RS41 Vaisala Radiosonde programming

IZ2FLY - RS Hunters Group

Download CoIDE

https://www.softpedia.com/get/Programming/Coding-languages-Compilers/CooCox-CoIDE.shtml#download

download

gcc-arm-none-eabi-5_2-2015q4-20151219-win32.exe

https://launchpad.net/gcc-arm-embedded/+download

Download ST-Link Utility to completely erase even the protected memory of the STM32

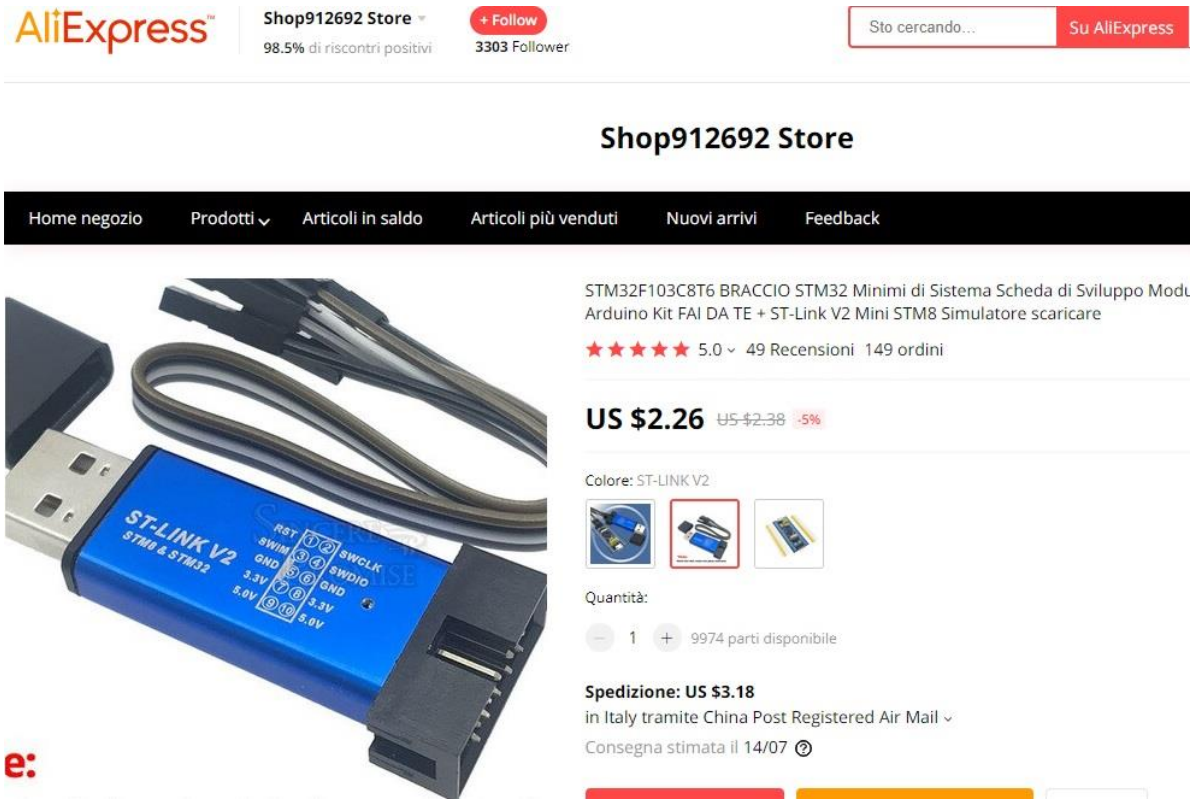
https://softdeluxe.com/STM32-ST-Link-Utility-1430407/download/

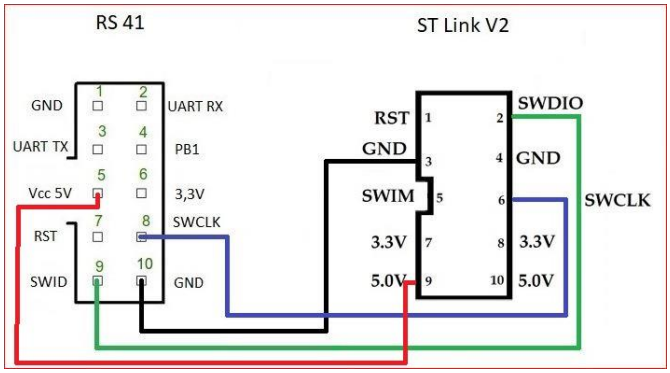
or

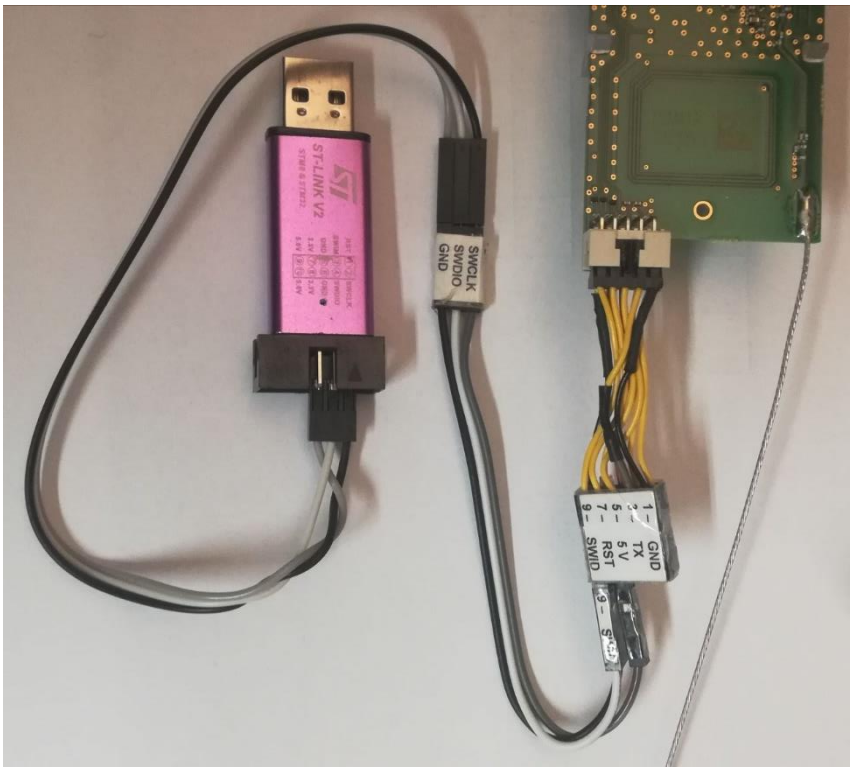
https://iz2fly.altervista.org/wp-content/uploads/2023/04/en.stsw-link004.zip

