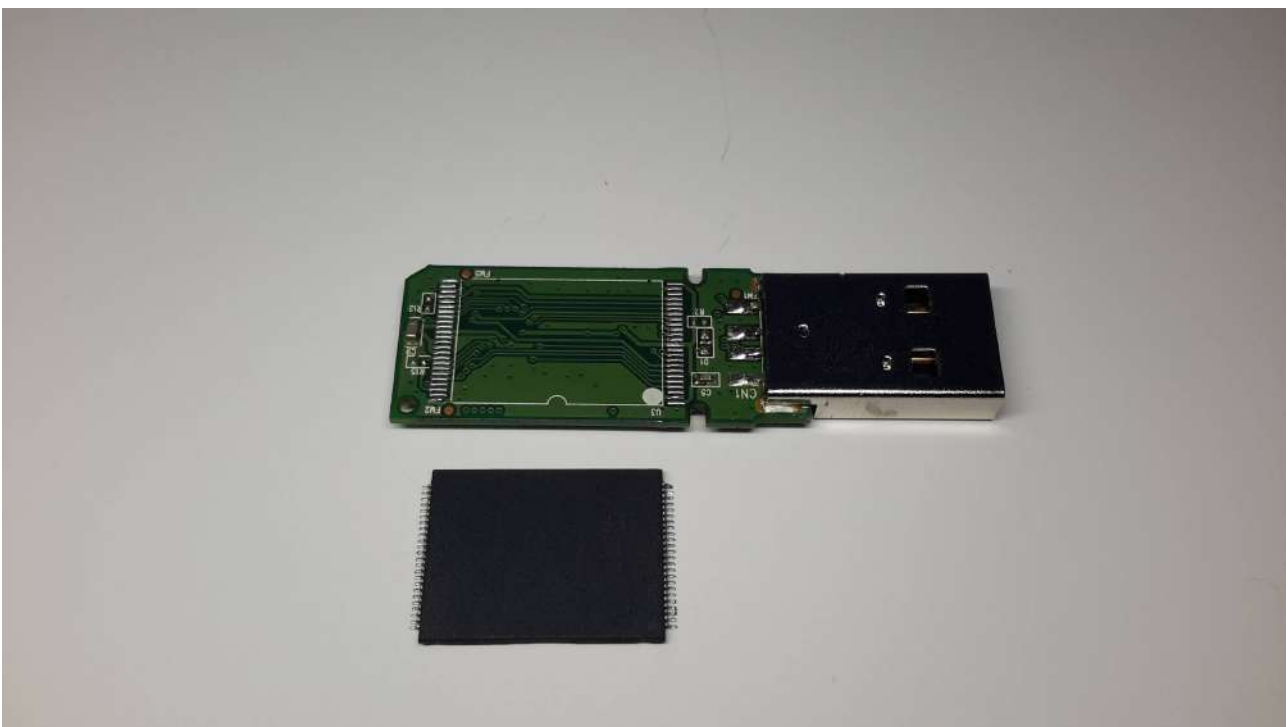
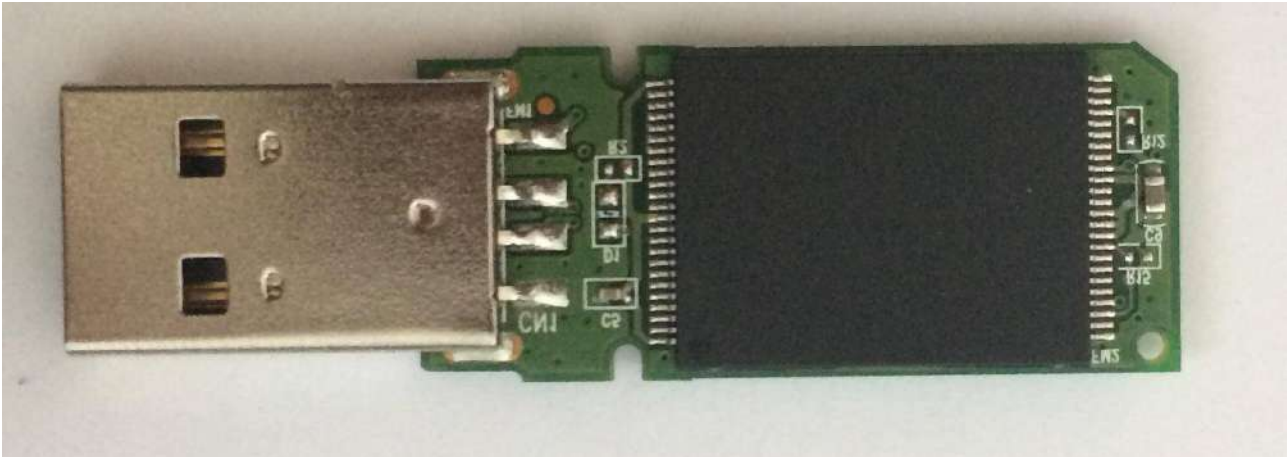


