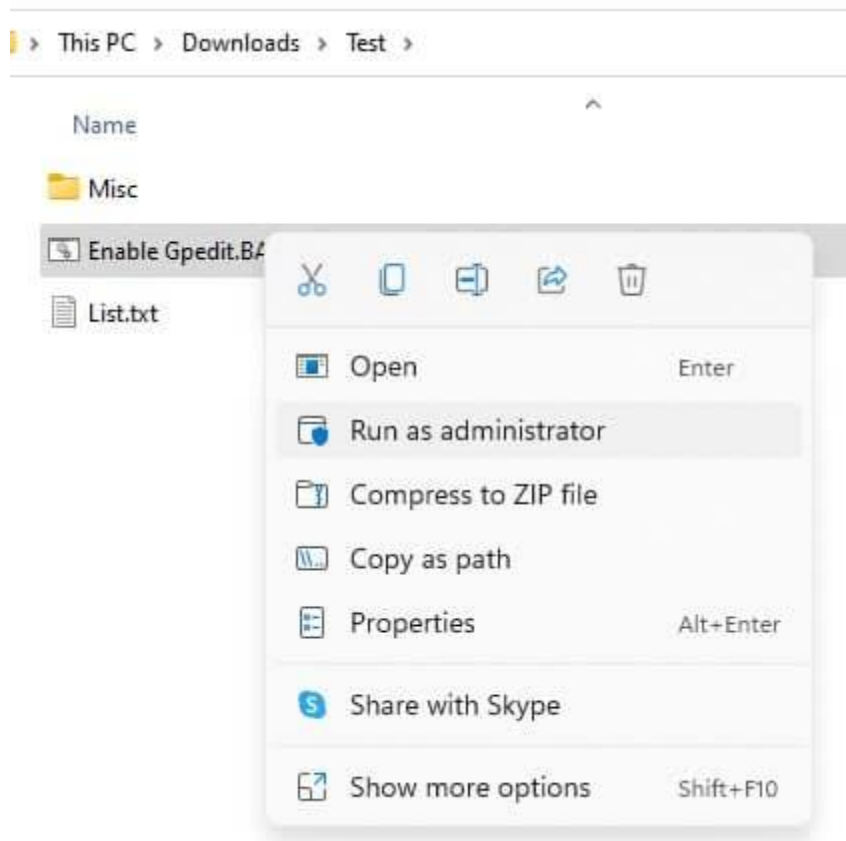
```
dir /b %SystemRoot%\servicing\Packages\Microsoft-Windows-GroupPolicy-ClientExtensions-Package~3*.mum >List.txt
```

```
dir /b %SystemRoot%\servicing\Packages\Microsoft-Windows-GroupPolicy-ClientTools-Package~3*.mum >>List.txt
```

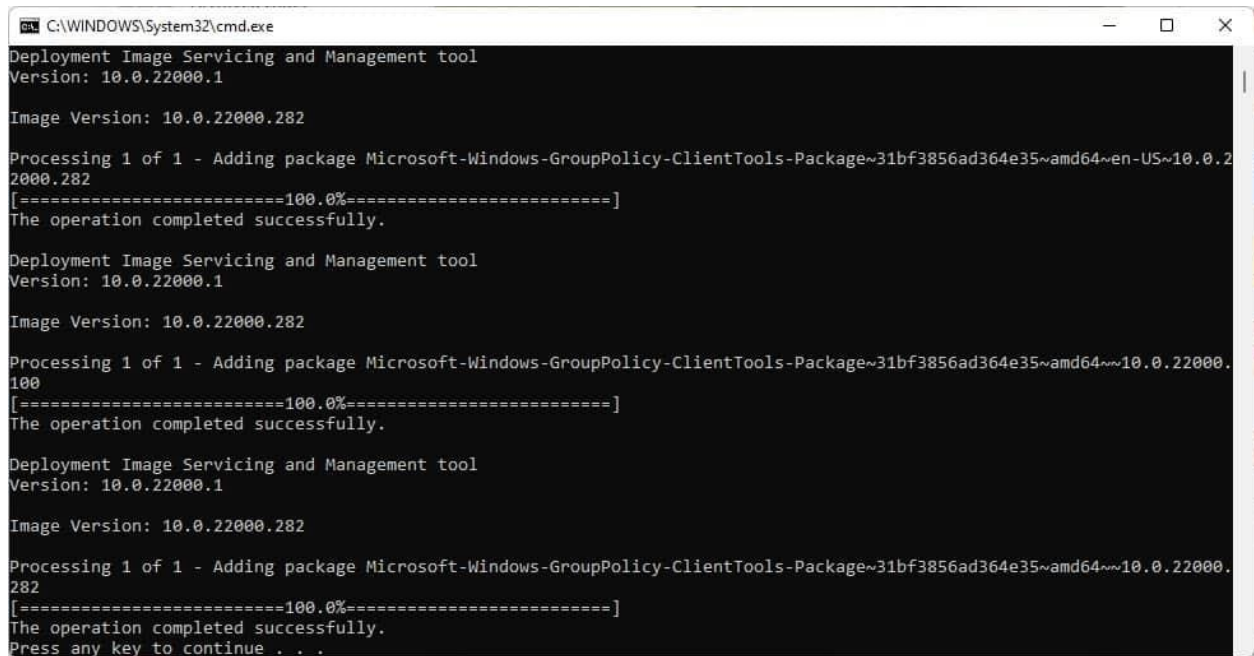
```
for /f %%i in ('findstr /i . List.txt 2^>nul') do dism /online /norestart /add-package:"%SystemRoot%\servicing\Packages\%%i"
```

```
pause
```