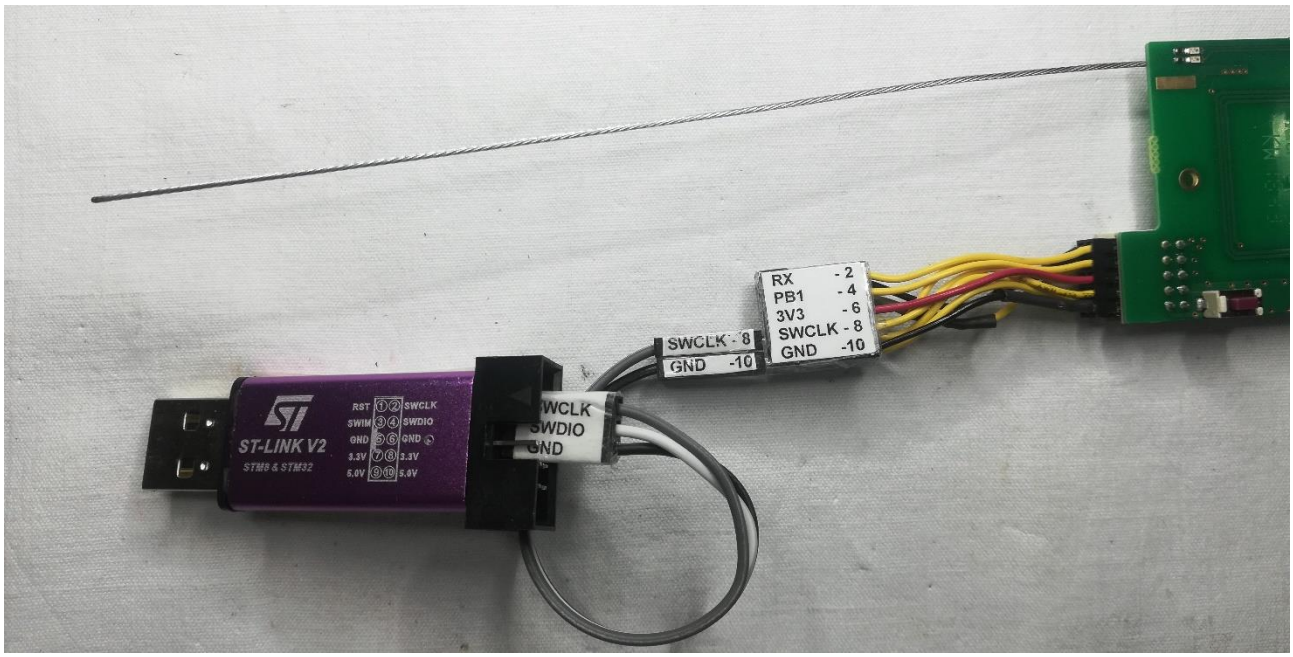
https://en.freedownloadmanager.org/Windows-PC/STM32-ST-Link-Utility-FREE.html

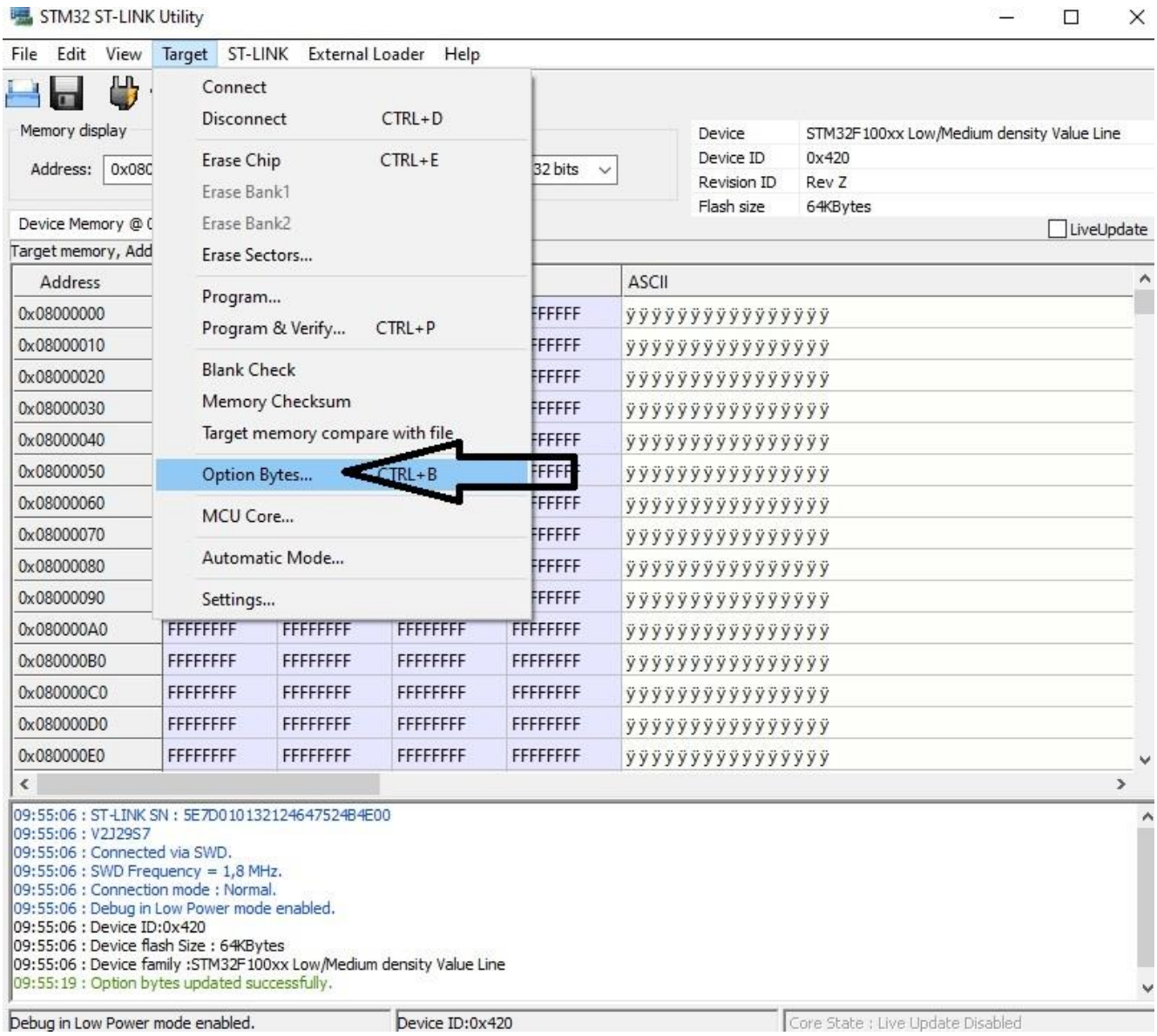
See attached file or updated software.

