Summary of Converting from the M17 Protocol to a later version of the M17 Protocol

1. Transfer the latest version of the openrtx_cs7000.dfu program to the radio using the DfuSeDemo program.

Converting from the M17 Protocol to a later version of the M17 Protocol



Picture showing where the keys are

You need the following programs and hardware:

CS7000 M17 radio

Programming cable

DfuSeDemo program

openrtx_cs7000.dfu program

If you have not already done it, install the DFuSeDemo Program on your PC. If done properly you should have the following shortcut on your PC.



1. Attach one end of the programming cable to the radio and the other end to the USB port of the computer.

2. Run the DFuSeDemo program and you should get the following Screen:

Available DFU Devices Supports Upload Manifest Supports Download Accelera Can Detach Enter DFU mode/HID detach Leave Actions Can Detach Can Detach Can Detach	■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ □ FU mode	Application Mod Vendor ID: Procuct ID: Version:	e: DFU Mode: Vendor ID: Procuct ID: Version:
Target Id Name		Available S	ectors (Double Click for more)
Upload Action File: Choose Upload	Upgrade or Ve File: Vendor ID:	erify Action Targe	ts in file:

3. Press the SK1 button and while it is pressed turn on the radio and the screen is shown as follows:

STM Device in DF	U Mode		•	Vendor ID:	Vendor ID: 04	83
 Supports Uplo Supports Down Can Detach Enter DFU mode/ 	ad Inload Inload Inload	Manifestatio	n tolerant I Upload (ST) FU mode	Procuct ID: Version:	Procuct ID: DF Version: 22	11 00
ctions						
Select Target(s):	Target Id	Name		Available Sec	tors (Double Click for n	nore)
	00	Internal Flas	h	12 sectors		
	01	OTP Memor	;	1 sectors		
	03	Device Feat	r ure	1 sectors		
Upload Action File: Choose Transferred data	. Up size	load	Upgrade or V File: Vendor ID: Procuct ID: Version:	erify Action Targets i	n file:	
O KB(O Bytes) of	O VD(O DÀ(62)		Verify after Optimize	er download Upgrade duration (Re	move some FFs)	
Operation duratio C	n)0:00:00		Choose	Upgra	de Verit	fy

4. Press the choose button and you get the following screen.

🧼 Open	A MARCEL MAR			x
M17 Updates 🕨 M17 Firmv	ware 🗸	Search M17	Firmware	٩
Organize 🔻 New folder			ii • 🚺	0
🖈 Favorites	Name	Date modified	Туре	
 Downloads Recent Places Desktop OneDrive - Personal 	openrtx_cs7000.dfu	7/16/2024 2:37 PM	DFU File	
 □ Libraries □ Documents □ Music □ Pictures □ Videos 				
🔣 Homegroup				
Des (C:)				
File name: .dfu	< [✓ Dfu Files (*.dfr Open -	u) Cancel	•

5. Find your file and highlight it as follows and then press the Open button.



6. You get the screen below.

STM Device in DF Supports Uploa Supports Dowr Can Detach Enter DFU mode/ Actions	U Mode ad Manife aload Accele HID detach Lea	▼ estation tolerant erated Upload (ST) ave DFU mode	Application Mode: Vendor ID: Procuct ID: Version:	DFU Mode: Vendor ID: 0483 Procuct ID: DF11 Version: 2200
Select Target(s):	Target Id Name 00 Interna 01 Option 02 OTP M 03 Device	l Flash Bytes emory Feature	Available Sector 12 sectors 1 sectors 2 sectors 1 sectors	ors (Double Click for more)
Upload Action File: Choose Transferred data : 0 KB(0 Bytes) of (Operation duration 0	Upload size D KB(0 Bytes) n 0:00:00	Upgrade or V File: Vendor ID: Procuct ID: Version: Verify aft Optimize Choose.	/erify Action openttx_cs7000.dfu 0483 Targets in 000 S 0000 er download Upgrade duration (Rem	i file: T nove some FFs) e Verify
		File correctly	loaded.	

7. Now highlight the Internal Flash as shown below and press the Upgrade button.



8. You will get the following warning.



9. Press the Yes button and you will get the following:

wailable DFU Dev	rices		A	DELLA
STM Device in DFU Mode 🔹 👻			Application Mode:	DFU Mode:
Image: Supports Upload Image: Manifestation tolerant Image: Supports Download Image: Accelerated Upload (ST) Image: Can Detach Image: Can Detach		Vendor ID: Procuct ID:	Vendor ID: 0483 Procuct ID: DF11	
Enter DFU mode/	'HID detach Leave	DFU mode	VCISION.	Version. 2200
ctions				
Gelect Target(s):	Target Id Name		Available Sec	tors (Double Click for more)
	00 Internal Fl	ash	12 sectors	
	01 Option By	tes	1 sectors	
	02 OTP Mem	ory	2 sectors	
	03 Device Fe	ature	1 sectors	
Upload Action		- Upgrade or V	erify Action	
File:		File:	openrtx_cs7000.dfu	
		Vendor ID:	0483 Targets i	in file:
Choose	. Upload	Procuct ID:	DF11 00	ST
Transferred data	size	Version:	0000	
UKB(UBytes) of 3 Bytes)	206 KB(211792	🔲 Verify afte	er download	
On and then the other		📃 Optimize	Upgrade duration (Re	move some FFs)
Operation duratio	n 10:00:00	Choose	. Upgra	de Verify
	Target 00: Up	grading - Er	rase Phase (66%	ງ

