Step to flash AM32 to Artery Tek MCU using ST-Link/V2

- 1. Solder wire as usual to SWD and SWC.

2. Download Keil Software at <u>www.keil.com</u>. Choose MDK-ARM

C	arn	n ke	EIL						
A	Products	Download	Events	Support	Videos		Q Search Keil	+	Go
D Sel	ownloa	d Produ	UCTS w to downloa	ad the latest v	ersion.				
(MDK Vers De	DK-Arm ion 5.38a (Decembe velopment envir	or 2022) Conment for (Cortex and Arr	n devices.		C51 Version 9.61 (December 2022) Development tools for all 8051 devices.		
	C251 C2 Vers De	251 ion 5.60 (May 2018) velopment tools	for all 8025	devices.		C166	C166 Version 7.57 (May 2018) Development tools for C166, XC166, & XC2000 MC	Us.	

3. Download Bootloader for Artery Tek from Alka Motor Github.

a. <u>https://github.com/AlkaMotors/AM32_Arterytek</u>

양 main → 양 1 branch ा tag	IS	Go to file	Add file - <> Code
AlkaMotors update Keil project fil	es	Local	Codespaces
Listings	Initial Upload	> Clone	
Dbjects	Initial Upload	HTTPS SSH GitHu	ıb CLI
Resources	Initial Upload	https://github.com/Alk	kaMotors/AM32_Arterytek.
inc inc	Initial Upload	Use Git or checkout with SVN	using the web URL.
🖿 mcu	Initial Upload	[] Open with GitHub D	esktop
src src	Initial Upload		•
🗋 .gitattributes	Initial commit	Download ZIP	
AM32_MultiProject.uvmpw	Initial Upload		last y

c. Unzip the files.

4. Unpack the ArteryTek.AT32F421.

🔞 Am32	7/2/2023 1:24 AM	µVision5 Project	20 KB
ArteryTek.AT32F421_DFP.2.0.5	11/1/2023 6:40 AM	uVision Software P	189 KB
EventRecorderStub.scvd	11/1/2023 6:40 AM	SCVD File	1 KB

5. Click AM32 Project file

🔣 Am32 🗲	7/2/2023 1:24 AM	µVision5 Project	20 KB
VarteryTek.AT32F421_DFP.2.0.5	11/1/2023 6:40 AM	uVision Software P	189 KB
EventRecorderStub.scvd	11/1/2023 6:40 AM	SCVD File	1 KB



7. Select "Debug" tab and select " ST-Link Debugger" from drop-down menu. After that, click Settings.

	UIUNK Pro Cotov Dobugger
Limit Speed to Real-Time Load Application at Startup Run to main() tialization File:	ULINK/bios Debugger ULINK/bios Debugger J-Link / J-TRACE Cortex Initializatio Models Cortex-M Debugger
Restore Debug Session Settings Breakpoints Toolbox Watch Windows & Performance Analyzer Memory Display System Viewer	Penicro Debugger SLabs UDA Debugger Image: State Contex
PU DLL: Parameter:	Driver DLL: Parameter:
ARMCM3.DLL -REMAP -MPU	SARMCM3.DLL -MPU
alog DLL: Parameter:	Dialog DLL: Parameter:
CM.DLL PCM4	TCM.DLL pCM4

8. If you connect the wires correctly, you can see the information of the connected device here.

Dobug Muptor	SW Devic	e		
Unit:	E	Error		Move
Shareable ST-Link	SWDIO	No ST-LINK detected	ł	Up
Serial Number:				Down
	C Autor	natic Detection	ID CODE:	
/ersion: HW: FW:	C Manu	al Configuration D	evice Name:	
Check version on start	Add	Delete Update	IR len:	AP: 0
T IC			1 ,	
Target Com Port: SW Clock Req: 4 MHz Selected: 0 MHz				

9. From here you may follow the instruction from YouTube by Alka Motors (<u>https://www.youtube.com/watch?v=7mrTUn59pDw</u>)

10. Pay attention on the bootloader. Double Click on the main.c file.



11. Go to Line 22 and Line 23. Make changes to this line according to your device.

21 22 #define USE_PB4 23 //#define USE_PA2 24 25 /* Includes ------

If your device use PB4 bootloader



If your device use PA2 bootloader.

- 12. Then click "F7" on your keyboard.
- 13. Finally click "F8" on your keyboard.
- 14. Bootloader already uploaded to your device. Proceed to flash the firmware using ESC Config as per YouTube.