

# ENE KB9012

on

## LA-9941P VAUB0

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# 1 Introduction

## 1.1 Disclaimer

**USE THIS DOCUMENT AT YOUR OWN RISK**

**PLEASE BE AWARE THAT ANY INFORMATION YOU MAY FIND IN THIS DOCUMENT MAY BE INACCURATE, MISLEADING, DANGEROUS, ADDICTIVE, UNETHICAL OR ILLEGAL.**

Some information in this document may create an unreasonable risk for readers who choose to use the information. The Author do not take any warranties about the completeness, reliability and accuracy of this information. Any action you take upon the information in this document is strictly at your won risk, and the Author will not be liable for any losses and damages in connection with the use of this document.

## 1.2 Prologue

This How-to will instruct you how to read and write the **ENE KB9012** keyboard controller on the **LA-9941P** mainboard.

This process will unset the service tag. You can set the correct service tag afterwards.

## 1.3 Keyboard Controller

ENE's Keyboard Controller series is a highly integrated embedded controller (EC) with **128Kb** embedded flash for laptop platform. It appeals for low power consumption and best-in-class performance to satisfy customers' demand.

**The system support functions include:**

8051 MCU, LPC interface, PS/2 interface, Keyboard matrix encoder, PWM, A/D converter, D/A converter, Fan controller, SMBus interface, GPIO, PECI, one wire master, SPI and ENE Serial Bus.

**ENE's Keyboard Controller Series includes:**

KB901X, KB902X, KB903X, KB373X.

## 2 Preparation

### 2.1 Partlist

- SOFTWARE
  - Windows7 64Bit**
  - SVOD3 1.0.3.6**
- PROGRAMMER
  - SVODprogrammer ver 3**
- CABLES
  - 1x 1,0 mm Pitch 26 Pin AWM 20624 flex ribbon cable FFC**

## 2.2 Pinout

You need **KSI7**, **KSI6**, **KSI4**, **KSI5** and **KSO3**. Ground can be obtained from any usb ports.

|             |   |      |
|-------------|---|------|
| JKB PIN #02 | → | KSI7 |
| JKB PIN #03 | → | KSI6 |
| JKB PIN #04 | → | KSI4 |
| JKB PIN #06 | → | KSI5 |
| JKB PIN #15 | → | KSO3 |
| USB PORT    | → | GND  |

