## Vega

Firmware Upgrading Procedure

**Operating Manual – English 1.00** 



## Introduction

This document will describe the steps involved to successfully upgrade the Vega range of instruments with the latest firmware. All Vega instruments have a RS232 communications port as standard which will allow the connection of the instrument to a computer. If your computer does not have a RS232 communication port then an external RS232 to USB converter cable will have to be used.

## Please follow the steps below in order to successfully upgrade your instrument.

1) Connect the RS232 port on the Vega instrument to the PC RS232 port as described in the table below. If the computer does not have a RS232 port then an external RS232 to USB converter will have to be used. Use the following pinouts.

PC D9 Female Pin	Function
Pin 2	Pin 3 (RS232 TXD)
Pin 3	Pin 4 (RS232 RXD)
Pin 5	Pin 2 (Gnd)

2) Download and install the STM Flash loader application. Also download and unzip the Vega firmware file to a known location on your hard drive. The unzipped file will have the Vega model and firmware version with a .hex extension.

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3) Run the application and select the PC COM port that is connected to the Vega unit. Also change the Timeout parameter to 1. Make sure your screen matches that of below.

	Ilash Loader Demonstrator —			
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	Select the communication port and set settings, then click next to open connection.			
Select the PC COM port that the Vega unit is attached	© UART COM4 ▼ Parity Even Baud Rate 115200 ▼ Echo Disable	✓ Change t	to 1	
	Back Next Cancel	Close		

- 4) Apply power to the Vega unit while pressing the F2 button. The Vega display will be black and it will look like it is switched off.
- 5) Click the "NEXT" button on the STM Flash Loader application. If the below screen is not shown then repeat the above steps by turning the power off to the Vega unit and starting over.



6) Click the "NEXT" button on the STM Flash Loader application. The below screen should be shown. Dont change anything on the screen.

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Please, sele	Please, select your device in the target list				
Target	STM32F1_Hi	gh-density_25	6K		•
PID (h)	0414	_			
	NA	-			
ыл (n)		_			
Version	2.2				
Flash mappin	)g				
Name	Start add	ess End ad	dress Size	B	W A
💊 Page0	0x 80000	00 0x 8000	)7FF 0x800	(2K) 🖪	6
💊 Page1	0x 80008	00 0x 8000	)FFF 0x800	(2K) 🔳	E
💊 Page2	0x 80010	00       0x 8001	7FF 0x800	(2K) 🔳	<b>•</b>
💊 Page3	0x 80018	00       0x 8001	FFF 0x800	(2K) 🔳	<b>•</b>
🔷 🗞 Page4	0x 80020	00       0x 8002	27FF 0x800	(2K) 🔳	8
🔷 🗞 Page5	0x 80028	00        0x 8002	2FFF 0x800	(2K) - 🛅	<b>•</b>
👒 Page6	0x 80030	00        0x 8003	37FF 0x800	(2K) 🔳	<b>E</b>
💊 Page7	0x 80038	00        0x 8003	3FFF 0x800	(2K) 🔳	<b>E</b>
💊 Page8	0x 80040	00       0x 8004	7FF 0x800	(2K) 🛛 🛅	6
💊 Page9	0x 80048	00       0x 8004	IFFF 0x800	(2K) 🛛 🛅	6
🛛 🦠 Page10	0x 80050	00 0x 8005	57FF 0x800	(2K) 🔳	<b>•</b>
💊 Page11	0x 80058	00 0x 8005	SFFF 0x800	(2K) 🖪	•
Legend : 🖪 Protected 📑 UnProtected					
	Back	Next	Cance	el	Close

7) Click the "NEXT" button on the STM Flash Loader application. The below screen should be shown. Select "Download to device". Click the 3 full stop button and select the firmware file that you have downloaded and unzipped (You will have to select hex files (\*.hex)). Make sure the "Jump to the user program" and the "Verify after download" boxes are checked.

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	C Erase	firmware file.		
Select "Download to device"	© All C Selection			
	Image: Constraint of the second s	Tick		
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	Back Next Cancel Close			

8) Click the "NEXT" button on the STM Flash Loader application. The code will now be loaded into the Vega unit.



9) Once the code has been loaded and verified then the below screen will be shown. Make sure that the progress bar is green and that it has successfully completed the operation. Click "Close" to exit the program.



10) Power the Vega instrument off and back on again. Verify that the correct version of code has been loaded into the Vega unit by checking the version number on the start up screen. It may be necessary to load factory defaults on the Vega unit by pressing and holding both the F1 button and Rotary control when the power is been applied.