Lately, in NAND flash data recovery tasks, TSOP-48 packaged ICs with ceramic parts larger than the standard size, specifically 14×18 mm, are increasingly encountered. These dimensions contradict the specification (JEDEC MO-142 DD), but nevertheless they are present in real drives.

Although the pinout of this package type is the same as for the standard TSOP-48, the enlarged IC package size prevents installation into the standard TSOP-48 adapter from the PC-3000 FLASH kit after desoldering, making it impossible to read.



To support new package types (TSOP-48Wide), the TSOP-48 adapter included in the PC-3000 FLASH suite will be further refined, and all new kits shipped to users will come with the new adapter. To distinguish the modified adapter from the standard version, it will bear an additional sticker 'W' (wide).

Users with the standard TSOP-48 adapter are advised to use the available 'desoldering' adapters when dealing with such memory ICs. i.e., PC-3000 Flash Circuit Board (<http://www.acelab.ru/dep.pc/pc3000.flash.php#circuit-board>) or MultiBoard.

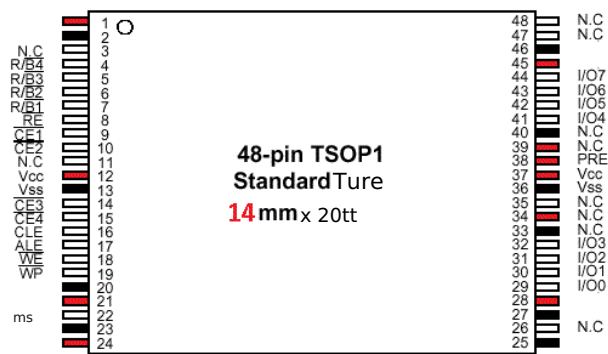
(<http://www.acelab.ru/dep.pc/pc3000.flash.php#multi-board>) with the TSOP-48/LGA-52 module. It should be noted that when using the described adapters, unlike TSOP-48, the possibility of automatically applying the power supply circuit is excluded. It is recommended to adhere to the following work order:

1. Desolder the microchip from the storage device and clean the contacts from excess solder.
2. Prepare the adapter for desoldering.
3. Solder the microchip onto the adapter according to power circuit 8 (details of power circuit 8 can be clarified through the dialog box "edit" in the "Power diagram" resources).
4. Connect to the reading device, create a temporary task and perform ID reading.
5. Check the microchip reference in the task for the recommended power scheme for this microchip.
6. Disconnect the adapter from the reading device and, using additional jumpers, implement the required power supply scheme.
7. Connect the adapter to the reading device, create a new task and perform the microchip reading in it.