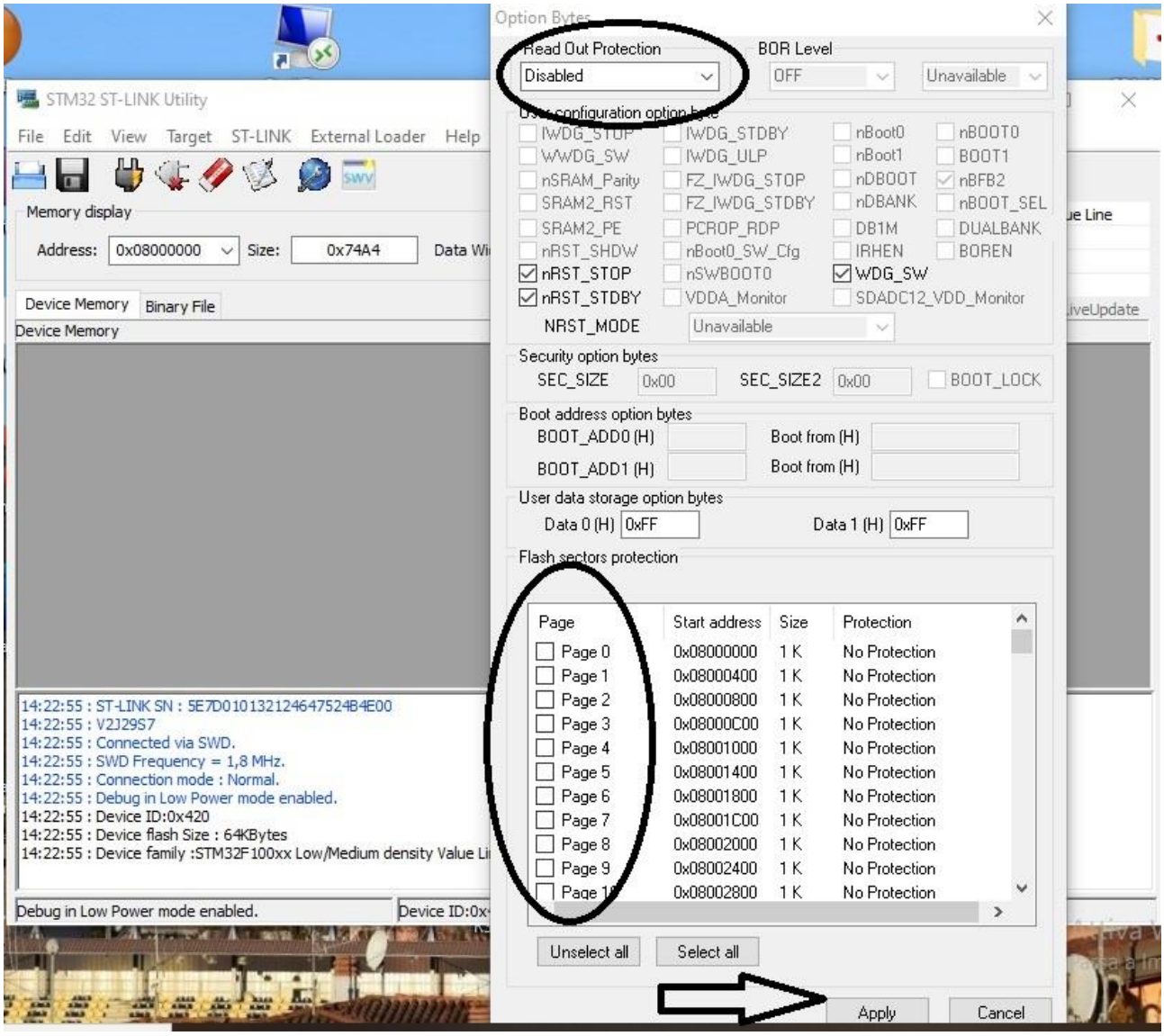


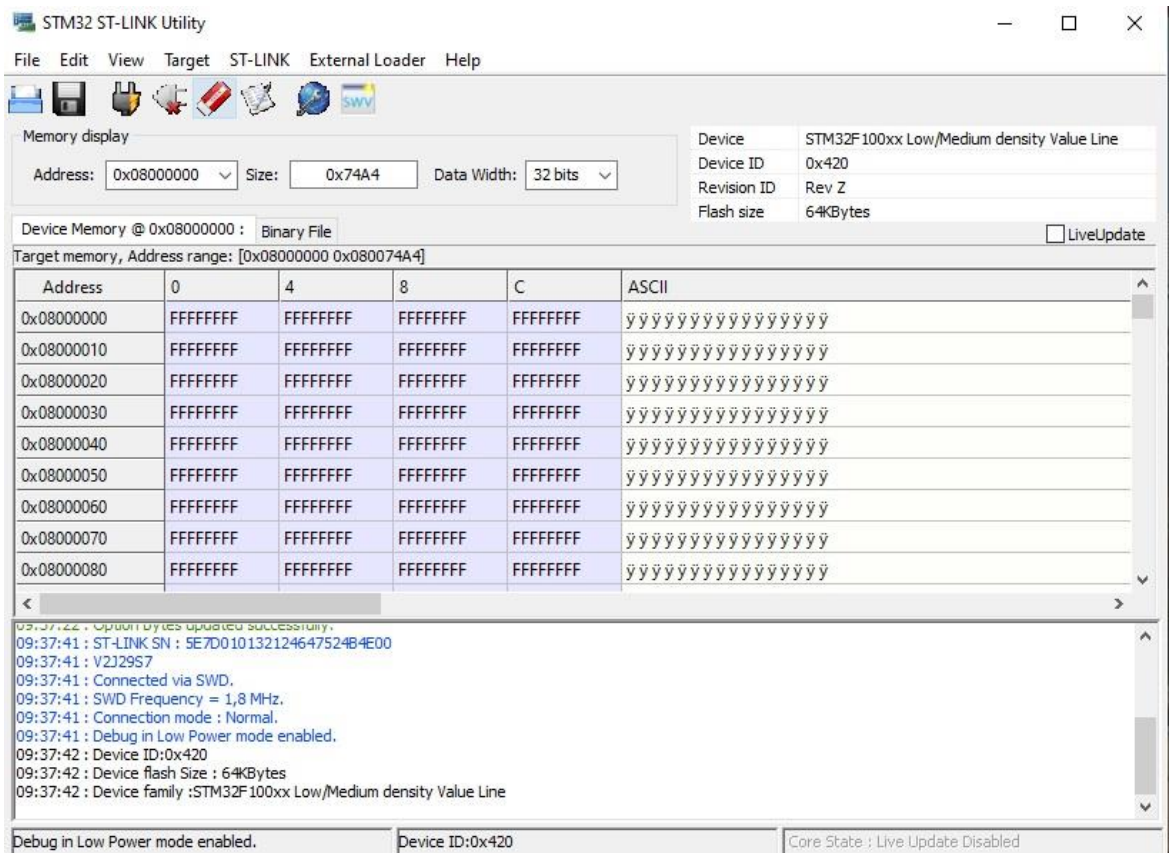

RS 41
ST Link V2
GND
UART RX
UART TX
PB1
Vcc 5V
3,3V
RST
SWCLK
SWID
GND
RST
GND
SWIM
3.3V
5.0V
SWDIO
GND
SWCLK
3.3V
5.0V


ST-LINK V2
SWCLK
SWDIO
GND
GND
TX
5V
RST
SWID


ST-LINK V2
STM8 & STM32
RST
SWCLK
SWIM
SWDIO
GND
GND
3.3V
3.3V
5.0V
5.0V
SWCLK
SWDIO
GND
RX - 2
PB1 - 4
3V3 - 6
SWCLK - 8
GND -10
SWCLK - 8
GND -10


STM32 ST-LINK Utility
File Edit View Target ST-LINK External Loader Help
Connect
Disconnect CTRL+D
Erase Chip CTRL+E
Erase Bank1
Erase Bank2
Erase Sectors...
Program...
Program & Verify... CTRL+P
Blank Check
Memory Checksum
Target memory compare with file
Option Bytes... CTRL+B
MCU Core...
Automatic Mode...
Settings...
Memory display
Address: 0x080
32 bits
Device STM32F100xx Low/Medium density Value Line
Device ID 0x420
Revision ID Rev Z
Flash size 64KBytes
LiveUpdate
Device Memory @ 0
Target memory, Add
Address
ASCII
0x08000000
0x08000010
0x08000020
0x08000030
0x08000040
0x08000050
0x08000060
0x08000070
0x08000080
0x08000090
0x080000A0 FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF
0x080000B0 FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF
0x080000C0 FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF
0x080000D0 FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF
0x080000E0 FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF
09:55:06 : ST-LINK SN : 5E7D010132124647524B4E00
09:55:06 : V2J29S7
09:55:06 : Connected via SWD.
09:55:06 : SWD Frequency = 1,8 MHz.
09:55:06 : Connection mode : Normal.
09:55:06 : Debug in Low Power mode enabled.
09:55:06 : Device ID:0x420
09:55:06 : Device flash Size : 64KBytes
09:55:06 : Device family :STM32F100xx Low/Medium density Value Line
09:55:19 : Option bytes updated successfully.
Debug in Low Power mode enabled.
Device ID:0x420
Core State : Live Update Disabled


