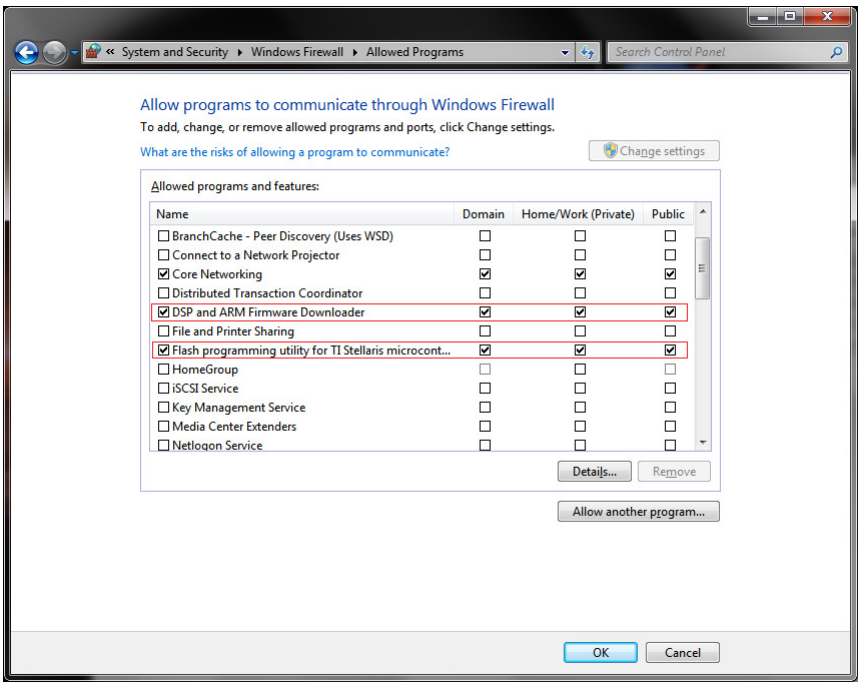
ARM Firmware Download Procedure

Combined Firmware Downloader 1.1.0+

After Installing / Before Running the Program

Confirm that the tool has the proper Firewall access by checking its permissions (Control Panel → System and Security → Windows Firewall → Allowed Programs)*



*shortcut location and dialog may change depending on the operating system. Above shown is for Windows 7).

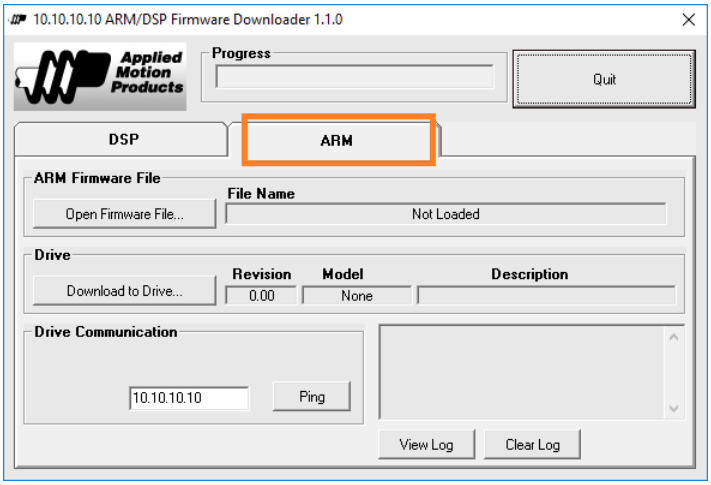
Verify that both “DSP and ARM Firmware Downloader” AND “Flash programming utility for TI Stellaris microcontrollers” are allowed full access across the Domain, Private and Public networks as well as checked on the left to enable the policy. If the program/s do not exist in the list, proceed to the next step as Windows SHOULD prompt for the settings as the programs get executed.