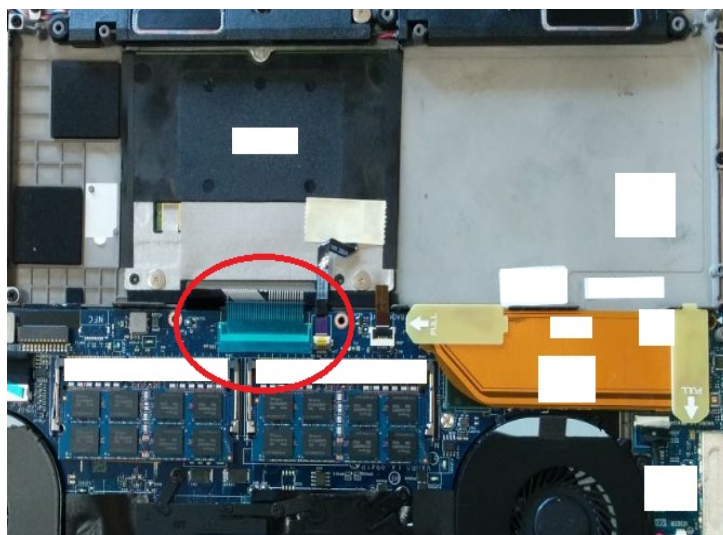


Figure 1: JKB keyboard connector

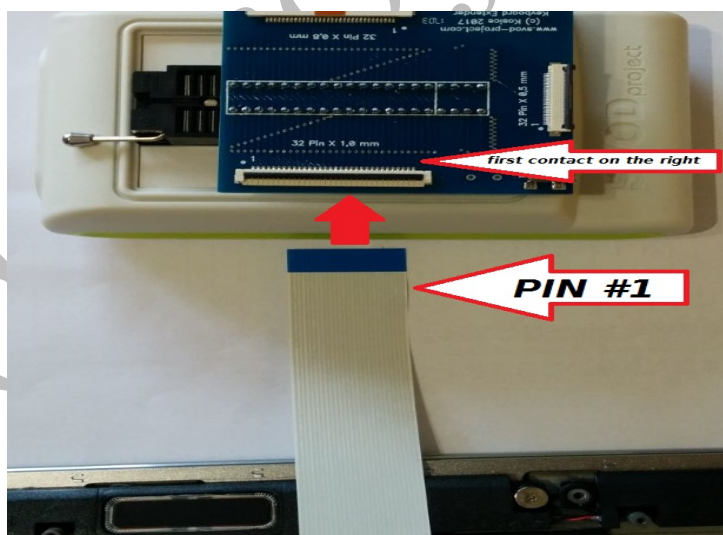


Figure 2: Plug in the far right, not left

## 2.3 Shift Trick

A small problem is the original JKB connector on the mainboard itself. It needs extra cables without corner on the right side. You could cut the SVOD3 cable, but i prefer to shift the cable one pin to the left.