Option Bytes
Read Out Protection
Disabled
BOR Level
OFF
Unavailable
User configuration option bytes
IWDG_STOP
IWDG_STDBY
nBoot0
nBOOT0
WWDG_SW
IWDG_ULP
nBoot1
BOOT1
nSRAM_Parity
FZ_IWDG_STOP
nDBOOT
nBFB2
SRAM2_RST
FZ_IWDG_STDBY
nDBANK
nBOOT_SEL
SRAM2_PE
PCROP_RDP
DB1M
DUALBANK
nRST_SHDW
nBoot0_SW_Cfg
IRHEN
BOREN
nRST_STOP
nSWBOOT0
WDG_SW
nRST_STDBY
VDDA_Monitor
SDADC12_VDD_Monitor
NRST_MODE
Unavailable
Security option bytes
SEC_SIZE
0x00
SEC_SIZE2
0x00
BOOT_LOCK
Boot address option bytes
BOOT_ADD0 (H)
Boot from (H)
BOOT_ADD1 (H)
Boot from (H)
User data storage option bytes
Data 0 (H)
0xFF
Data 1 (H)
0xFF
Flash sectors protection
Page
Start address
Size
Protection
Page 0 0x08000000 1 K No Protection
Page 1 0x08000400 1 K No Protection
Page 2 0x08000800 1 K No Protection
Page 3 0x08000C00 1 K No Protection
Page 4 0x08001000 1 K No Protection
Page 5 0x08001400 1 K No Protection
Page 6 0x08001800 1 K No Protection
Page 7 0x08001C00 1 K No Protection
Page 8 0x08002000 1 K No Protection
Page 9 0x08002400 1 K No Protection
Page 10 0x08002800 1 K No Protection
Unselect all
Select all
Apply
Cancel
STM32 ST-LINK Utility
File Edit View Target ST-LINK External Loader Help
Memory display
Address: 0x08000000 Size: 0x74A4 Data Wi
Device Memory
Binary File
14:22:55 : ST-LINK SN : 5E7D010132124647524B4E00
14:22:55 : V2J29S7
14:22:55 : Connected via SWD.
14:22:55 : SWD Frequency = 1,8 MHz.
14:22:55 : Connection mode : Normal.
14:22:55 : Debug in Low Power mode enabled.
14:22:55 : Device ID:0x420
14:22:55 : Device flash Size : 64KBytes
14:22:55 : Device family :STM32F100xx Low/Medium density Value Li
Debug in Low Power mode enabled.


STM32 ST-LINK Utility
File Edit View Target ST-LINK External Loader Help
Memory display
Address: 0x08000000 Size: 0x74A4 Data Width: 32 bits
Device STM32F100xx Low/Medium density Value Line
Device ID 0x420
Revision ID Rev Z
Flash size 64KBytes
Device Memory @ 0x08000000 :
Binary File
LiveUpdate
Target memory, Address range: [0x08000000 0x080074A4]
Address 0 4 8 C ASCII
0x08000000 FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x08000010 FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x08000020 FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x08000030 FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x08000040 FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x08000050 FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x08000060 FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x08000070 FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x08000080 FFFFFFFF FFFFFFFF FFFFFFFF FFFFFFFF ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
09:37:41 : ST-LINK SN : 5E7D010132124647524B4E00
09:37:41 : V2J29S7
09:37:41 : Connected via SWD.
09:37:41 : SWD Frequency = 1,8 MHz.
09:37:41 : Connection mode : Normal.
09:37:41 : Debug in Low Power mode enabled.
09:37:42 : Device ID:0x420
09:37:42 : Device flash Size : 64KBytes
09:37:42 : Device family :STM32F100xx Low/Medium density Value Line
Debug in Low Power mode enabled.
Device ID:0x420
Core State : Live Update Disabled