Run the Combined Firmware Downloader program

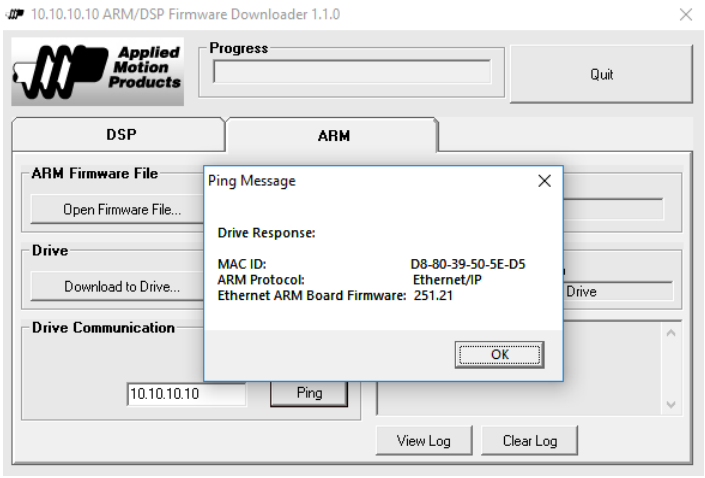
Locate the program (Start→All Programs→Applied Motion Products→Combined Firmware Downloader) and run it. A dialog box like the one below may appear when the program launches for the first time. ***It is critical for all three boxes to be checked in order for the tool to work correctly. If all three boxes are not checked on both screens, the download may fail, and the unit may become inoperable. Confirm by clicking the "Allow access" button.***

Preparing the Tool and Drive

The Ethernet firmware is located on an ARM processor inside the unit, so the ARM firmware tab should be used to download the firmware:

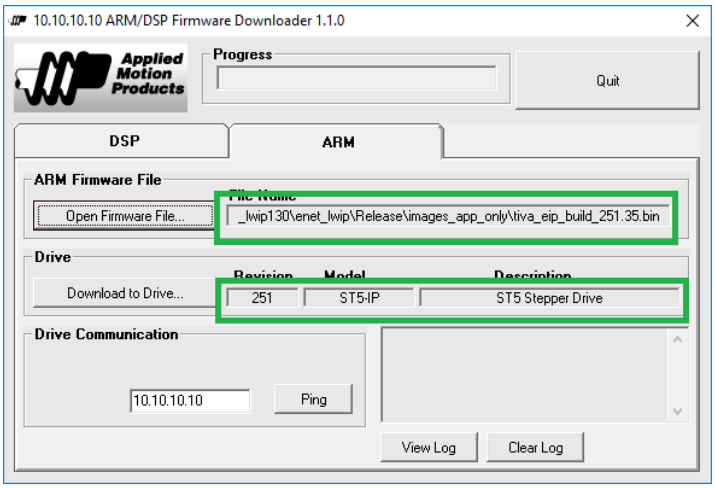


Power up the drive, enter the IP address in the Drive Communication box and hit “Ping.” The drive should respond with a popup box similar to the one below. If a “No response” dialog box appears, it could be one of several things: the IP address is incorrect; there’s a hardware wiring problem; computer or network settings; or the Ping command was sent before the drive was fully powered up. Double check all connections, ensure computer and network settings (including firewalls, port blockers, anti-virus permissions) are correct, power up the drive, wait 20 seconds, and try again.



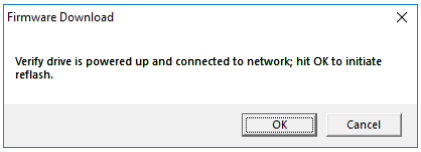
Hit OK to dismiss the dialog box.

Press “Open Firmware File” and select the correct file. Verify that the firmware file name is correct, and that the drive revision, model, and description are populated.