- Right-click on the BAT file that was saved and Run it as Administrator.



- A command-prompt window should open. This is the DISM command, which installs the relevant packages to enable GPEDIT on your computer. Wait for the process to be completed, it may take a few seconds. You'll know when it's done, when you see a message that says "Press any key to continue".



```
C:\WINDOWS\System32\cmd.exe
Deployment Image Servicing and Management tool
Version: 10.0.22000.1

Image Version: 10.0.22000.282

Processing 1 of 1 - Adding package Microsoft-Windows-GroupPolicy-ClientTools-Package~31bf3856ad364e35~amd64~en-US~10.0.22000.282
[=====100.0%=====]
The operation completed successfully.

Deployment Image Servicing and Management tool
Version: 10.0.22000.1

Image Version: 10.0.22000.282

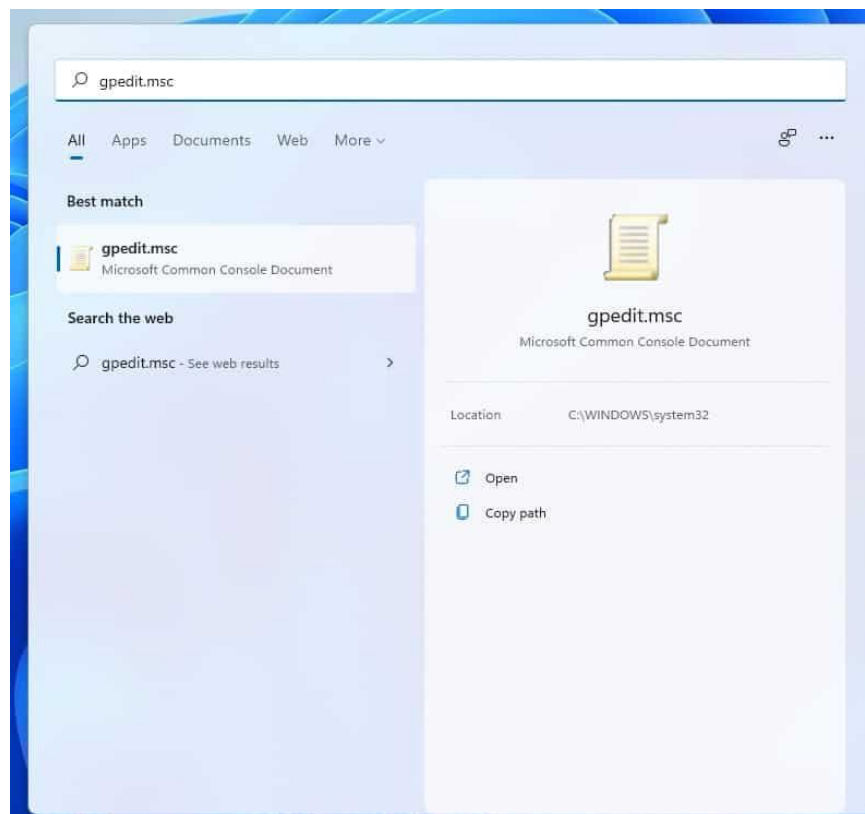