If the ID of the microchip is not read when desoldering according to power scheme 8, it is recommended to implement power scheme 9 using additional jumpers and try reading the identifier again. If there is a PCB that the NAND flash microchip was desoldered from, it is recommended to use it as a source of information about the power scheme. The order of actions should be as follows:

the sequence of actions should be as follows:

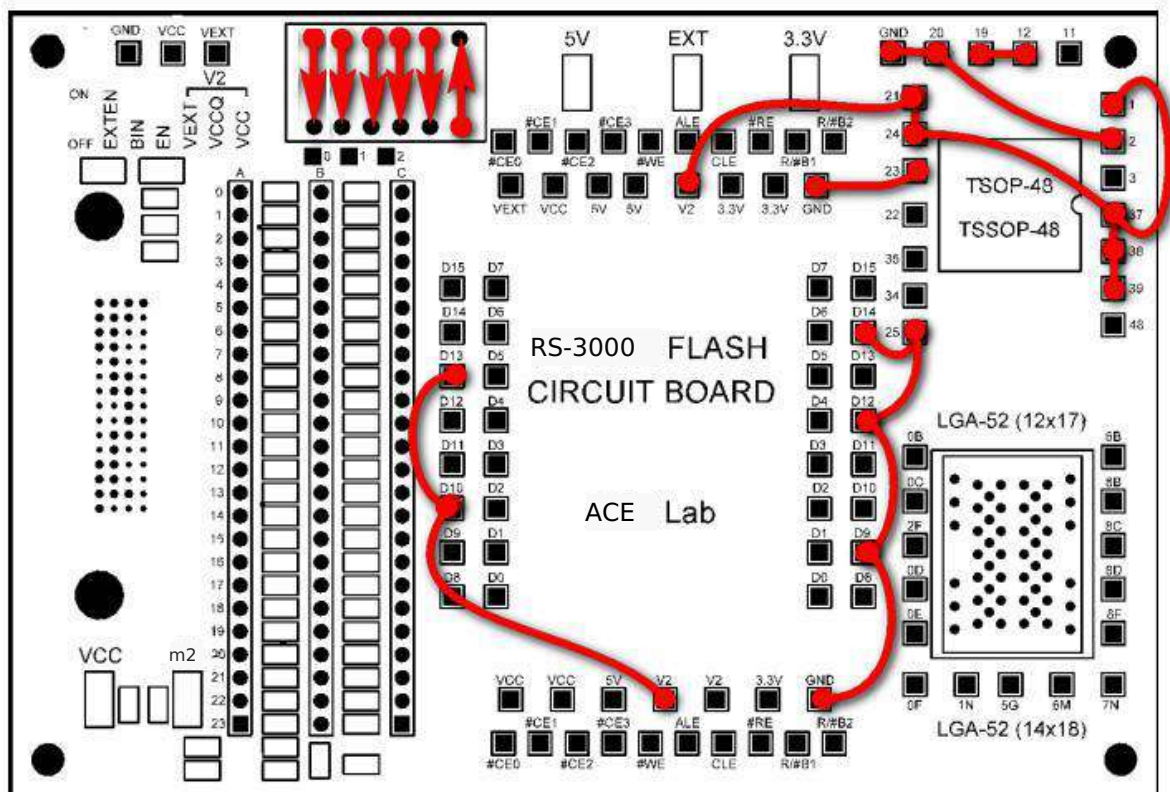
1. Desolder the microchip. Remove solder residue from contact pads where the microchip was soldered with a copper braid. Rinse with isopropyl alcohol;
2. Define terms: VSS = GND - ground, VCC = VCCQ - +3.3V power. The pad of a pin is the place on the board to which a pin of the memory chip is soldered.
3. Find the largest capacitor on the board. Set the multimeter to continuity mode. Touch the USB connector with one probe of the multimeter and the capacitor terminals with the other probe. The terminal that makes the multimeter beep is noted as VSS (ground). Solder a short black wire to this point.
4. In the same way find the capacitor terminal that would beep the multimeter when touched by one probe and the memory chip leg pad of pin 12 with the other probe. Mark this as VCC (power). Solder a red wire to this input.
5. Set the multimeter to continuity mode. With one probe connected to the black wire (see step 3), touch each pin pad / land on the memory chip with the other probe. If you hear a beep, mark this pin as connected to VSS (GND).
6. In the same way, with the red wire (see step 4) touch each pad of the memory chip with the other probe. If you hear a beep, mark this pin as connected to VCC (power). Example of measurement records:

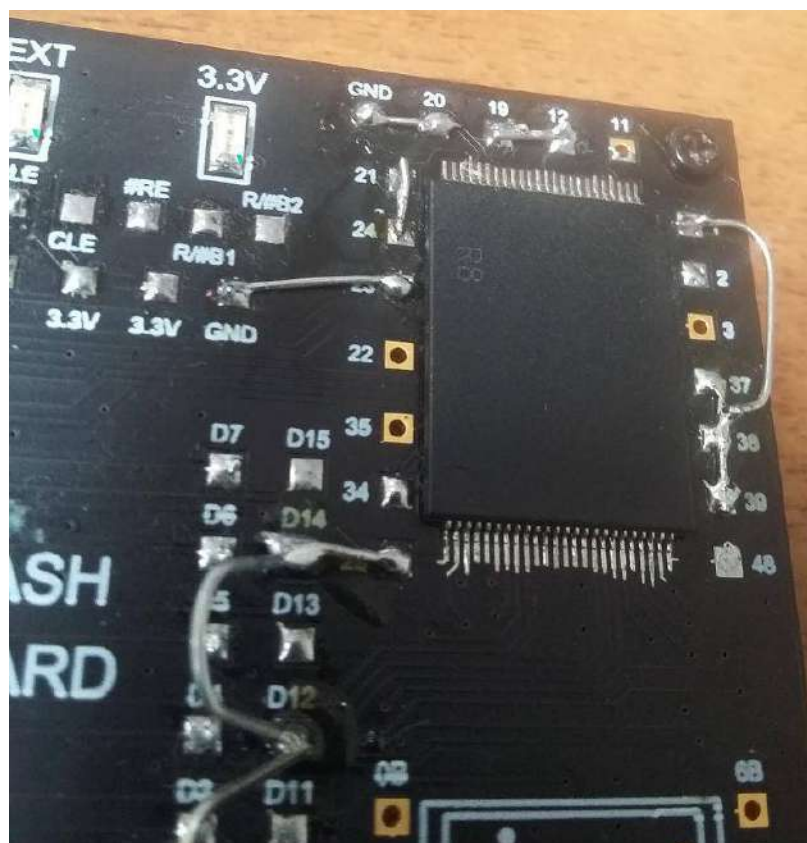


VCC= 21, 24, 1, 37, 38, 39, D13(45), D10 (28), 19
GND = 20, 2, 25, D14(46), D12(40), D9(27), 23

7. Then we solder the microchip to the PC-3000 FLASH CircuitBoard. Connect all marked pins as GND with the GND pad on the CircuitBoard, and the pins marked as VCC with V2 on the CircuitBoard.

Example of connection diagram different from 8 and example of desoldering on the adapter:





Users with the standard TSOP-48 adapter variant are recommended to send their adapter for free modification to the Wide variant. Details of this process should be arranged in advance by email (mx@acelab.ru).

The standard adapter can be modified by yourself. It is important to maintain very careful handling to prevent damage to the adapter and loss of its operability. Please note that self-modification will void the warranty on the adapter and is done at your own risk!

One of the possible modification options is presented below:

Instructions for modifying the TSOP-48 adapter

For the work, it is advisable to have a set of tools and materials on hand that will be needed during the modification process. These include: tweezers, scalpel, needle file, riffler file, burr, etc. Please note that the engineer determines the most convenient tool for performing the adapter modification for themselves.