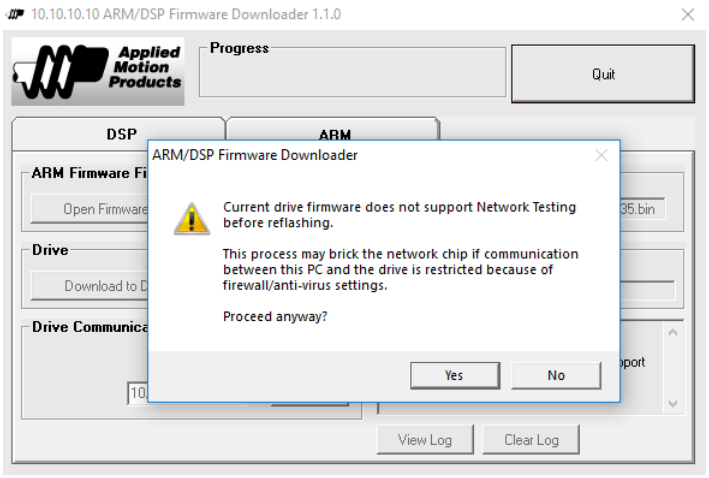


Reflash

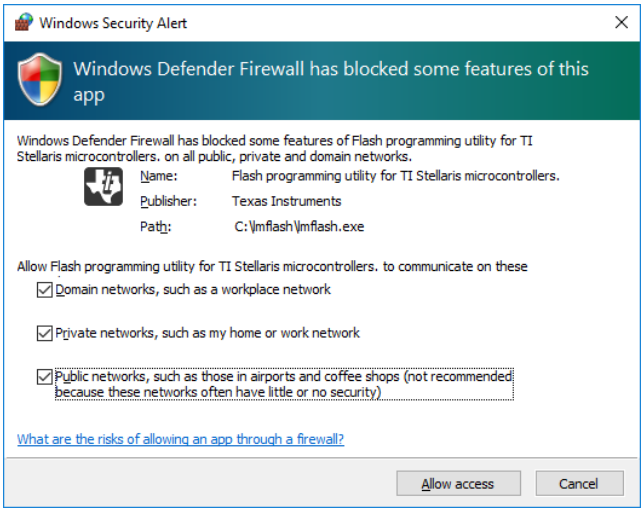
Once everything looks correct, hit “Download to Drive”. A pop-up confirming drive should be powered-up will appear. Click “OK”.



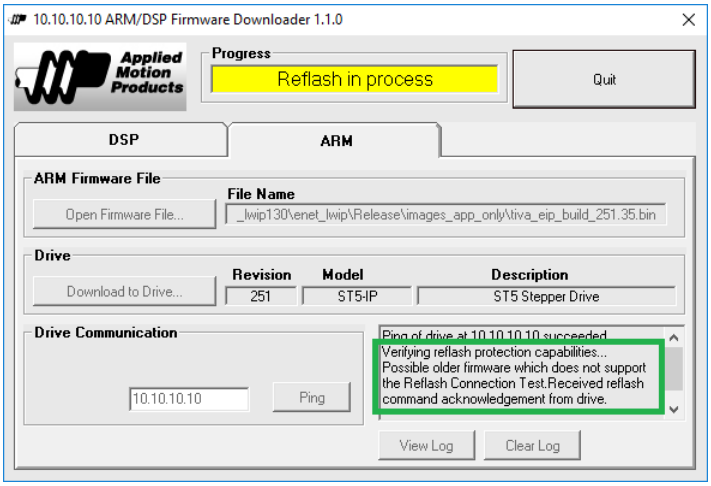
If the drive being flashed has current firmware that supports Network Testing (Reflash Protection), skip to the Network Test (Reflash Protection) section. If the drive being flashed has older firmware that does not have Reflash Protection Capability, a warning dialog will appear:



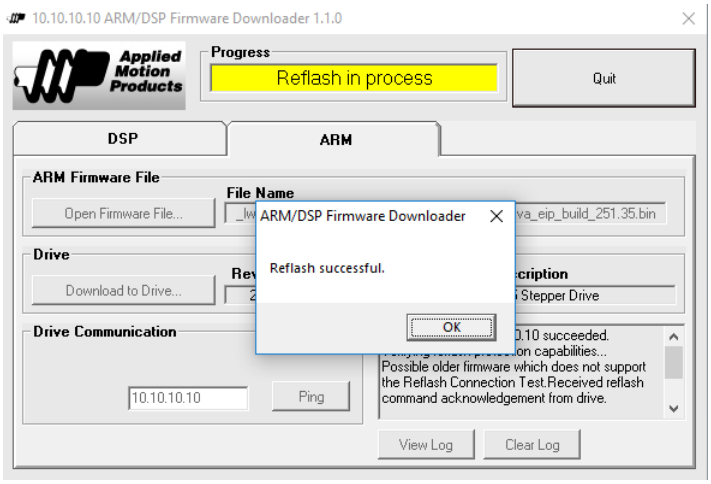
If “Yes” is clicked, a dialog box like the one below may appear if this is the first time the program is downloading. ***It is critical for all three boxes to be checked in order for the tool to work correctly. If all three boxes are not checked on both screens, the download may fail, and the unit may become inoperable. Confirm by clicking the “Allow access” button.***



