396-4512Y1 - SENTINEL ECU PROGRAMMING INSTRUCTIONS

This document explains everything related to updating the software on a Sentinel ECU. The first section explains how to install the software necessary to perform the update, and the next section explains the actual update procedure.

First the software needs downloaded from the following links. The first link is for the software used to load the Sentinel ECU Software and the second link goes to the page where the ECU Software can be located. All ECU Software versions are available, so locate the highest version and click to download it because that will be the current release version. This file will have a *.hex* extension. They are located under the Software Update heading.



Sentinel ECU Level 2 3CM Sentinel ECU Level 1 3CS

Download these to your laptop or to a USB Drive.

http://support.SurePointag.com/media/documents/SENTINEL_ECU_PROGRAMMING.zip

http://support.SurePointag.com/products/346

Setting up the Update Software

First time installs

- a. Extract the files from the Sentinel ECU Programming.zip file
 - i. Right click on file and select extract all
- b. Install Sentinel ECU FLASH utility.
 - i. Enter Sentinel ECU Flash Utility folder
 - ii. Run Setup
 - 1. Press yes on pop up if pops up
 - 2. Press next
 - 3. Press next
 - 4. Press yes
 - 5. Press Next
 - 6. Press Next

- 7. Make sure PEAK-System Technik GmbH CAN interface is selected
- 8. Press Next
- 9. Press Yes on Popup
- 10. Press Ok
- 11. Install PEAK CAN module driver
 - i. Press next
 - ii. Press I agree
 - iii. Press Next
 - iv. Press Next
 - v. Press Next
 - vi. Press Next
 - vii. Should be installing
 - viii. Press Finish
 - ix. Press Ok
- 12. Select PCAN USB
- 13. Press next
- 14. Type *SurePointNet* into box instead of *TestNet*
- 15. Press Next
- 16. Press OK
- iii. Copy winflash.ini file
 - 1. On computer go to
 - a. Go to the ECU Programming Software file that you downloaded and unzipped. Copy the *winflash* file that is here (configuration settings)
 - b. Go to C:\Program Files (x86)\STW\KEFEX Winflash\Winflash
 - c. Overwrite winflash.ini in this folder with the *winflash* file that you just copied. (Copy and paste from ECU Programming Software unzipped file to this file in Program Files (x86)).
- c. Plug CAN Module into Computer and let drivers install (this can take a few minutes)
 - i. It will not look like the computer is doing much, but after a minute a message that says device installed in the lower corner of the screen should appear. If this message does not appear, continue to next step after a minute.
- d. Run WinFlash(RIGHT CLICK ON WINFLASH and run as ADMINISTRATOR, VERY IMPORTANT!!)
 - i. Now setup driver and file location
 - 1. Press Select at top of page
 - 2. Press top configure button

	Setup	1		
	Network	\sim	Bus Off Handling	
	16 - PROGRAM	1MING 1G V	Handle Busoff automatically	
	Bitrate kBit/s	\smile	Retry sending on busoff	
	1000	~	Retry timeout: 10 ms	
	11bit IDs to receive			
	Add >>>	0x00000000 / 0x000007FF		
	Eda			
	EUK			
	Delete <<<			
	Beceive All			
	Note: all 29bit ID	s will be received; no filtering is pos	sible	
	onoral options			
	Create protocol file	L7-Protocol: CAN Layer 2	~	
	Timestamp format:	Absolute since system start (milli-	seconds.micro-seconds) 🗸 🗸	
Pre Tyj Sel	ess Create pe SurePoir lect Device	IntNet into the Creative steed in the On Ir	Cancel	
Pre Tyj Sel Pre Cre	ess Create pe <i>SurePoir</i> lect Device ess OK eate Network	NTNET into the Creative listed in the On Ir	Cancel eate Network Box nterface Box	
Pre Tyj Sel Pre Cre	ess Create pe <i>SurePoir</i> lect Device ess OK eate Network	Into the Cre Iisted in the On Ir SureFireNet	Eate Network Box	
Pre Tyj Sel Pre Cre	ess Create pe <i>SurePoir</i> lect Device ess OK eate Network eate network :	The construction of the	Eate Network Box	
Pre Tyj Sel Pre Cre	ess Create pe SurePoir lect Device ess OK eate Network eate network : n interface: 6: PCAN-USB	vok into the Cre listed in the On Ir SureFireNet	Cancel	
Pre Typ Sel Pre Cre	ess Create pe SurePoir lect Device ess OK eate Network eate network : n interface: <u>6: PCAN-USB</u>	vork vork vork vork vork vork vork vork	Eate Network Box hterface Box	