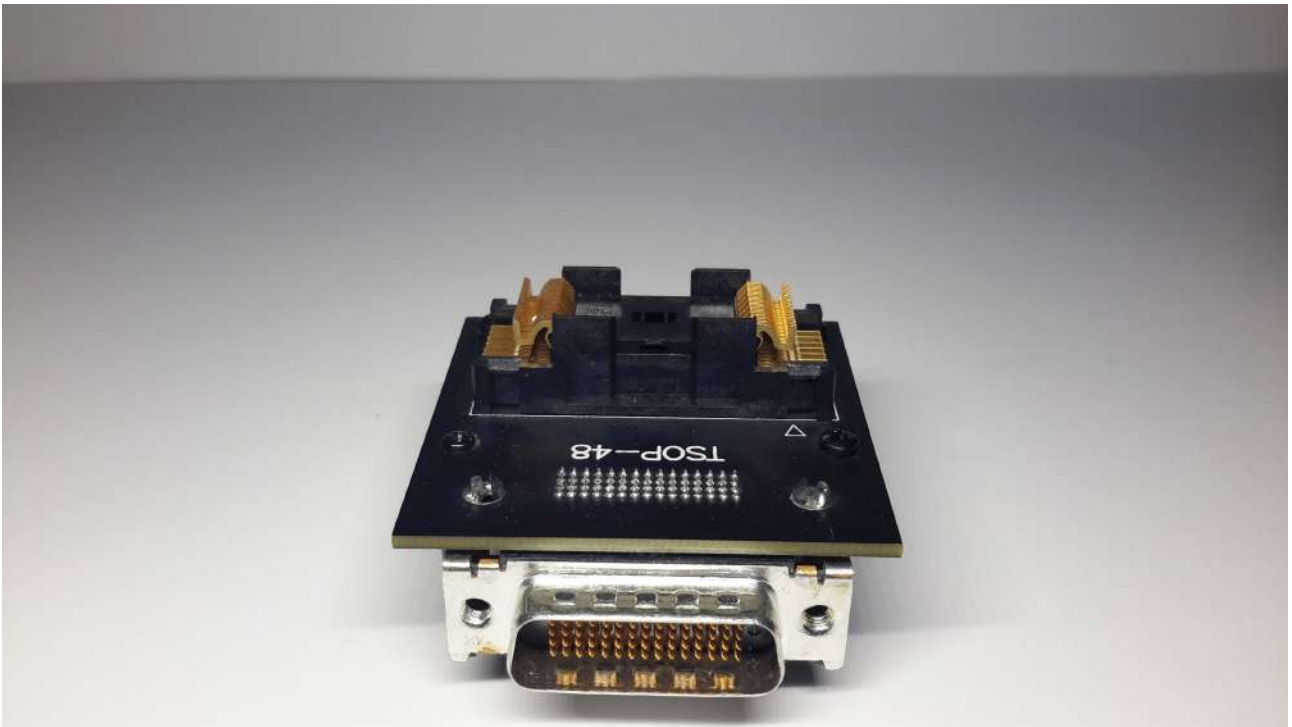
First, you need to remove the moving part of the adapter's clamping mechanism. For this, you can use tweezers. Gently move back the 4 latches.



When all four latches are slightly moved back, you will be able to remove the moving part of the adapter



The main reason why the wide integrated circuit does not fit in the adapter is due to the limiting flanges.



Our task is to remove them exactly as well.

There are many different ways to do this.

For example, you can use a scalpel/utility knife and carefully trim along the edges.

