# Vega / Blaze

Firmware Upgrading Procedure

**Operating Manual – English 1.01** 



# Introduction

This document will describe the steps involved to successfully upgrade the Vega/Blaze range of instruments with the latest firmware. All Vega/Blaze 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/Blaze 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/Blaze firmware file to a known location on your hard drive. The unzipped file will have the Vega/Blaze model and firmware version with a .hex extension.

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

	Flash Loader Demonstrate	or	-		×	
		life.aug	gmented			
	Select the communication port and set settings, then click next to open connection. Common for all families					
Select the PC COM port that the Vega/Blaze unit is attached to.	COM4 Baud Rate 115200 Data Bits 8	Parity     Echo     Timec	Disable			Change to 1
	Back	Next	Cancel	Clo	se	

- 4) Apply power to the instrument while pressing the F2 button. The Vega / Blaze display will be black and it will look like it is turned 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 instrument and starting over.



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

🧼 Flash Loa	der Demonstrato	or	_			
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Please, selec	Please, select your device in the target list					
Target	Target STM32F1_High-density_256K					
PID (h)	0414	0414				
BID (h)	NA					
Version	2.2					
Flash mappin	J					
Name	y Start address	End addre	ss Size	BWA		
No Page0	0x 8000000	0x 80007F				
No Page 1	0x 8000800	0x 8000FF				
No. Page2	0x 8001000	0x 80017F	0110000 (211)			
No Page 3	0x 8001800	0x 8001FF				
📚 Page4	0x 8002000	0x 80027F				
💊 Page5	0x 8002800	0x 8002FF				
💊 Page6	0x 8003000	0x 80037F		88		
Nage7	0x 8003800	0x 8003FF		법법		
💊 Page8	0x 8004000	0x 80047F	010000 (211)	법법		
💊 Page9	0x 8004800	0x 8004FF	F 0x800 (2K)			
💊 Page10	0x 8005000	0x 80057F	F 0x800 (2K)	88		
🙈 Page11	0x 8005800	0x 8005FF	F 0x800 (2K)	•••		
Legend :	🖪 Prot	ected	🗄 UnProtecte	Ь		
	Back	Next	Cancel	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", "Global Erase" and "Verify after download" boxes are checked.

	🧼 Flash Loader Demonstrator — 🗌 🗙			
	life.augmented	Click and load Vega / Blaze		
	C Erase	firmware file.		
Select "Download to device"	All     C Selection	7		
	Ownload to device     Download from file	Select		
	C:\Infiniteq\Vega\ALT-5\Flash Debug\Exe\ALT-5V102.hex			
	C Erase necessary pages C No Erase Global Erase	Tick		
	@ (h) 8000000	TICK		
	□ Optimize (Remove some FFs)			
	Apply option bytes			
	C Upload from device			
	Upload to file	Tick		
		TICK		
	C Enable/Disable Flash protection			
	DISABLE VRITE PROTECTION V			
	C Edit option bytes			
	Back Next Cancel Close			

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



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.

🧼 Flash Load	ler Demonst	rator	_		$\times$	
			ugmented			
Target	STM32F1_H	ligh-density_256K				
Map file	STM32F1_H	ligh-density_256K	.STmap			
	DOWNLOA C:VAHRS-1.					
File size 117.66 KB (120488 bytes) Status 117.66 KB (120488 bytes) of 117.66 KB (120488 bytes) Time 00:34						
Download operation finished successfully						
	Back	Next	Cancel	Cle	ose	

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