

How to ...



## STM32 STLink Utility - overview 2

Menu	👼 STM32 ST-LINK	Utility					SU		
	<u>F</u> ile <u>E</u> dit <u>V</u> iew	Target ST-L	INK External L	.oader <u>H</u> elp					
		🗣 🎸 🎉	swv						1
Mamanyaddraaa	Memory display						Device STM32L47x/L48	3x	N.A.
Memory address *	Address: 0x200	00000 👻 Size	e: 0x56A0	Data Wid	th: 32 bits 🔻	•	Revision ID Rev Y		
	Douico Momory @ (	2000000 +					Elash size 1MBytes		
	Target memory, Add	ress range: [0x2	0000000 0x2000	DE_FLASH.DIN				LiveUpdate	
	Address	0	4	8	С	ASCII		<u>^</u>	
	0x20000000	20010E28	20005511	2000552D	20005531	(U.	-U.1U.		
	0x20000010	20005535	20005539	2000553D	0000000	5U.9U	J. = U		
	0x20000020	0000000	0000000	00000000	20005541		AU.		
	0x20000030	20005545	0000000	20005549	200054F9	EU	.IU. ùT.		
File data	0x20000040	2000554D	20005551	20005555	20005559	MU.Q	U. UU. YU.		
	0x20000050	2000555D	20005561	20005565	20005569	]U. aU	. eU. iU.		
	0x20000060	2000556D	20005571	20005575	20005507	mU.q	U. uUU.		
	0x20000070	20005579	2000557D	20005581	20005585	yU.}U	. UU.		
	0x20000080	20005589	2000558D	20005591	20005595	‰U. l	U. 'U. •U.		
				SSTURY.					
	12:46:01 : ST-LINK	SN:0672FF4856	4978508717382	2					
	12:46:01 : Connecte	ed via SWD.	. 12323115						
	12:46:01 : SWD Fre 12:46:01 : Connecti	quency = 1,8 MF on mode : Conne	iz. ct Under Reset.					=	
CUISUIE	12:46:01 : Debug in 12:46:01 : Device II	Low Power mode 0:0x415	e enabled.						
	12:46:01 : Device fi	ash Size : 1MByte	2S // 48x						
	LE. TO. OI . DEVICE IS	anny .5111521473							
life.augmented	Debug in Low Power	mode enabled.		Device ID:0x4	15		Core State ; Live	Update Disabled	
									2

MCU's info

# STM32 STLink Utility – connecting to target and opening file

Connecting to target



12:55:52 : ST-LINK SN : 0672FF485649785087173822 12:55:52 : ST-LINK Firmware version : V2J23M9 12:55:52 : Connected via SWD. 12:55:52 : SWD Frequency = 1,8 MHz. 12:55:52 : Connection mode : Connect Under Reset. 12:55:52 : Debug in Low Power mode enabled. 12:55:52 : Debug in Low Power mode enabled. 12:55:52 : Device ID:0x415 12:55:52 : Device flash Size : 1MBytes 12:55:52 : Device family :STM32L47x/L48x	H
Debug in Low Power   Device ID:0x415 Core State :	Live Up

• Opening file



	Device Memory @ 0x	(20000000 : Fi	e:01_RUNMOD	E_FLASH.bin		FIGHT SIZE	
Ľ	[01_RUNMODE_FLASH	H.bin], File size:	26676 Bytes				
	Address	0	4	8	С	ASCII	-
	0x0000000	200042D0	08006611	0800662D	08006631	ÐBff1f	
	0x0000010	08006635	08006639	0800663D	0000000	5 f 9 f = f	
	0x0000020	0000000	0000000	0000000	08006641	Af	
	0x0000030	08006645	0000000	08006649	080065FD	E f I f ý e	
	0x00000040	0800664D	08006651	08006655	08006659	MfQfUfYf	
	0x0000050	0800665D	08006661	08006665	08006669	]fafefif	
	0x0000060	0800666D	08006671	08006675	08006679	mfqfufyf	
	0x0000070	0800667D	08006681	08006685	08006689	}fff‰f	
	0x0000080	0800668D	08006691	08006695	08006699	f′f•f™f	-
	( III		Î	i	Î	•	



## STM32 STLink Utility – loading file to Flash 4

#### • Configuring the start address

👼 STM32 ST-LINK	Utility
File Edit View	Target ST-LINK External Loader Help
🖴 🔲 🔐	. Connect
Memory display	Disconnect CTRL+D
Address: 0x20	Erase Chip CTRL+E
	Erase Bank1
Device Memory @	C Erase Bank2
[01_RUNMODE_FLA	Erase Sectors
Address	Program
0x00000000	Program & Verify CTRL+P
0x0000010	
0x0000020	Blank Check
0x0000030	Compare device memory with [01_RUNMODE_FLASH.bin]
0x00000040	Option Bytes CTRL+B
0x0000050	
0x0000060	MCU Core
0x0000070	Automatic Mode
0x0000080	Settings
4 111	