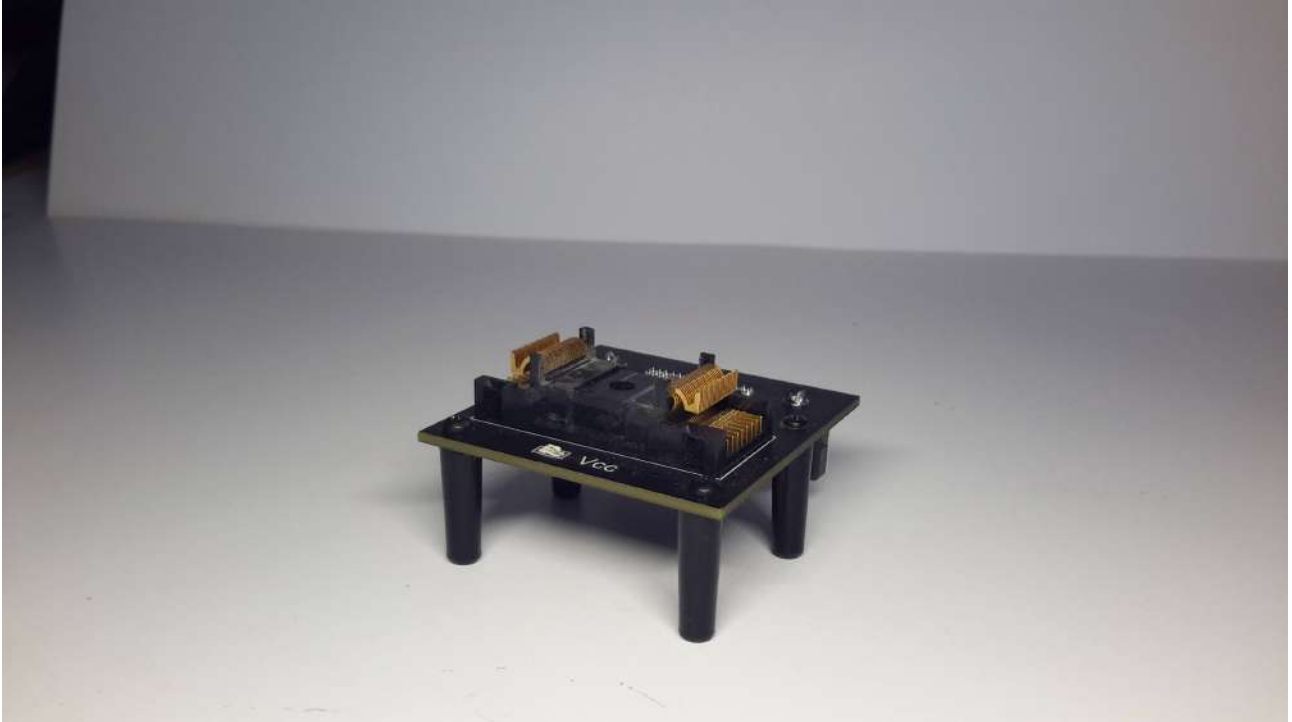


Other methods have proven themselves successful during adapter modernization:
use of a file, using a burr with the appropriate attachment, a coarse-grit sandpaper.