The download process will begin; the “Progress” text box will change to a yellow background and say “Reflash in Progress.” Detailed status can be found in the bottom right text box.



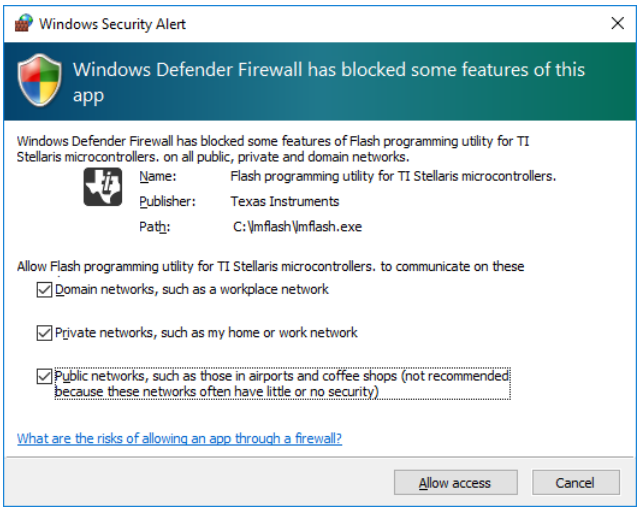
After about 30 seconds, a popup box will say “Reflash successful.” Hit “OK”.



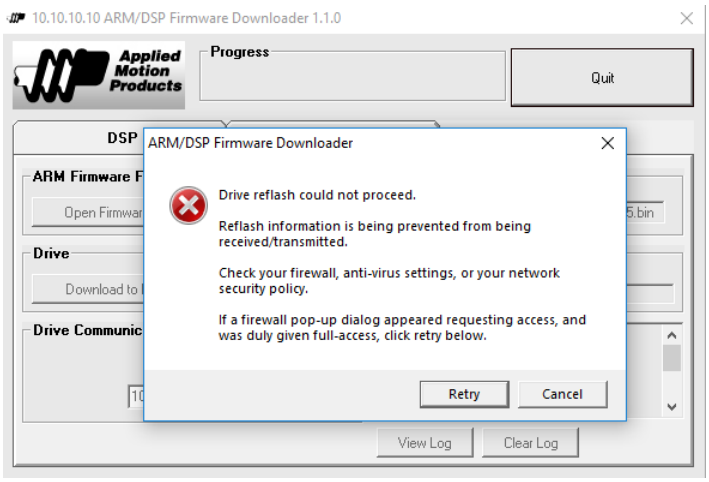
The drive is now upgraded and ready for use. The firmware downloader can be closed safely, and the drive can be used as normal. The next section is information relating to the Windows Firewall and is not a required step if the drive was successfully reflashed.

Network Test (Reflash Protection)

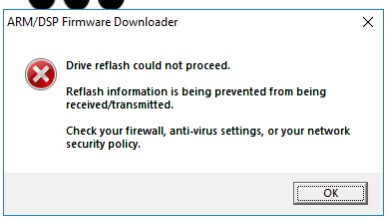
A dialog box like the one below may appear if this is the first time the program is downloading. ***It is critical for all three boxes to be checked in order for the tool to work correctly. If all three boxes are not checked on both screens, the download may fail, and the unit may become inoperable. Confirm by clicking the "Allow access" button.***