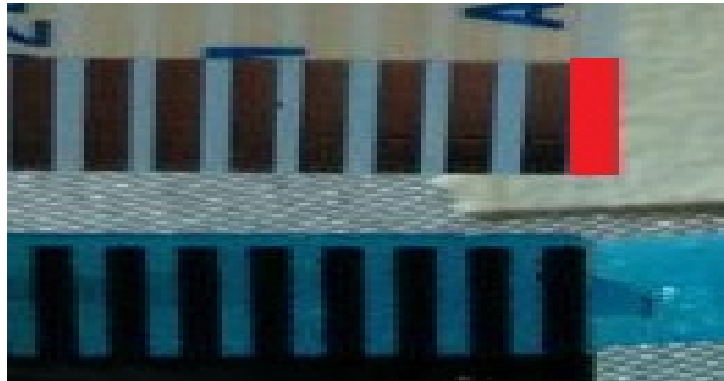


Figure 1: Svod3 ribbon cable with extra edge

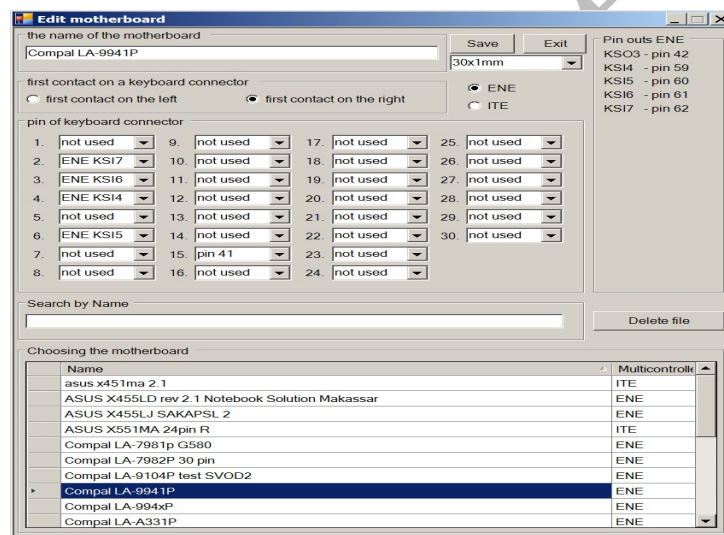


Figure 2: LA-9941P original pinout from database

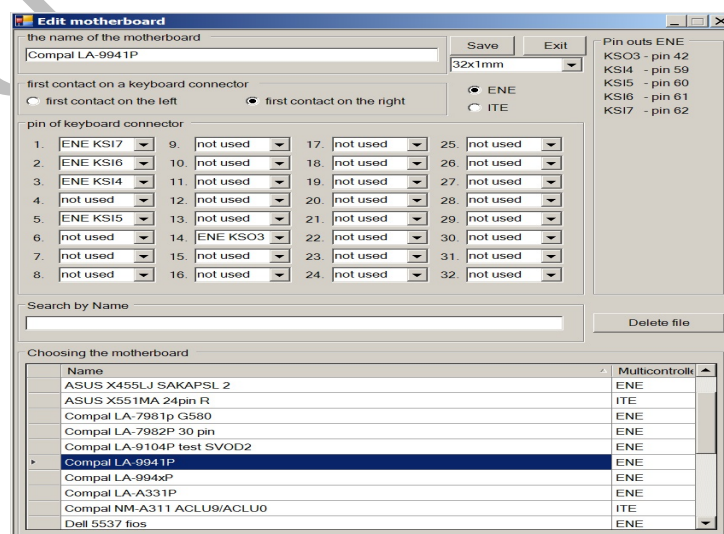
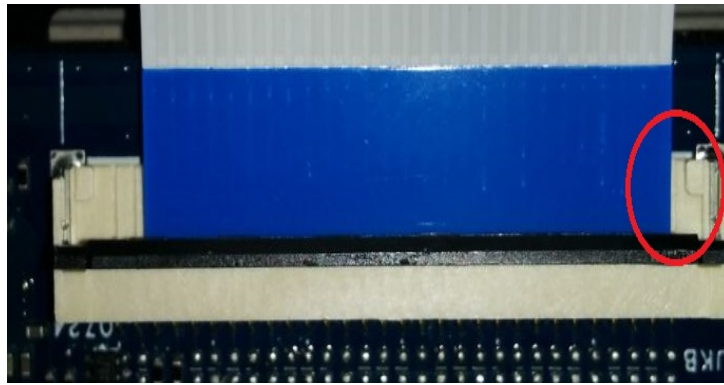
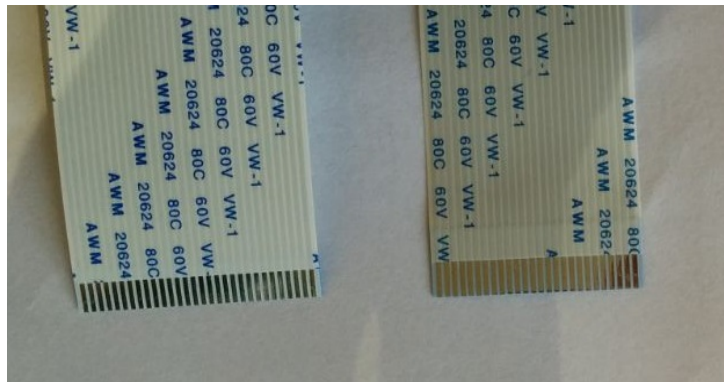