10. After a few seconds you will get the following screen:

STM Device in DE	ices 11 Mode		•	Appli	cation Mode:	DFU Mode:
 Supports Uploa Supports Dowr Can Detach 	ad Inload I	Manifesta Accelerati	tion tolerant ed Upload (ST)	Vendo Procu	or ID:	Vendor ID: 0483 Procuct ID: DF11
Enter DFU mode/	HID detach	Leave	DFU mode	ver	sion:	Version: 2200
Actions						
Select Target(s):	Target Id	Name			Available Secto	rs (Double Click for more)
	00	Internal Fla	ash		12 sectors	
	01	Option Byt	tes		1 sectors	
	02	OTP Mem	ory		2 sectors	
	03	Device Fe	ature		1 sectors	
Upload Action			Upgrade or V	erify Act	tion	
File:			File:	openrty	_cs7000.dfu	
			Vendor ID:	0483	Targets in	file:
Choose	. Up	load	Product ID:	DF11	00 5	1
Transferred data :	size		Version:	0000		
206 KB(211792 E KB(211792 Bytes	3ytes) of 206 :)		Verify aft	er downl Ungrade	oad a duration (Bern	ove some FEs)
Operation duration	n					
0	0:00:13		Choose		Upgrade	e Verify
		-	0.0.11			

You are now finished. Turn off the radio and turn it on again.

Installing the driver for the DfuSeDemo program manually

If after Pressing SK1 and while pressed turning on the radio you get the following screen, you might need to manually install the driver.

Available DFU Devices Available DFU Devices Supports Upload Manifesta Can Detach Enter DFU mode/HID detach Leave Actions	Application Mode: DFU Mode: Vendor ID: Vendor ID: Procuct ID: Procuct ID: Version: V
Select Target(s): Target Id Name	Available Sectors (Double Click for more)
Upload Action File: Choose Upload Transferred data size 0 KB(0 Bytes) of 0 KB(0 Bytes)	Upgrade or Verify Action File: Vendor ID: Targets in file: Procuct ID: Version:
Operation duration 00:00:00	Verity atter download Optimize Upgrade duration (Remove some FFs) Choose Upgrade Verify

Normally, this program if it needs a driver, finds it over the internet and gives you an option to install a local driver. Some operating systems do not seem to get the driver. If that is your situation, you should install the driver manually.

On your computer, go to the following directory:

C:\Program Files (x86)\STMicroelectronics\Software\DfuSe v3.0.6\Bin\Driver

If you go there you should see the following:

Name	Date modified	Туре	Size
🐌 Win7	1/11/2021 7:09 PM	File folder	
🕛 Win8	1/11/2021 7:09 PM	File folder	
闄 Win8.1	1/11/2021 7:09 PM	File folder	
🕛 Win10	1/11/2021 7:09 PM	File folder	
📄 version.txt	6/11/2018 12:53 AM	Text Document	4 KB

Now you have to match your windows version to your computer. I would expect Windows 10 to work with Windows 11.

Go into the folder matching your operating system and then go into the folder matching the type of operating system.

Name	Date modified	Туре	Size
\mu хб4	1/11/2021 7:09 PM	File folder	
퉬 х8б	1/11/2021 7:09 PM	File folder	
DFU_Win7_x86x64_v3.0.4.0_LogoVerificati	7/10/2012 6:35 PM	Adobe Acrobat D	132 KB

If you go into the x64 bit folder you get the following:

Name	Date modified	Туре	Size
鷆 хб4	1/11/2021 7:09 PM	File folder	
💐 dpinst_amd64.exe	2/8/2010 10:36 PM	Application	1,026 KB
sttube.cat	7/10/2012 6:38 AM	Security Catalog	9 KB
STtube.inf	7/9/2012 11:02 PM	Setup Information	10 KB

Run the dpinst_amd64.exe program to install the driver.

Name	Date modified	Туре	Size
₩ x86	1/11/2021 7:09 PM	File folder	
💐 dpinst_x86.exe	2/8/2010 9:59 PM	Application	901 KB
sttube.cat	7/10/2012 6:38 AM	Security Catalog	9 KB
STtube.inf	7/9/2012 11:02 PM	Setup Information	10 KB

If you go into the x86 folder you get the following:

Run the dpinst_x86.exe program to install the driver.

The Windows 10 folder is an exception. When you go into the folder you get the following:

Name	Date modified	Туре	Size
\mu хб4	1/11/2021 7:09 PM	File folder	
\mu х86	1/11/2021 7:09 PM	File folder	
💐 dpinst_amd64.exe	2/8/2010 10:36 PM	Application	1,026 KB
💐 dpinst_x86.exe	2/8/2010 9:59 PM	Application	901 KB
🥏 sttube.cat	4/27/2018 6:38 AM	Security Catalog	11 KB
STtube.inf	4/27/2018 3:31 AM	Setup Information	13 KB

Both programs are here so run what is appropriate for your computer.