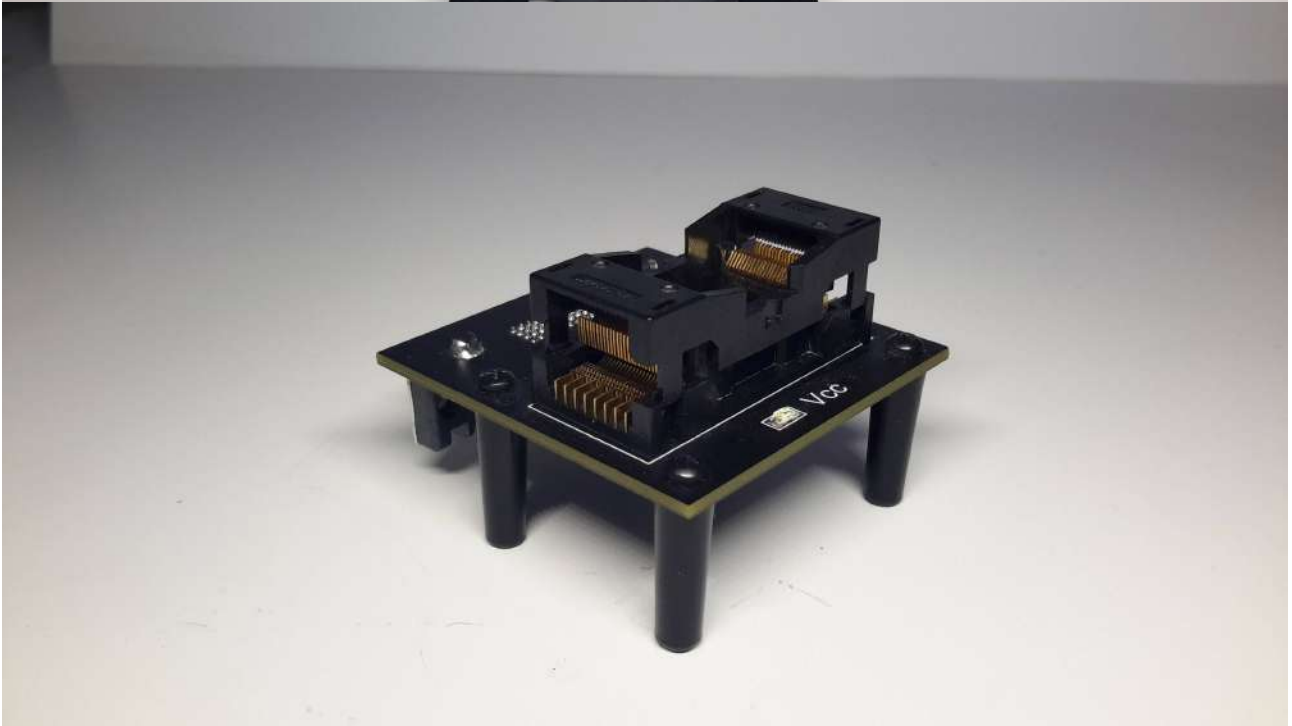
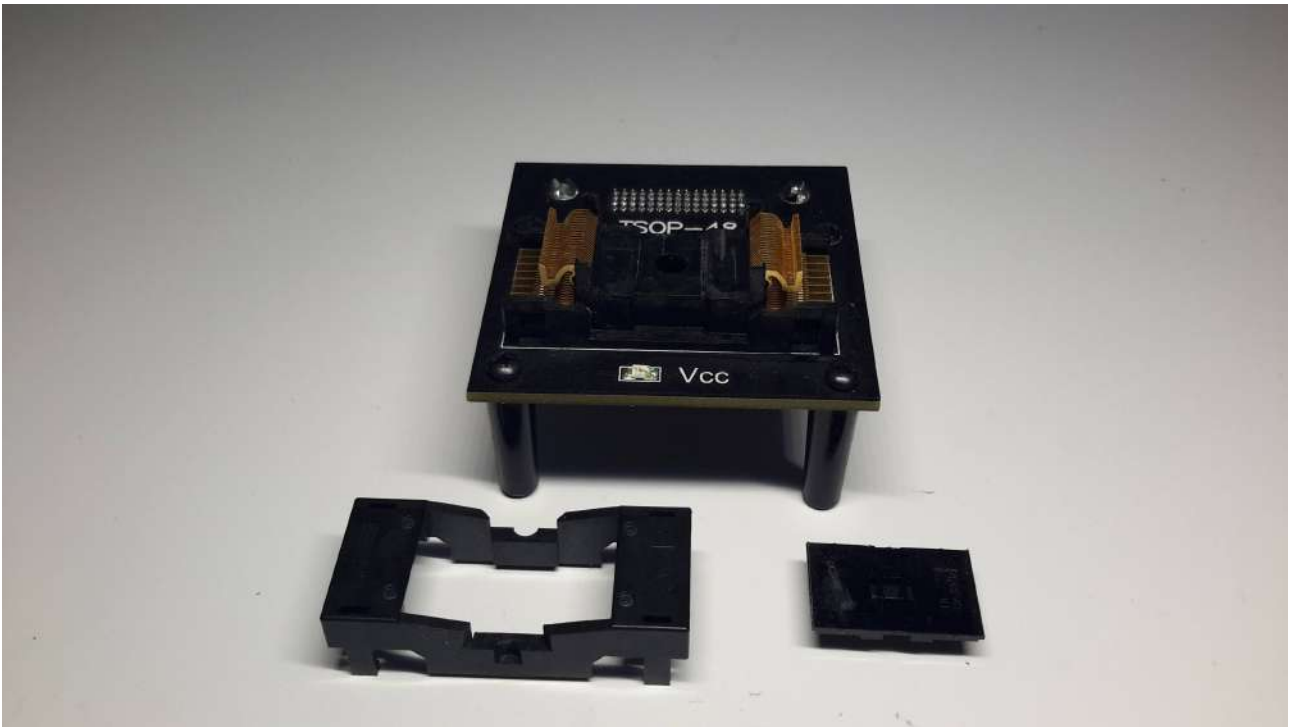
How deeply to scrub?