Figure 3: LA-9941P shifted pinout for 26pin cable



**Figure 4:** Shifted by 1 pin to the left in JKB



**Figure 5:** 30pin vs 26pin



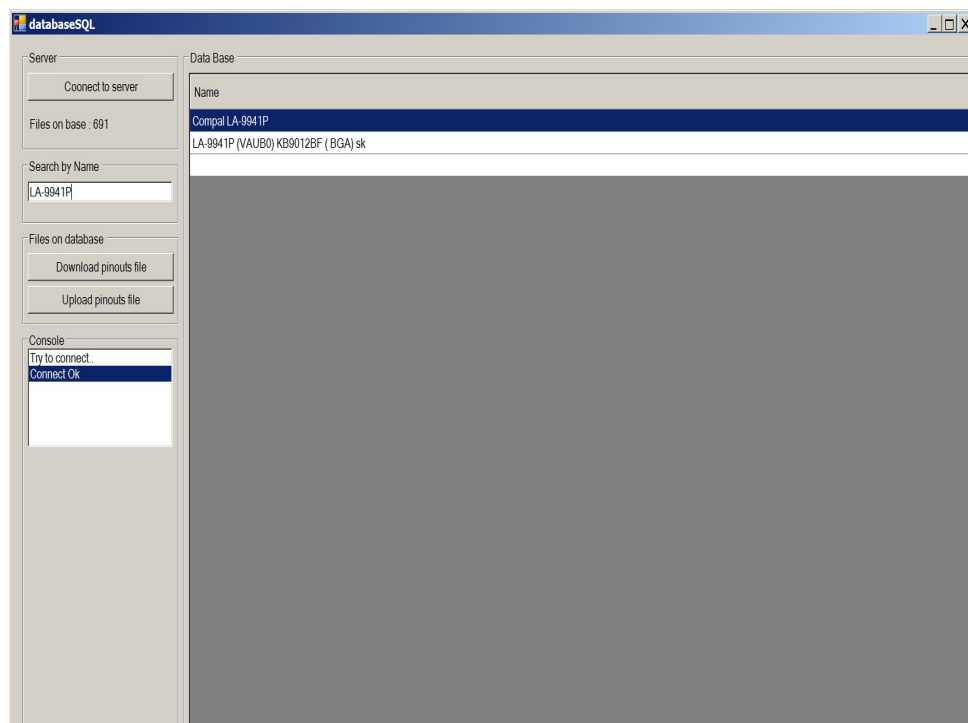
#### INFO

If you use this trick you cannot go on with the 30pin cable. You need to use the 26pin cable!

## 2.4 Remove Batteries

Please unplug or remove the main battery and also the CMOS battery.

## 2.5 Download Pinout



**Figure 6:** Use the online database to download the LA-9941P motherboard pinout.

### 3 Flashing

I assume you have connected the cables correct. The **ac connector** and **usb ground** must be detached unless you will be asked to attached.