Processing 1 of 1 - Adding package Microsoft-Windows-GroupPolicy-ClientTools-Package~31bf3856ad364e35~amd64~10.0.22000.100
[=====100.0%=====]
The operation completed successfully.

Deployment Image Servicing and Management tool
Version: 10.0.22000.1

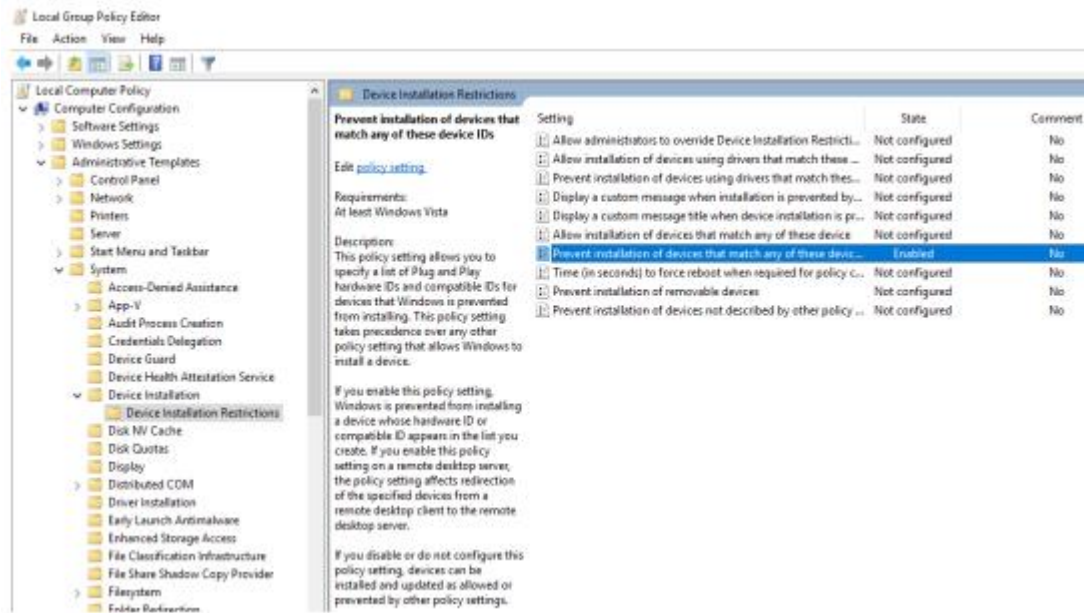
Image Version: 10.0.22000.282

Processing 1 of 1 - Adding package Microsoft-Windows-GroupPolicy-ClientTools-Package~31bf3856ad364e35~amd64~10.0.22000.282
[=====100.0%=====]
The operation completed successfully.
Press any key to continue . . .
```

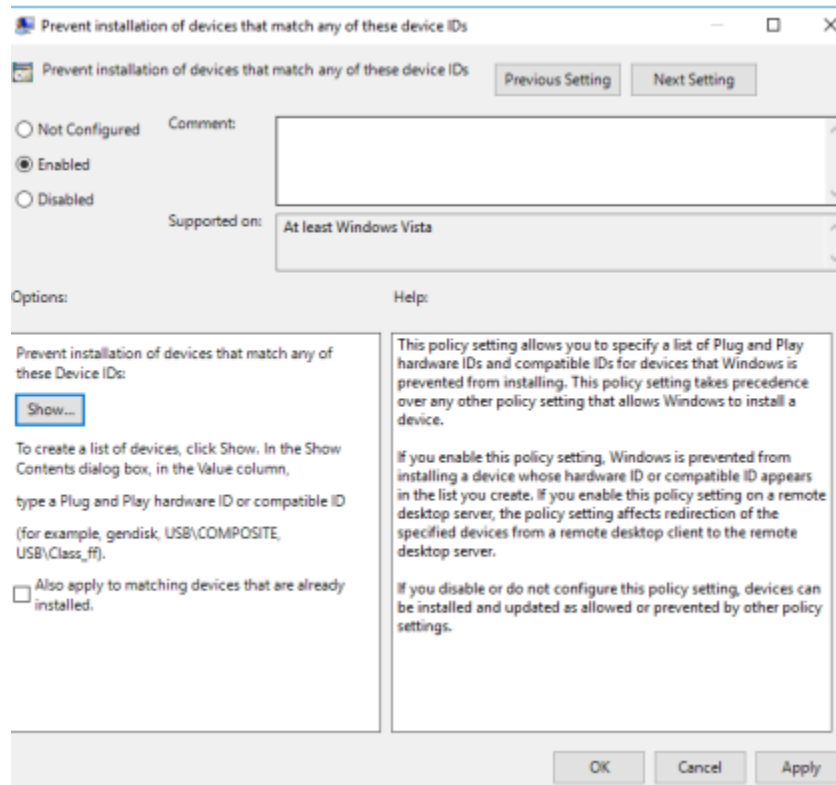
- Tap any key and the command window should close.
- Click the Start button and type Gpedit.msc, and you should see the tool appear in the result click on it (or use the Run command with Win + R, followed by Gpedit.msc), and you will be able to access the Group Policy Editor. (In some cases you need to restart your computer so you can find Gpedit.msc)