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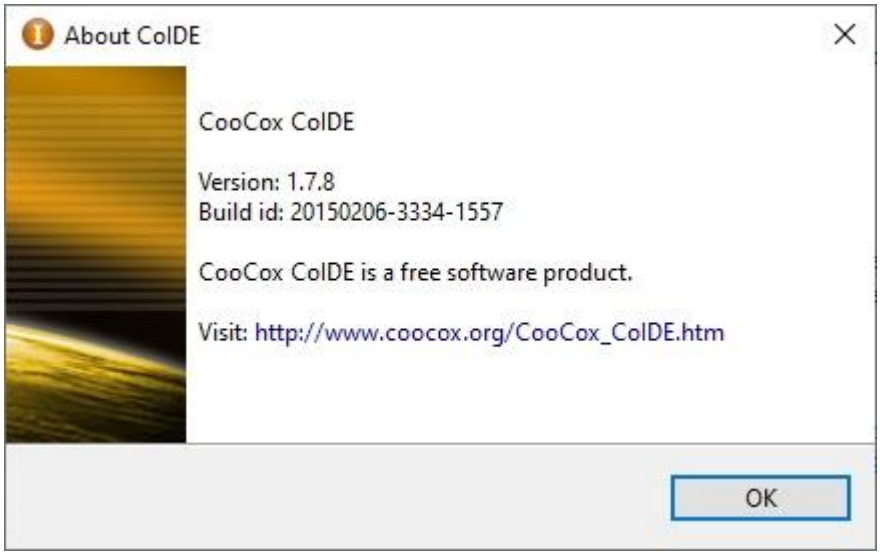
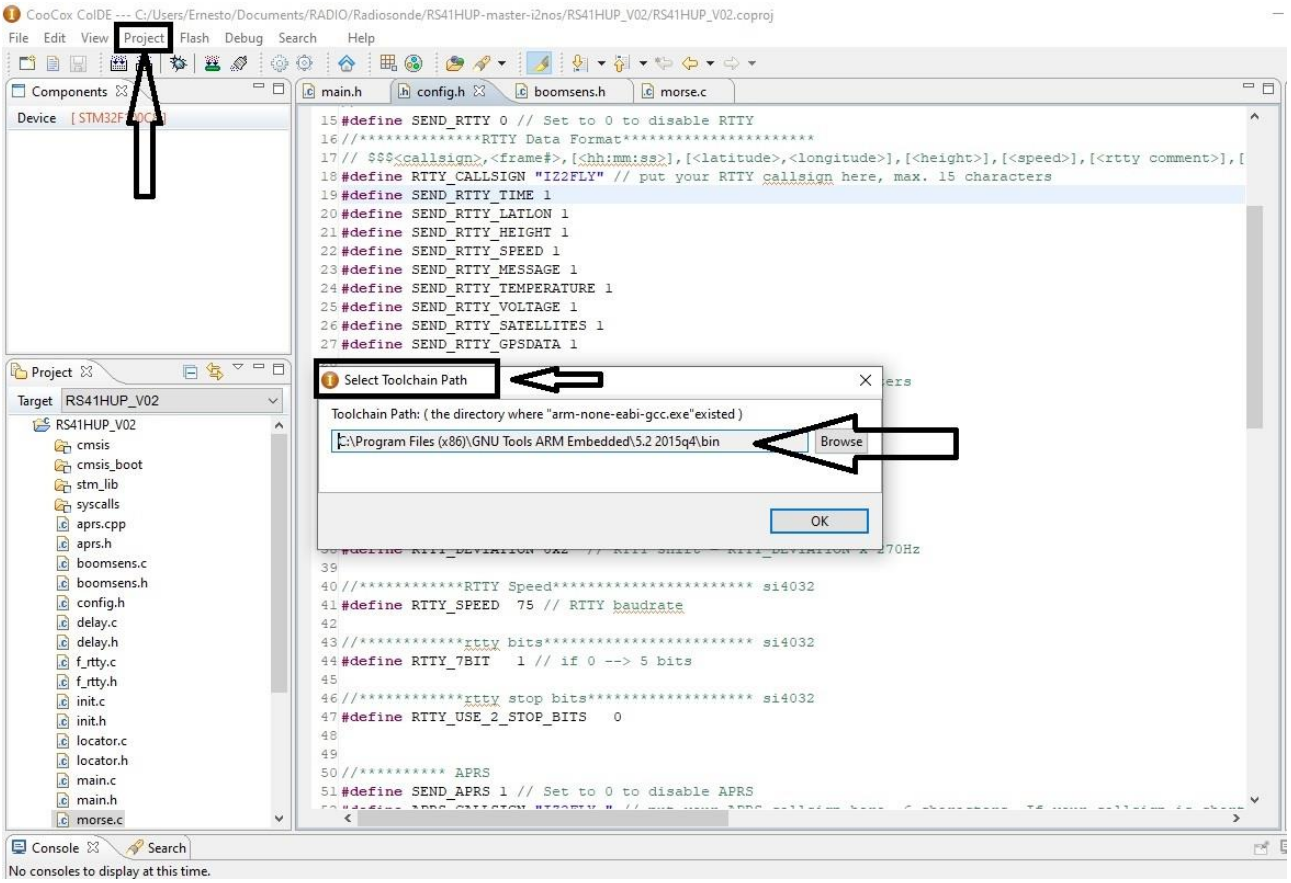