#### 3.1 Set Mode

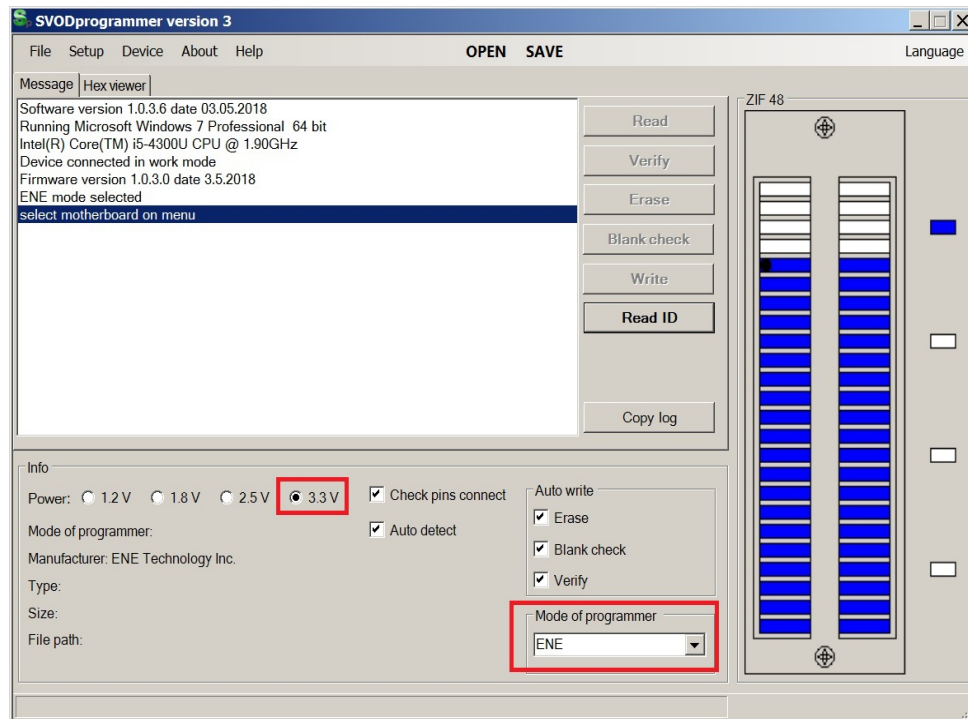


Figure 1: Choose 3.3V and the ENE Mode

#### 3.2 Select Motherboard

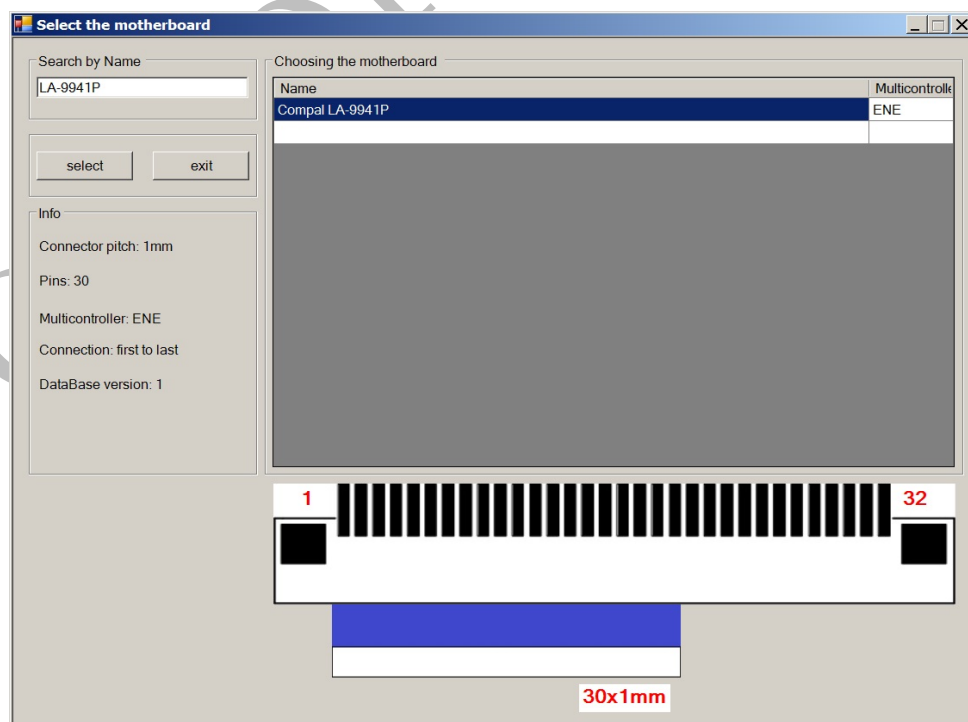
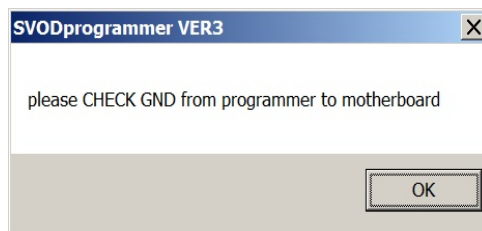
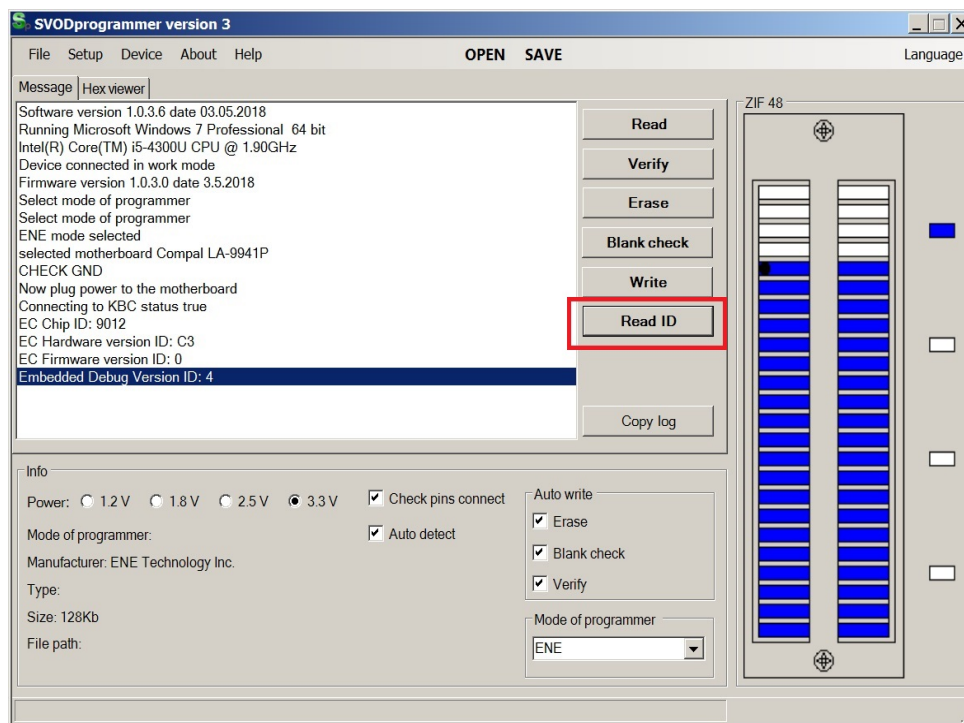


Figure 2: Choose your previously downloaded LA-9941P motherboard pinout

### 3.3 Read ID



**Figure 3:** Connect ground and click OK



**Figure 4:** Click the Read ID button



#### INFO

After selecting the motherboard pinout you will be asked to plug in the usb ground cable. If this is done you can also connect the ac power adapter cable.