Download [ 01_F	RUNMODE_FLASH.bin ]
Start address :	0x08000000
File path :	C:\Users\szymon panecki\Desktop\LP Examples\Binar Browse
− Verification ⊚ ∨	erify while programming 💿 Verify after programming
Click "Start" to p	program target.
🔽 Reset after j	orogramming Start Cancel

## STM32 STLink Utility – loading file to SRAM

### 1) Unchecking nBoot1

🖷 STM32 ST-LIN	Utility	132	2.5	ST1	11	1k	
File Edit View	Target	ST-LINK E	External L	.oader Helj	р		
Memory display	, Ca Di	onnect sconnect		CTRL+D			
Address: 0x20	c Er Er	ase Chip ase Bank1	1	CTRL+E			
Device Memory @ [01_RUNMODE_FL/	C Er Er	ase Bank2 ase Sectors					
Address 0x0000000 0x00000010	Pr Pr	ogram ogram & Ver	ify (	CTRL+P			
0x00000020 0x00000030	BI	ank Check ompare devic	e memo	ry with [01_R	UNMOD	E_FLASH.	pin]
0x00000040	0	otion Bytes	(	CTRL+B			
0x00000060	м	CU Core					
0x00000070 0x00000080	A	utomatic Moo	de				
	56	ttings					