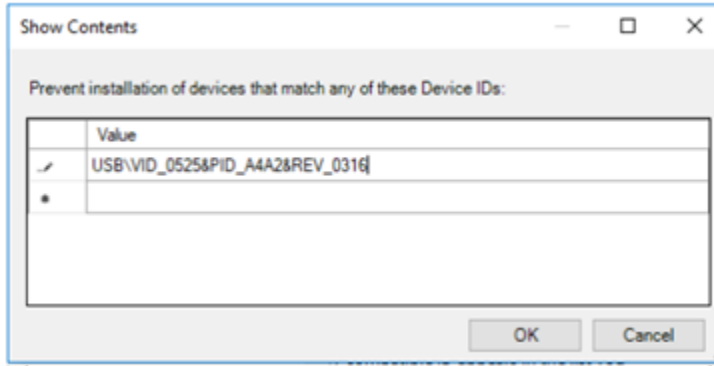
- With Gpedit.msc working in either Windows 10, Windows 11 or Windows 11 Home, you can move forward with these steps:



- Navigate through the menu tree
  - Computer Configuration
    - Administrative Templates
      - System
        - Device Installation
          - Device Installation Restrictions
- Double click on **Prevent installation of devices that match any of these device IDs**
- On left side of the screen, click on **Enabled**
- Lower down the screen on left side, click on **Show**

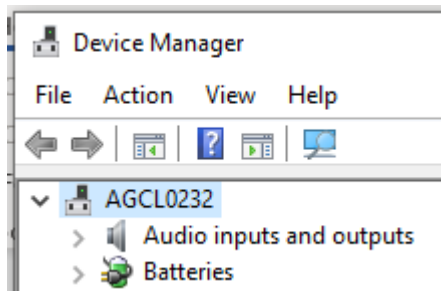


- In **Show Contents** box that appears, click on a blank line and **right click, paste** to place previously copied device ID to this window. This is what tells the PC that when it sees this device do NOT assign as a COM port



## 2<sup>nd</sup> Half of Process

- Download driver for RNDIS Ethernet Gadget. Navigate to <https://www.aimco-global.com/software> and click on **GEN IV System Port Connectivity – Windows 10 RNDIS Driver**
- The driver will automatically download a Zip file to your PC's Download folder. Copy and name the folder **RNDIS Driver** and place into Documents. Unzip folder to Documents so it has a home on the PC that can be found easily
- Return to **Device Manager** (still open from Step 1). **Right Click** on the device the PC assigned as a **COM port** in the beginning.
- Select **Uninstall Device** and the **COM port** assigned device will be removed
- At the top of the Device Manager screen, click on the **Monitor Icon** which will scan for Hardware Changes



- The device will now appear depending on your PC configuration as an **RNDIS Ethernet Gadget** or a **COM port**.
- Right click on the Device that appeared and select **Update Driver**
- Click on **Browse my computer for driver software**
- Click on **Let me pick from a list of available drivers on my computer** and **Have Disk**
- Select **driver from folder placed in PC Documents**
- **Install driver**
- In Device Manager the device should now appear as **USB Ethernet/RNDIS Gadget** and connectivity will be functional.