### 3.4 Read KB9012

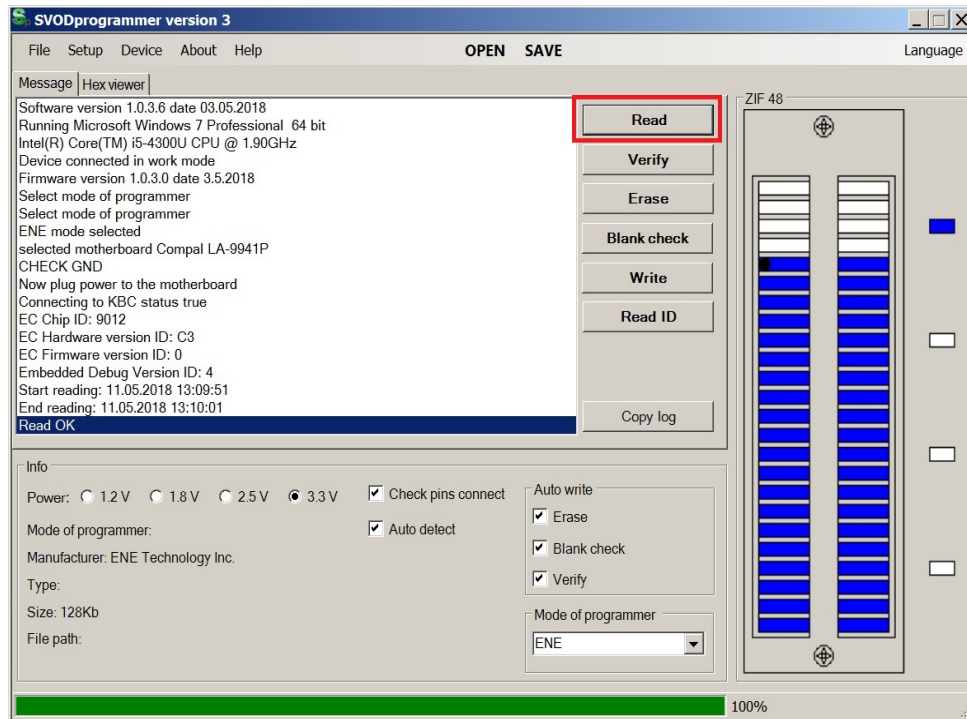


Figure 5: Make a backup of the actual content of the KB9012 and save it to a file

### 3.5 Write KB9012

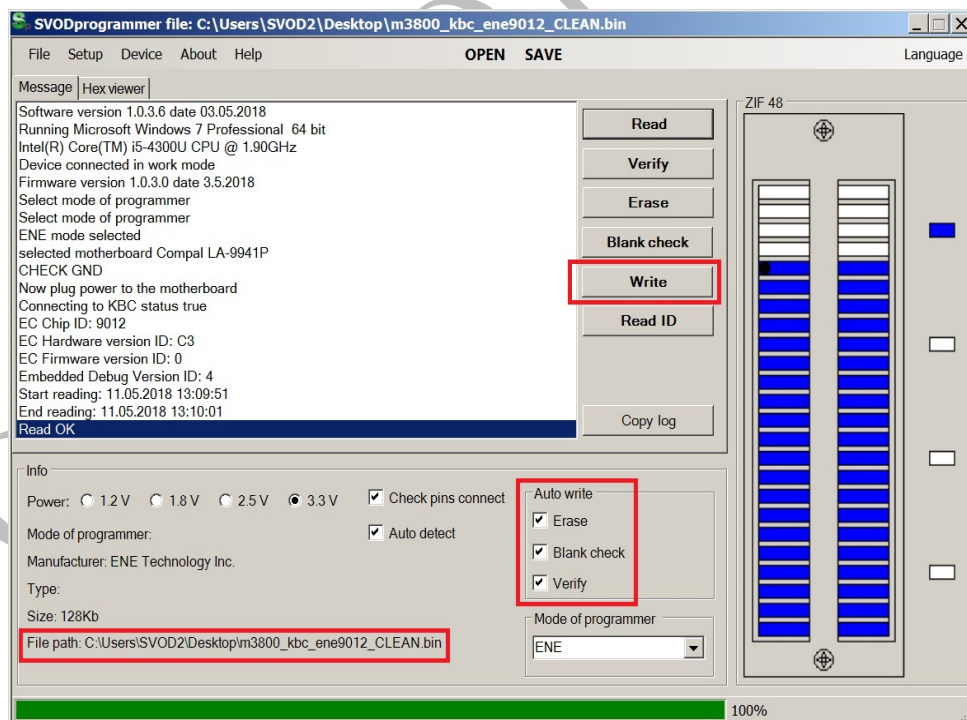


Figure 6: Make a backup of the actual content of the KB9012 and save it to a file

- 1) Load la-9941p\_m3800\_kb\_ene9012\_128Kb.bin
- 2) Click Write

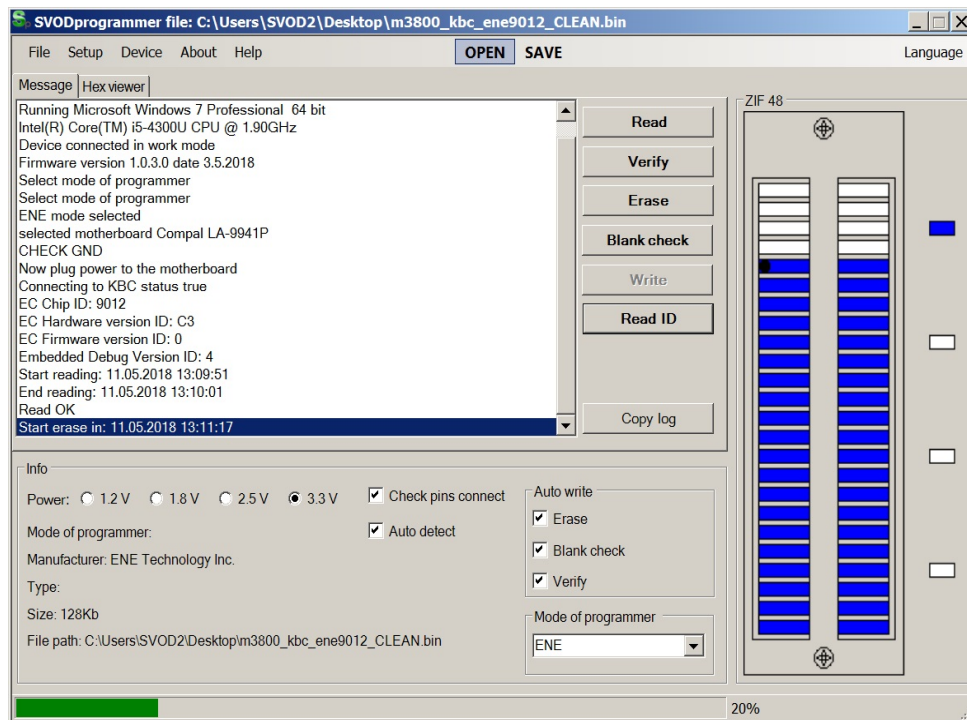


Figure 7: Flash process...