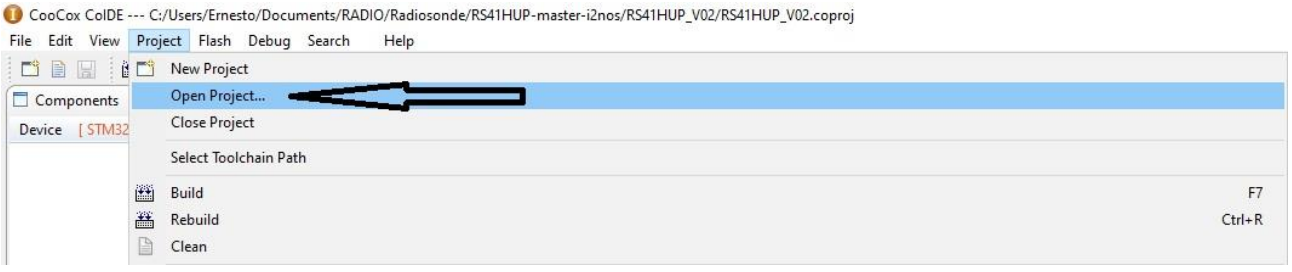
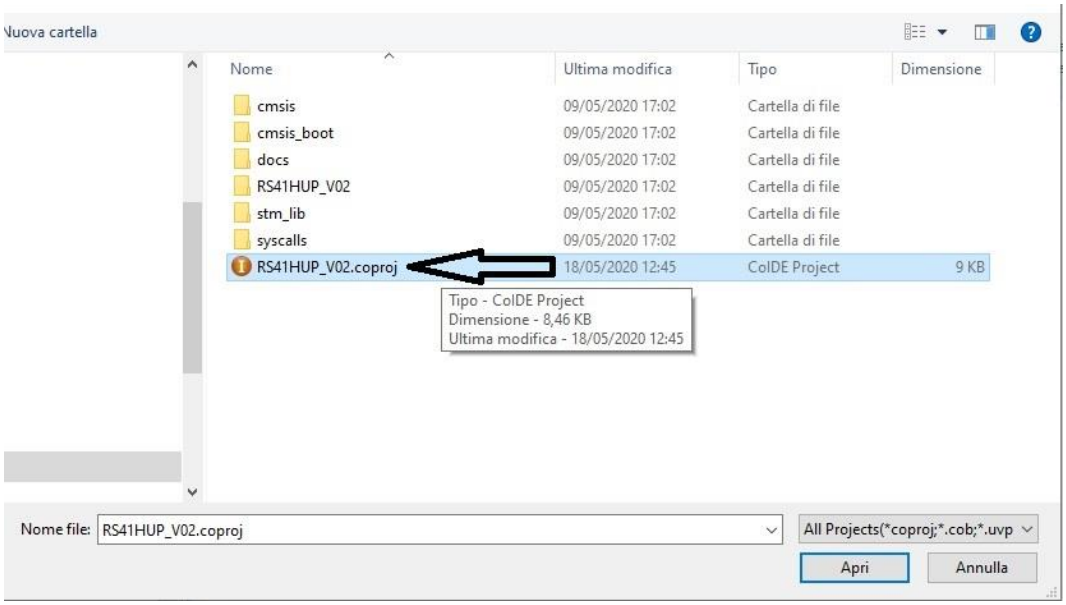
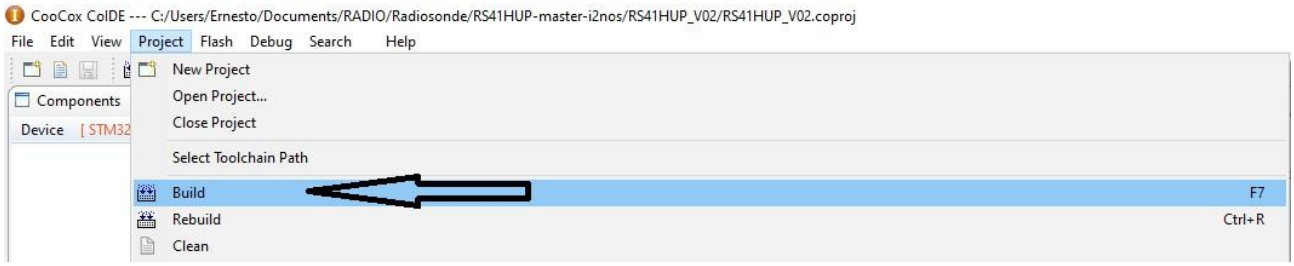