Read Out Protection		BOR Level					
Level 0	-	Level 0	-	·			
User configuration op	tion byte						
🗸 IWDG_SW	🔽 IWDI	G_STDBY	nBoot0				
📝 IWDG_STOP	🗌 IWDI	G_ULP	nBOOT0				
🗸 wwdg_sw	🗌 FZ_I'	WDG_STOP	📃 nBoot1				
nSRAM_Parity	FZ_I'	WDG_STDBY	BOOTI	her with the BO(	)T0 nin_select	ts the Boot mo	ode
V SRAM2_RST	PCRI	OP_RDP	nD nB00T	1 checked/unch	eked and BO	DT0=0 => Boc	ot from Main Flash memo
V SRAM2_PE	nBoo	ot0_SW_Cfg	nB nB00T	1 checked	and BOO	T0=1 => Boot	t from System memory.
🗸 nRST_SHDW	B00	T0 nSW Config	BF nB00T	1 unchecked	and BOO	T0=1 => Boot	t from Embedded SRAM.
✓ nRST_STOP	VDD.	A_Monitor	DUAEBAN	К			
🖉 nRST_STDBY			nDBANK				
SDADC12_VDD_	Monitor		DB1M				
- 2001_ADD0(N)		Boot from (H)					
BOOT_ADD1 (H) BOOT_ADD1 (H) User data storage op Data 0 (H)	tion bytes	Boot from (H) Boot from (H) Data 1 (H)					
BOOT_ADD1 (H) User data storage op Data 0 (H) Flash sectors protect Flash protecti	tion bytes	Boot from (H) Boot from (H) Data 1 (H) Write protection					
BOOT_ADD1 (H) BOOT_ADD1 (H) User data storage op Data 0 (H) Flash sectors protect Flash protecti Page	tion bytes ion on mode: Start address	Boot from (H) Boot from (H) Data 1 (H) Write protection Size Protect					
BOOT_ADD1 (H) BOOT_ADD1 (H) User data storage op Data 0 (H) Flash sectors protect Flash protection Page Page 0	tion bytes ion on mode: Start address 0x08000000	Boot from (H) Boot from (H) Data 1 (H) Write protection Size Protect 2 K No Prol	ion tection				
BOOT_ADD1 (H) BOOT_ADD1 (H) User data storage op Data 0 (H) Flash sectors protect Flash protection Page Page 0 Page 1	tion bytes ion on mode: Start address 0x08000000 0x08000800	Boot from (H) Boot from (H) Data 1 (H) Write protection Size Protect 2 K No Prol 2 K No Prol	ion tection tection				
BOOT_ADD1 (H) BOOT_ADD1 (H) User data storage op Data 0 (H) Flash sectors protect Flash protection Page Page 0 Page 1 Page 2	tion bytes ion on mode: Start address 0x08000000 0x08000800 0x08001000	Boot from (H) Boot from (H) Data 1 (H) Write protection Size Protect 2 K No Prol 2 K No Prol 2 K No Prol	ion tection tection tection				
BOOT_ADD1 (H) BOOT_ADD1 (H) User data storage op Data 0 (H) Flash sectors protect Flash protection Page Page 0 Page 1 Page 2 Page 3	tion bytes ion on mode: Start address 0x08000000 0x08000800 0x08001000 0x08001000 0x08001800	Boot from (H) Boot from (H) Data 1 (H) Write protection Size Protect 2 K No Prol 2 K No Prol 2 K No Prol 2 K No Prol	ion tection tection tection tection				
BOOT_ADD1 (H) BOOT_ADD1 (H) User data storage op Data 0 (H) Flash sectors protect Flash protection Page Page 0 Page 1 Page 2 Page 3 Page 4	tion bytes ion on mode: Start address 0x08000000 0x08000800 0x08001000 0x08001800 0x08001800 0x08002000	Boot from (H) Boot from (H) Data 1 (H) Write protection Size Protect 2 K No Prol 2 K No Prol	ion tection tection tection tection tection				
BOOT_ADD1 (H) BOOT_ADD1 (H) User data storage op Data 0 (H) Flash sectors protect Flash protection Page Page 0 Page 1 Page 2 Page 2 Page 3 Page 4 Page 5	tion bytes ion on mode: Start address 0x08000000 0x08000800 0x08001000 0x08001000 0x08001800 0x08002000 0x08002800 0x08002800	Boot from (H) Boot from (H) Data 1 (H) Write protection Size Protect 2 K No Prol 2 K No Prol	ion tection tection tection tection tection				
BOOT_ADD1 (H) BOOT_ADD1 (H) User data storage op Data 0 (H) Flash sectors protect Flash protection Page Page 0 Page 1 Page 2 Page 3 Page 4 Page 5 Page 6 Page 7	tion bytes ion primode: Start address 0x08000000 0x08000800 0x08001000 0x08001000 0x08001800 0x08002000 0x08002000 0x08002000 0x08002000	Boot from (H) Boot from (H) Data 1 (H) Write protection Size Protect 2 K No Prol 2 K No Prol	ion tection tection tection tection tection tection tection				
BOOT_ADD1 (H) BOOT_ADD1 (H) User data storage op Data 0 (H) Flash sectors protect Flash protection Page Page 0 Page 1 Page 2 Page 3 Page 4 Page 5 Page 6 Page 7 Page 9	tion bytes ion mode: Start address 0x08000000 0x08001000 0x08001000 0x08001000 0x08002000 0x08002000 0x08002000 0x08002800 0x08003000 0x08003800	Boot from (H) Boot from (H) Data 1 (H) Write protection Size Protect 2 K No Prol 2 K No Prol	ion tection tection tection tection tection tection tection tection				
BOOT_ADD1 (H) BOOT_ADD1 (H) User data storage op Data 0 (H) Flash sectors protect Flash protecti Page Page 0 Page 1 Page 2 Page 3 Page 3 Page 4 Page 5 Page 6 Page 7 Page 8	tion bytes ion on mode: Start address 0x08000000 0x08001000 0x08001000 0x08001000 0x08002000 0x08002000 0x08002000 0x08002000 0x08002000 0x08003800 0x08003800 0x08004000	Boot from (H) Boot from (H) Data 1 (H) Write protection Size Protect 2 K No Prol 2 K No Prol	ion tection tection tection tection tection tection tection				
BOOT_ADD1 (H) BOOT_ADD1 (H) User data storage op Data 0 (H) Flash sectors protect Flash protection Page Page 0 Page 1 Page 2 Page 2 Page 3 Page 4 Page 5 Page 6 Page 7 Page 8	tion bytes ion on mode: Start address 0x08000000 0x08001000 0x08001000 0x08001000 0x08001800 0x08002000 0x08002800 0x08002800 0x08002800 0x08002800 0x08002800 0x08002800 0x08002800 0x08002800	Boot from (H) Boot from (H) Data 1 (H) Write protection Size Protect 2 K No Prol 2 K No Prol	ion tection tection tection tection tection tection tection				

## STM32 STLink Utility – loading file to SRAM

#### 2) Connecting Boot0 to VDD





STM32 STLink Utility –	- loading file to	SRA
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#### 3) Configuring the start address

🖷 STM32 ST-LINK U	Jtility
File Edit View	Target ST-LINK External Loader Help
	Connect
Memory display	Disconnect CTRL+D
Address: 0x200	Erase Chip CTRL+E
	Erase Bank1
Device Memory @ (	Erase Bank2
[01_RUNMODE_FLAS	Erase Sectors
Address	Dragram
0x00000000	Program
0x0000010	Program & Verify CTRL+P
0x0000020	Blank Check
0x0000030	Compare device memory with [01_RUNMODE_FLASH.bin]
0x0000040	Option Bytes CTRL+B
0x0000050	
0x0000060	MCU Core
0x0000070	Automatic Mode
0x0000080	Settings
4	

life.augmented

Download [ 01_	RUNMODE_FLASH.bin ]
Start address	0x20000000
File path :	C:\Users\szymon panecki\Desktop\LP Examples\Binar Browse
Verification -	Verify while programming 💿 Verify after programming
Click "Start" to	program target.
🔽 Reset after	programming
	Start Cancel







#### www.st.com/stm32l4