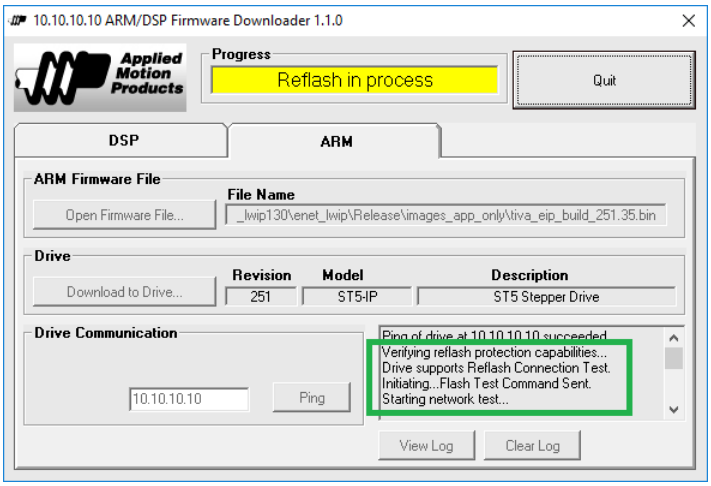
Because the drive acknowledgement has been delayed due to the Firewall, the tool already timed-out and displays the following:



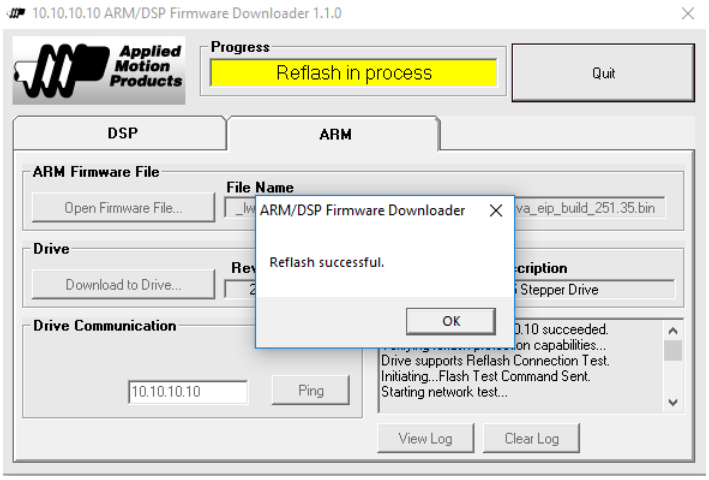
Hit "Retry" as the last paragraph in the dialog applies in this case. If the communication between the drive and the tool can't be established properly, a dialog appears. Otherwise, proceed to the next step.



The download process will begin; the “Progress” text box will change to a yellow background and say “Reflash in Progress.” Detailed status can be found in the bottom right text box.



After about 30 seconds, a popup box will say “Reflash successful.” Hit “OK”.