About CoIDE
CooCox CoIDE
Version: 1.7.8
Build id: 20150206-3334-1557
CooCox CoIDE is a free software product.
Visit: http://www.coocox.org/CooCox_CoIDE.htm
OK

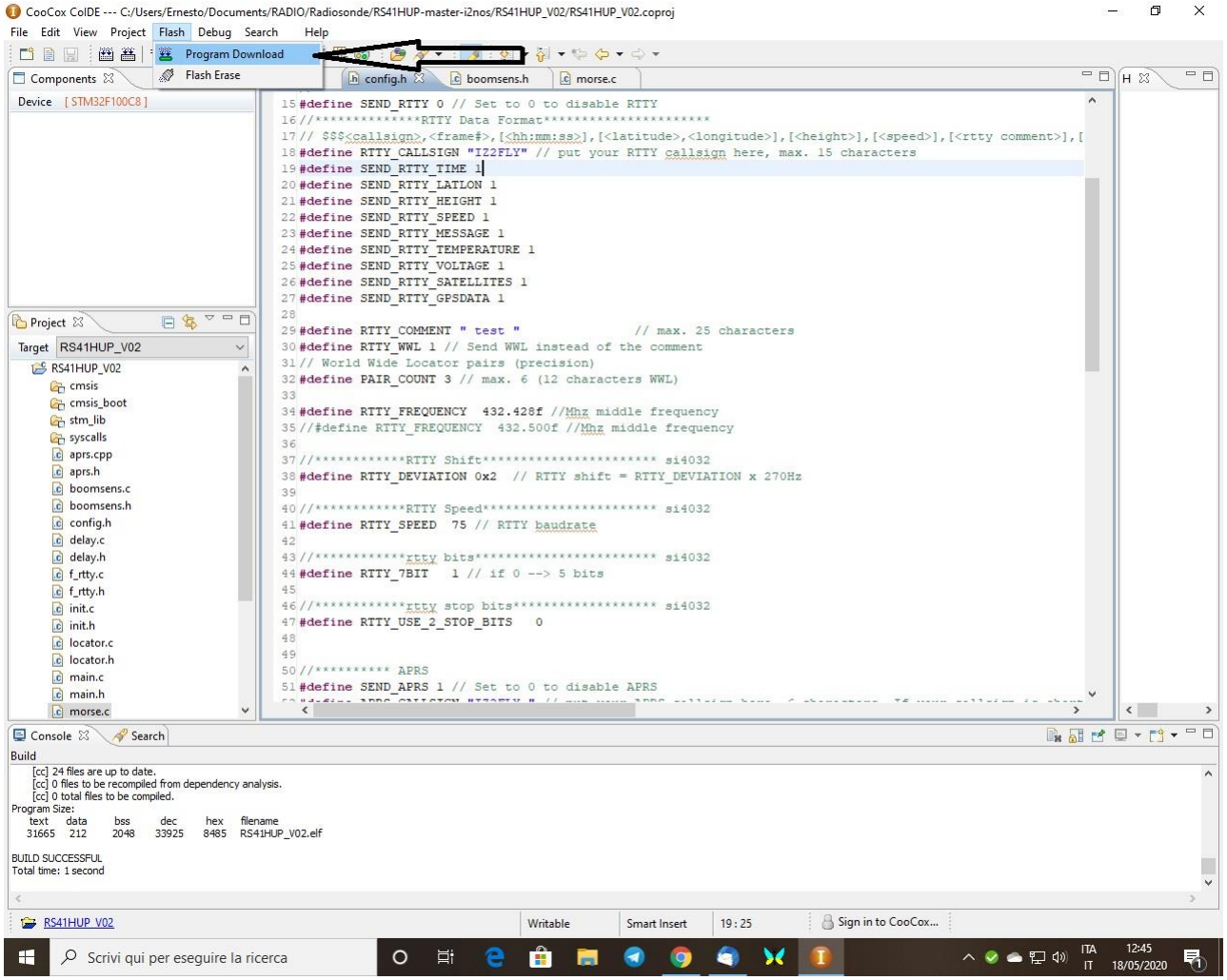
Nome
Ultima modifica
Tipo
Dimensione
CoIDE-1.7.8.exe
28/11/2019 11:09
Applicazione
462.554 KB
gcc-arm-none-eabi-5_2-2015q4-20151219-win32.exe
28/11/2019 17:26
Applicazione
77.873 KB