The first reference point is that with the plastic substrate removed, you can scrape it completely so that there is no bump at all

Vertically — up to the level of the special protrusion that runs along the legs of the adapter
It should look like this



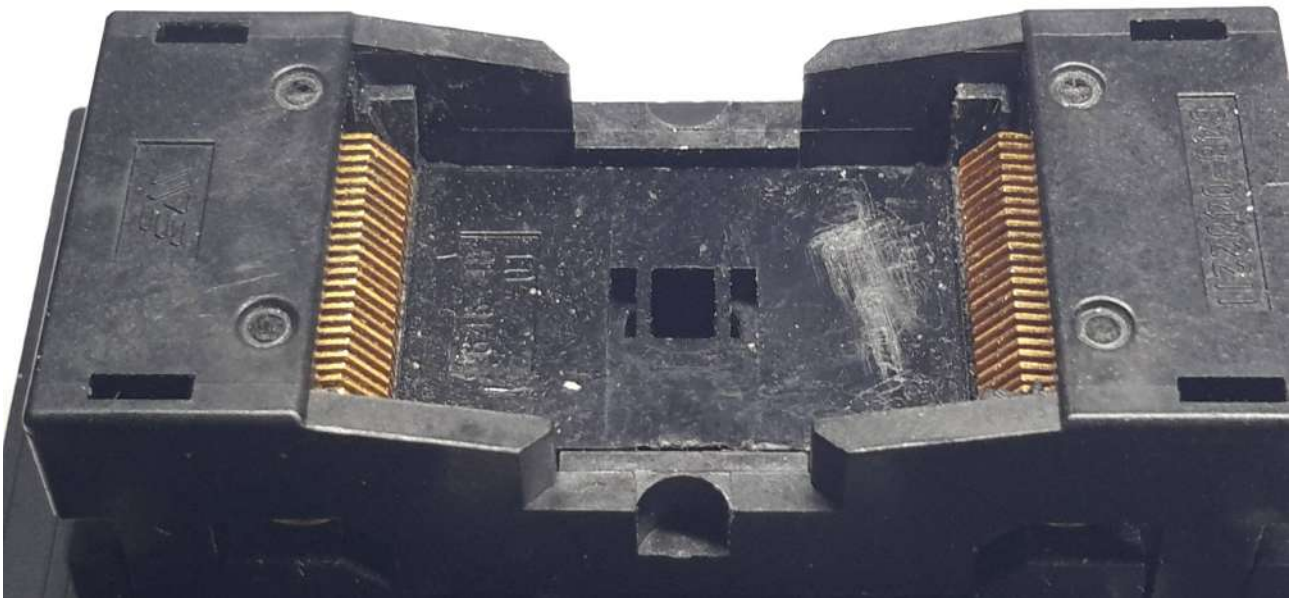
We remove all fine plastic dust and assemble the adapter in the reverse order



When installing the moving part of the adapter, we recommend simultaneously snapping all 4 latches. The easiest way to do this is by pressing the edges of the component with two fingers, as you would when installing a memory chip.

If the adapter pins do not align, you should remove the moving part and try snapping it again. Do not try to nudge the pins into place with tweezers. They will settle into place with correct and careful engagement.

All set, the adapter is ready to work with new wide memory chips



After the specified modification, the further operation with TSOP-48 chips in a wide package is performed in the standard manner.