- 11. Press OK to go back to setup
- 12. Press OK to go back to main screen
- ii. Now setup file to program
 - 1. Press select at top next to HEX FILE
 - 2. Find the ISO Sentinel HEX file on the USB drive or the folder on your computer where you saved it
 - 3. Press OK or open to select
- iii. Computer should be set up now.

Updating the Sentinel ECU

1. Make sure that the PCAN programming adapter is plugged into the USB on your computer. Be sure the Sentinel ECU is powered on (2 green lights by harness connector).



- 2. Find the **Program** Connector on the ECU Harness. It is a 4 pin Deutsch connector.
- 3. Connect the programming adapter cable (212-02-3579Y1) between the PCAN USB adapter and **Program** connector on the ECU Harness



a. 4. Run Winflash

a.

a.



5. Select correct file to load. Verify Bitrate is 1000.

Comm-DLL: C:\WINDOWS\system32\stwpeak2	2.dll	💦 Configure 🕞 Select
Hex File: C:\\Documents\STW Workspace	e\V_1_1_5\result\VortexControlle	r-3CM_VT.hex Q View Del Select
Connected to node 0 Flashloader protocol version: V3.06i0 Block based checksums supported by this node Number of Flash sectors: 20 Device ID: "Y_ESX3CM" ID check: scanning hex file for ID ID check: scatch Changing hex record length to the maximum supported by the node (255) Sectors to erase: 34 56 Erasing sector 6 Total erase time: 16 s Recording usermame 'apopp' on node. Filesize 2573756Bytes Timestamp 25.02.2020 15:02:46 Line 3617 / 3617 Byte 915024 / 915024 at 17.29kB/s Total download time: 41 s Average rate: 21.52kB/s Verilying flash block checksums Total time: 61 s Flashing finished.	Configuration: CONFIG1 ~ Search Nodes Configure Node Flash Node	Flash Parameters Advanced Parameters Communication Image: Compary ID: Local ID: 0 Company ID: SFR Send ID: 81 29Bit ID Bitrate: 1000 kBit/s Type of Hex File Automatic

6. Press Flash Node button

Comm-DLL: C:\WINDOWS\system32\stwpeak2	Configure 🕞 S				
Hex File: C:\\Documents\STW Workspace\V_1_1_5\result\VortexController-3CM_VT.hex Q View 🕞 S					
Connected to node 0 Flashloader protocol version: V3.06r0 Block based checksums supported by this node Number of Flash sectors: 20 Device UK ESV201	Configuration:	Flash Parameters Advanced Parameters Communication Local ID: 0			
Device ID ISASCHM ID check: scanning hex file for ID ID check: match Changing hex record length to the maximum supported by the node (255) Sectors to erase: 3456 Erasing sector 6	Q Search Nodes	Company ID: SFR Send ID: 81 29Bit			
Total erase time: To s Recording username 'apopp' on node. Filesize 25737568ytes Timestamp 25.02.2020 15:02:46 Line 3617 / 3617 Bute 915024 / 915024 at 17.29kB/s	Configure Node	Bitrate: 1000 v kBit/s			
Total download time: 41 s Average rate: 21.52kB/s Verifying flash block checksums Total time: 61 s Elacking finished	👸 Flash Node	Type of Hex File Automatic			

- 7. Should see resetting node.
- 8. Then should see erasing sectors.
- 9. Then should see programming.
- 10. Then press OK at the end to start the ECU.
- 11. If things aren't right after software update, restore the system to **Default Settings.** Press SurePoint Logo icon > press on Sunburst > Auxiliary Settings Screen > **Default Settings.**