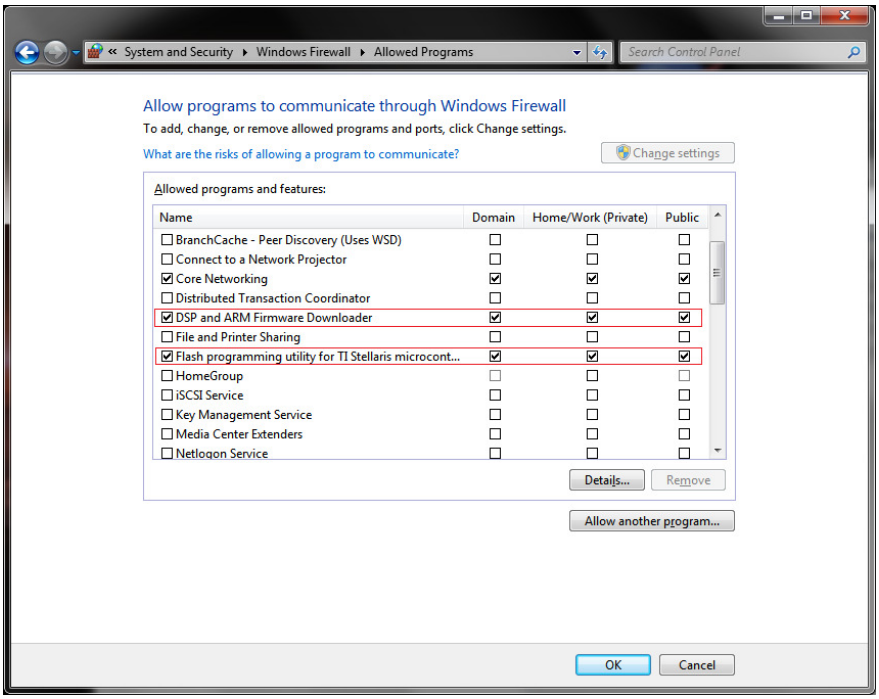


The drive is now upgraded and ready for use. The firmware downloader can be closed safely, and the drive can be used as normal. The next section is information relating to the Windows Firewall and is not a required step if the drive was successfully reflashed.

Drive Recovery

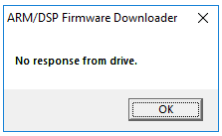
If the above procedure has somehow caused the drive to be unresponsive to the network (i.e., good drive LED status), you can attempt recovery of the ARM firmware.

First, go back to the Firewall Settings (Control Panel → System and Security → Windows Firewall → Allowed Programs)* and confirm that both programs have full access.

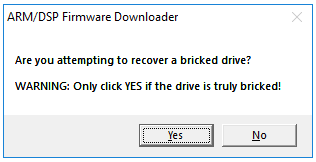


*shortcut location and dialog may change depending on the operating system. Above shown is for Windows 7).

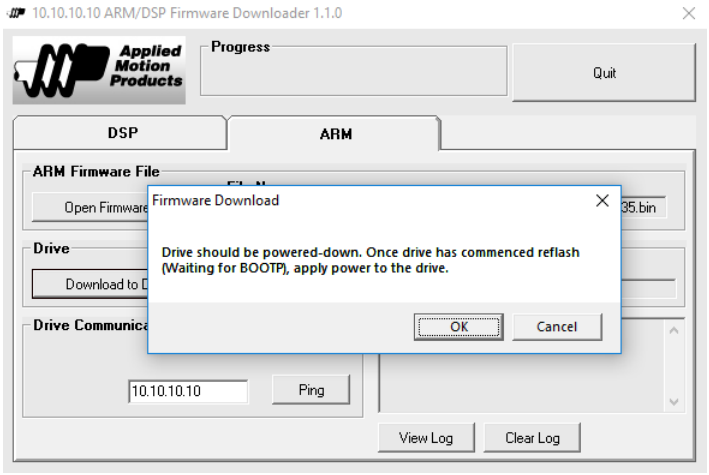
Power-off the drive and run the tool. Select the new firmware file and hit the “Download to Drive”. A pop-up appears:



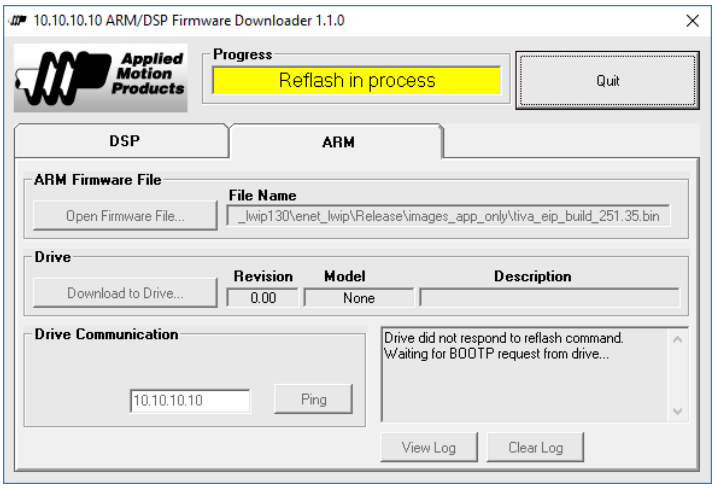
Hit “OK” and another pop-up appears:



Click “Yes” and the screen would now look like:



With the drive powered-down, click OK. Restore power to the drive when the status display shows the “Waiting for BOOTP” and the recovery should start in a couple of seconds:



Otherwise, an error message is generated: