



MacBook T2 ROM SPI Flash Adaptor

For Universal 25 Series EEPROM SPI Flash Programmers



Product

This product is designed to provide a simple solution to flash the T2 ROM found in newer MacBook models. It features a high-quality level shifter design to convert data/signal voltages from as high as 5v down to 1.8v, allowing most universal 25 series SPI programmers the ability to read and write to the contents of the chip. A lot of research was done on the two primary chips used inside newer model MacBooks from Adesto and Macronix to ensure this product meets the requirements to properly read and write to the T2 ROM chip. It has been thoroughly tested in both simple and complex setups to ensure longevity and repeat usage without error. This utilizes the USON-8 4x3mm design, but also has the two middle ground planes to ensure proper grounding. The layout was designed based on the design recommendations of the T2 ROM chip manufacturer.

Directions

Solder **one** T2 ROM IC that you wish to read/write to on the board. Use your favorite programming tool of choice.

The following are common use cases where this product will be useful

- Change the serial number of the MacBook
- Check the T2 ROM for corruption
- Program a new T2 ROM on to the ROM IC

There are two locations where you can solder a T2 ROM IC on this product. Only utilize **one** at a time. I included two locations to solder the T2 rom as it did not impact signal integrity due to the small form factor and it increases the product longevity.

The following MacBook Models are fully supported by this product:

| MacBook T2 ROM Support | | |
|------------------------|-----------|--|
| Model # | Board # | MacBook Series |
| a2289 | 820-01987 | MacBook Pro (13-inch, 2020, Two Thunderbolt 3 ports) |
| a2251 | 820-01949 | MacBook Pro (13-inch, 2020, Four Thunderbolt 3 ports) |
| a2179 | 820-01958 | MacBook Air (Retina, 13-inch, 2020) |
| a2159 | 820-01598 | MacBook Pro (13-inch, 2019, Two Thunderbolt 3 ports) |
| a2141 | 820-01700 | MacBook Pro (16-inch, 2019) |
| a1990 | 820-01041 | MacBook Pro (15-inch, 2018 – 2019) |
| a1989 | 820-00850 | MacBook Pro (13-inch, 2018 – 2019, Four Thunderbolt 3 ports) |
| a1932 | 820-01521 | MacBook Air (Retina, 13-inch, 2018 – 2019) |

Models not listed with an M1 Processor do have a T2 ROM chip. This can be read and modified, but the serial number is no longer present on this chip (meaning you cannot modify the serial number for models with the m1 chip at this time).



Warranty

This product will have a 60-day warranty, covering premature failure that is not due to poor soldering practices. If determined the board failed prematurely, then a replacement board will be promptly sent out at no cost to the buyer.