CooCox CoIDE --- C:/Users/Ernesto/Documents/RADIO/Radiosonde/RS41HUP-master-i2nos/RS41HUP_V02/RS41HUP_V02.coproj
File Edit View Project Flash Debug Search Help
Components
Device
main.h
config.h
boomsens.h
morse.c
#define SEND_RTTY 0 // Set to 0 to disable RTTY
//**************RTTY Data Format**********
// $$$<callsign>,<frame#>,[<hh:mm:ss>],[<latitude>,<longitude>],[<height>],[<speed>],[<rtty comment>],[
#define RTTY_CALLSIGN "IZ2FLY" // put your RTTY callsign here, max. 15 characters
#define SEND_RTTY_TIME 1
#define SEND_RTTY_LATLON 1
#define SEND_RTTY_HEIGHT 1
#define SEND_RTTY_SPEED 1
#define SEND_RTTY_MESSAGE 1
#define SEND_RTTY_TEMPERATURE 1
#define SEND_RTTY_VOLTAGE 1
#define SEND_RTTY_SATELLITES 1
#define SEND_RTTY_GPSDATA 1
Project
Target RS41HUP_V02
RS41HUP_V02
cmsis
cmsis_boot
stm_lib
syscalls
aprs.cpp
aprs.h
boomsens.c
boomsens.h
config.h
delay.c
delay.h
f_rtty.c
f_rtty.h
init.c
init.h
locator.c
locator.h
main.c
main.h
morse.c
Select Toolchain Path
Toolchain Path: (the directory where "arm-none-eabi-gcc.exe"existed)
C:\Program Files (x86)\GNU Tools ARM Embedded\5.2 2015q4\bin
Browse
OK
//*************RTTY Speed********** si4032
#define RTTY_SPEED 75 // RTTY baudrate
//*************rtty bits********** si4032
#define RTTY_7BIT 1 // if 0 --> 5 bits
//*************rtty stop bits********** si4032
#define RTTY_USE_2_STOP_BITS 0
//********** APRS
#define SEND_APRS 1 // Set to 0 to disable APRS
Console
Search
No consoles to display at this time.


CooCox CoIDE --- C:/Users/Ernesto/Documents/RADIO/Radiosonde/RS41HUP-master-i2nos/RS41HUP_V02/RS41HUP_V02.coproj
File Edit View Project Flash Debug Search Help
New Project
Open Project...
Close Project
Select Toolchain Path
Build F7
Rebuild Ctrl+R
Clean


Nuova cartella
Nome
Ultima modifica
Tipo
Dimensione
cmsis
09/05/2020 17:02
Cartella di file
cmsis_boot
09/05/2020 17:02
Cartella di file
docs
09/05/2020 17:02
Cartella di file
RS41HUP_V02
09/05/2020 17:02
Cartella di file
stm_lib
09/05/2020 17:02
Cartella di file
syscalls
09/05/2020 17:02
Cartella di file
RS41HUP_V02.coproj
18/05/2020 12:45
CoIDE Project
9 KB
Tipo - CoIDE Project
Dimensione - 8,46 KB
Ultima modifica - 18/05/2020 12:45
Nome file: RS41HUP_V02.coproj
All Projects(*coproj;*.cob;*.uvp
Apri
Annulla


CooCox CoIDE --- C:/Users/Ernesto/Documents/RADIO/Radiosonde/RS41HUP-master-i2nos/RS41HUP_V02/RS41HUP_V02.coproj
File Edit View Project Flash Debug Search Help
Components
Device [STM32
New Project
Open Project...
Close Project
Select Toolchain Path
Build F7
Rebuild Ctrl+R
Clean


CooCox CoIDE --- C:/Users/Ernesto/Documents/RADIO/Radiosonde/RS41HUP-master-i2nos/RS41HUP_V02/RS41HUP_V02.coproj
File Edit View Project Flash Debug Search Help
Program Download
Flash Erase
Components
Device [STM32F100C8]
Project
Target RS41HUP_V02
RS41HUP_V02
cmsis
cmsis_boot
stm_lib
syscalls
aprs.cpp
aprs.h
boomsens.c
boomsens.h
config.h
delay.c
delay.h
f_rtty.c
f_rtty.h
init.c
init.h
locator.c
locator.h
main.c
main.h
morse.c
config.h
boomsens.h
morse.c
15 #define SEND_RTTY 0 // Set to 0 to disable RTTY
16 //***************RTTY Data Format**********************
17 // $$$<callsign>,<frame#>,[<hh:mm:ss>],[<latitude>,<longitude>],[<height>],[<speed>],[<rtty comment>],[
18 #define RTTY_CALLSIGN "IZ2FLY" // put your RTTY callsign here, max. 15 characters
19 #define SEND_RTTY_TIME 1
20 #define SEND_RTTY_LATLON 1
21 #define SEND_RTTY_HEIGHT 1
22 #define SEND_RTTY_SPEED 1
23 #define SEND_RTTY_MESSAGE 1
24 #define SEND_RTTY_TEMPERATURE 1
25 #define SEND_RTTY_VOLTAGE 1
26 #define SEND_RTTY_SATELLITES 1
27 #define SEND_RTTY_GPSDATA 1
28
29 #define RTTY_COMMENT " test " // max. 25 characters
30 #define RTTY_WWL 1 // Send WWL instead of the comment
31 // World Wide Locator pairs (precision)
32 #define PAIR_COUNT 3 // max. 6 (12 characters WWL)
33
34 #define RTTY_FREQUENCY 432.428f //Mhz middle frequency
35 //#define RTTY_FREQUENCY 432.500f //Mhz middle frequency
36
37 //************RTTY Shift********************** si4032
38 #define RTTY_DEVIATION 0x2 // RTTY shift = RTTY_DEVIATION x 270Hz
39
40 //************RTTY Speed********************** si4032
41 #define RTTY_SPEED 75 // RTTY baudrate
42
43 //************rtty bits********************** si4032
44 #define RTTY_7BIT 1 // if 0 --> 5 bits
45
46 //************rtty stop bits****************** si4032
47 #define RTTY_USE_2_STOP_BITS 0
48
49
50 //********** APRS
51 #define SEND_APRS 1 // Set to 0 to disable APRS
Console
Search
Build
[cc] 24 files are up to date.
[cc] 0 files to be recompiled from dependency analysis.
[cc] 0 total files to be compiled.
Program Size:
text data bss dec hex filename
31665 212 2048 33925 8485 RS41HUP_V02.elf
BUILD SUCCESSFUL
Total time: 1 second
RS41HUP_V02
Writable
Smart Insert
19 : 25
Sign in to CooCox...
Scrivi qui per eseguire la ricerca
ITA
IT
12:45
18/05/2020