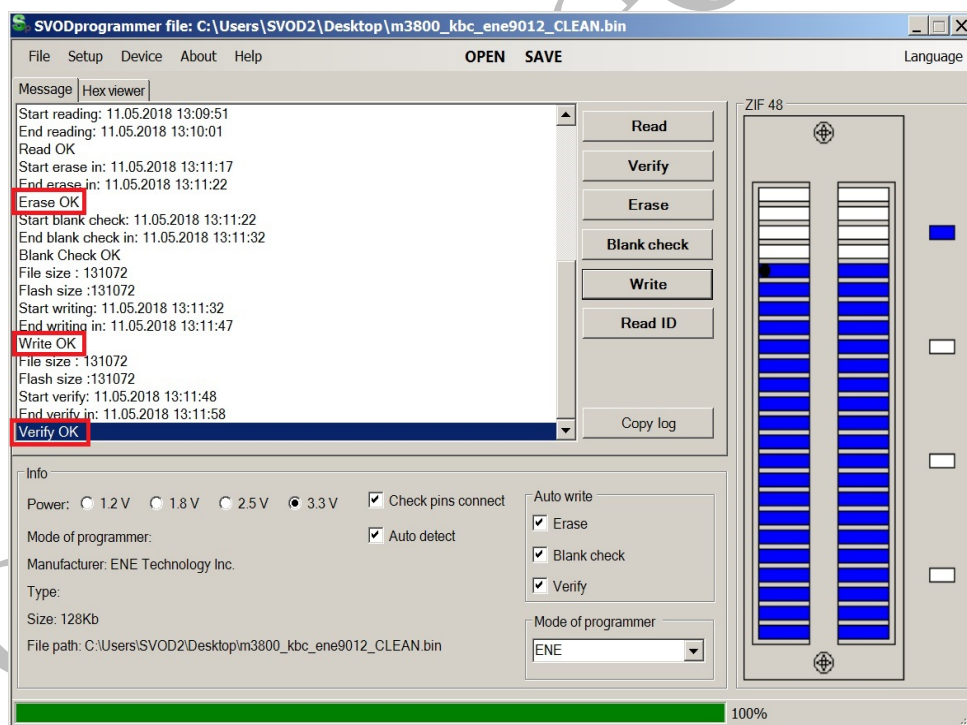


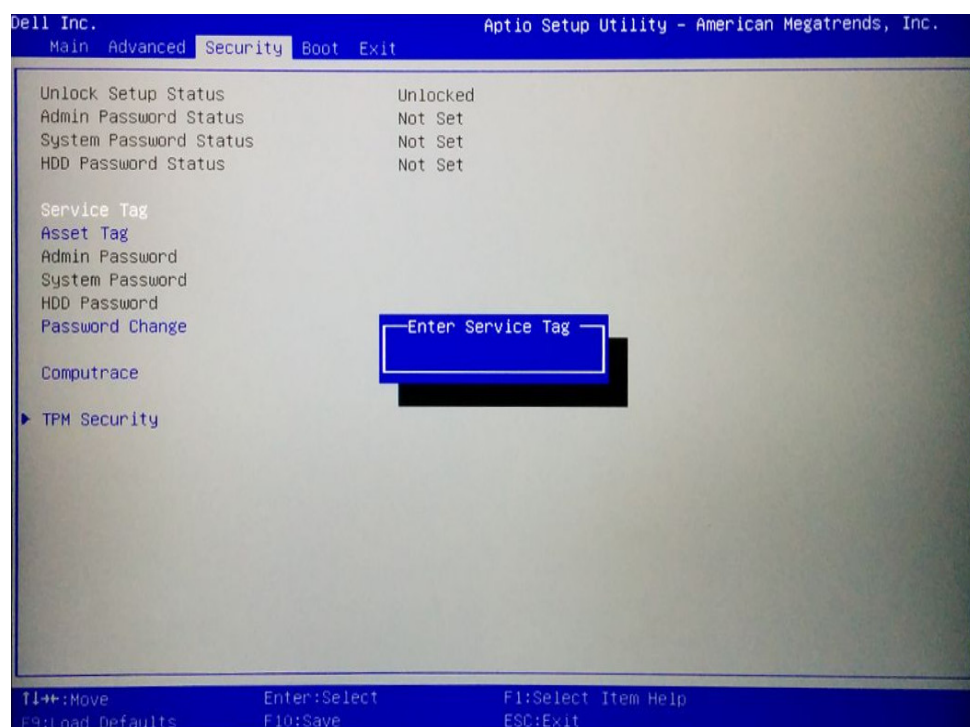
Figure 8: Successful flashing with verification

## 4 Set Service Tag

You can set a correct service tag in the BIOS.

### 1) Set Service Tag

*\* enter BIOS and set service tag*



**Figure 1:** Service Tag Installer

## 5 Question and Answers

- Where can i get the pinout of the mainboard?

*You can find the pinout and port label in the schematics.*

Svod-project.com

## 6 Files

### Attachments:

ENE KB9012 dump for LA-9941P: 

Svod-project.com