EEEN301 T1 2022 WFH

Texas Instruments Code Composer Studio Installation

This document will outline the steps required to install Code Composer Studio on your Windows 10 home machine. The macOS and Linux versions are available but presently don't support the AM3358 device.

CCS install

First, download the version 9.0.1 from: https://software-

<u>dl.ti.com/ccs/esd/documents/ccs_downloads.html</u> note: <u>https://www.ti.com/tool/CCSTUDIO</u> page contains user guides and application notes for Code Composer Studio. The documentation may be useful in helping you combat any issues you may obtain while using Code Composer Studio as always Google and Stack Overflow are your friends.

Once again there are documentation links to help you install Code composer Studio including full installation instructions on this page under Release information. They may also be found at the following link: <u>https://software-dl.ti.com/ccs/esd/documents/users_guide/ccs_installation.html</u>

Once the software has downloaded, you can follow the installation instructions provided by TI with the following changes:

When asked to Select Components, add the Sitara AMx Processors before clicking next.

😚 Setup	- 🗆 🗙
Select Components	Ŷ
Select the components you want to install; clear the components you do not want to	install. Click Next when you are ready to continue. Click on a component to get a detailed description
InstallBuilder	< Back Next > Cancel

When asked to Install debug probes, select the SEGGER J-Link.

😚 Setup	_	
Install debug probes		Ŷ
Select the debug probes you want installed.		
Spectrum Digital Debug Probes and Boards		
Blackhawk Debug Probes		
SEGGER J-Link		
InstallBuilder		
	< Back Next >	Cancel

The installation should continue as per the TI guide after this. The installation takes around 30 minutes to complete, including downloading on a reasonable internet connection.

Linaro Cross-Compiler installation

Copy the cross compiler tarball to the installation directory of code composer studio. The default directory is C:\ti\ccs<version>\ccs\tools\compiler where <version> is the version number of code composer studio. This extraction appears to require elevated privileges to create symbolic links, I'm not sure? It is extremely important that the cross compiler software version matches the firmware version on the beaglebone devices. If the device and software have different versions they will not talk to each other. We are currently as of September 2020 using version 5.3-2016.2 of the cross-compiler toolchain which is available from https://releases.linaro.org/components/toolchain/binaries/5.3-2016.02/arm-linux-gnueabihf.tar.xz

To check the firmware on the beaglebone we can connect to it over serial. With the Mini-USB plug connected. Open putty and connect to the com port of the beaglebone.

😹 PuTTY Configuration		×
Category:		
	Basic options for your PuTTY set	ssion
Eogging	Specify the destination you want to connec	t to
- Keyboard	Serial line	Speed
Features	СОМЗ	19200
Window Appearance	Connection type: Raw Telnet Rlogin SSH	H • Serial
Behaviour Translation Selection Colours	Load, save or delete a stored session Saved Sessions]
- Data	Default Settings	Load
Telnet		Save
SSH Serial		Delete
	Close window on exit: Always Never Only on cl	ean exit
About	Open	Cancel

You will be presented with a login screen. This contains the image date.



Logging in with the default password provided allows us to see the version of beaglebone installed on the system.



This display shows the version of the linux kernel running on the beaglebone, it should match the version of the cross compiler you're using to avoid issues? (older version could be fine? Newer version not fine?)

Remote NDIS driver installation

Install the RNDIS device driver within Windows. With the beaglebone plugged in, go to Device Manager. After a moment a device with no driver will appear.



We need to install the default Microsoft RNDIS driver. Right click on RNDIS and click update driver.



Searching online for drivers is not necessary as it should already exist so we just need to manually install it.

Update Drivers - RNDIS

How do you want to search for drivers?

- → Search automatically for updated driver software Windows will search your computer and the Internet for the latest driver software for your device, unless you've disabled this feature in your device installation settings.
- → Browse my computer for driver software Locate and install driver software manually.

Cancel

 \times

Click browse my computer for driver software.

		\times
~	Update Drivers - RNDIS	
	Browse for drivers on your computer	
	Search for drivers in this location: C:\Users\colen\OneDrive\Email attachments\Documents Browse	
	✓ Include subfolders	
	→ Let me pick from a list of available drivers on my computer This list will show available drivers compatible with the device, and all drivers in the same category as the device.	
	Next	ancel

Click let me pick from a list of available drivers on my computer

Select your device's type from the list below.

Common hardware types:

🔐 Miracast display devices	^
Mixed Reality devices	
Ample devices	
Henry Modems	
Monitors	
Multifunction adapters	
Wulti-port serial adapters	
Retwork adapters	
The second secon	
network Infrastructure Devices	
Network Protocol	
The service se	
Non-Plug and Play drivers	~

Next	Cancel

Select network adapters then click next

← Update Drivers - RNDIS

Select the device driver you want to install for this hardware.



Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.

X

Microchip Technology Inc.		RAS Async Adapter	
Microsoft		Remote NDIS based Internet Sharing Device	e
Motorola, Inc.		Remote NDIS Compatible Device	
Movistar	~	Surface Ethernet Adapter	
t	>	USB RNDIS Adapter	`
This driver is digitally sign	ned.		Have Disk
This driver is digitally sign Tell me why driver signing	ned. g is impo	ortant	Have Disk

Under manufacturer Microsoft select Remote NDIS compatible device.



Click Yes to confirm, we know this driver is an RNDIS compatible device.

Update Drivers - Remote NDIS Compatible Device

Windows has successfully updated your drivers

Windows has finished installing the drivers for this device:



Remote NDIS Compatible Device

Close

 \times

The system will say it was successful.