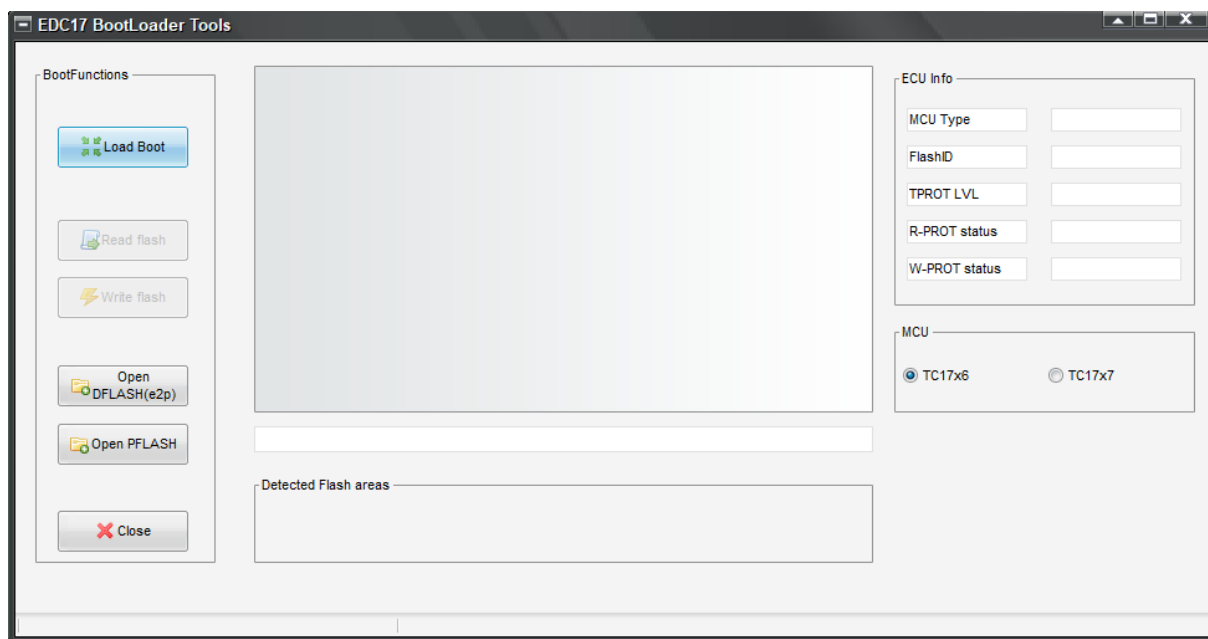


BACKGROUND

EDC17, based on Tricore processor is currently the latest evolution of Bosch Electronic Diesel Control (EDC) units. Special mode, named "Bootmode" gives an opportunity to access internal flash memory directly using special, external loaded program called "Bootloader"

EDC17 BOOTLOADER TOOLS



FEATURES:

- Able to boot Tricore TC17x6 and 17x7 series
- Read / write PFLASH (Program area) and DFLASH (emulated EEPROM) areas
- Auto checksum calculation for both PFLASH and DFLASH
- TPROT bypass for TP7-10

Currently tested EDC17 revisions are CP04,CP14,CP20,CP24,C46,C54 without external flash.

AUTOCHECKSUMMING

VCP can recalculate PFLASH area checksums in 2 ways:

- Method1: Hash+CRC
- Method2: Hash+CRC+RSA

Method 1 can be used for data sections (containing maps) however no guarantee, that even in no-critical sections ECU will accept such partly calculated security zones.

Method 2 is much slower comparing to method 1, however recalculates security zone fully and guarantees, that ECU will accept the modded flash. Note: depending to amount of sections to recalculate, whole process can take up to 2 hours. VCP will ask for a method before checksum update.

DFLASH (emulated EEPROM) is always fully recalculated.

USING BOOTLOADER TOOLS:

1. To read an area:
 - a. Connect bootpins, connect power to ECU
 - b. Press "Load Boot"
 - c. Disconnect power, press OK and connect power to ECU
 - d. Boot will be loaded along with protection info.
 - e. Select area to read from „Detected flash areas“
 - f. Press "Read flash"
2. To write an area:

BOOTPINS

During startup, CPU checks state of HWCFG pins and when they are set correctly, transfers control of further booting steps to external loader. We do recommend using special frame and needle probes, to position ECU and connect bootpins without soldering wires to the mainboard.

PINOUTS

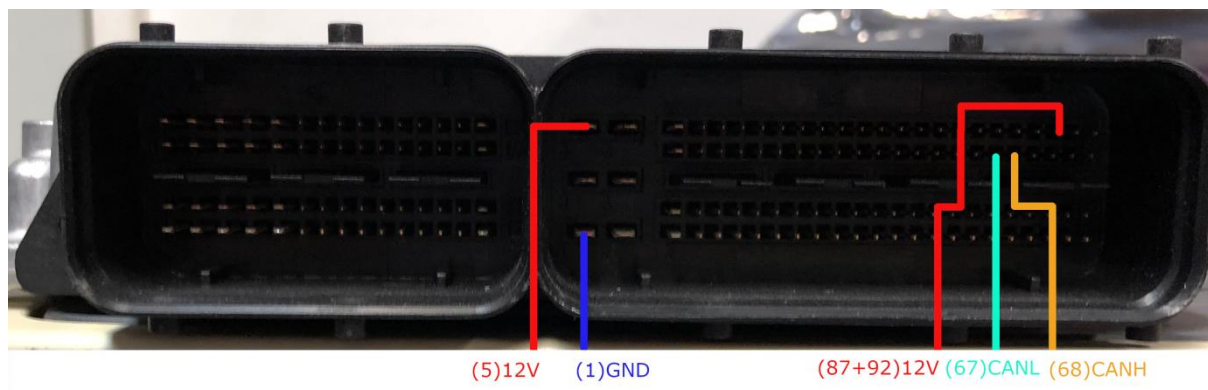


Figure 1 Main connector pinout

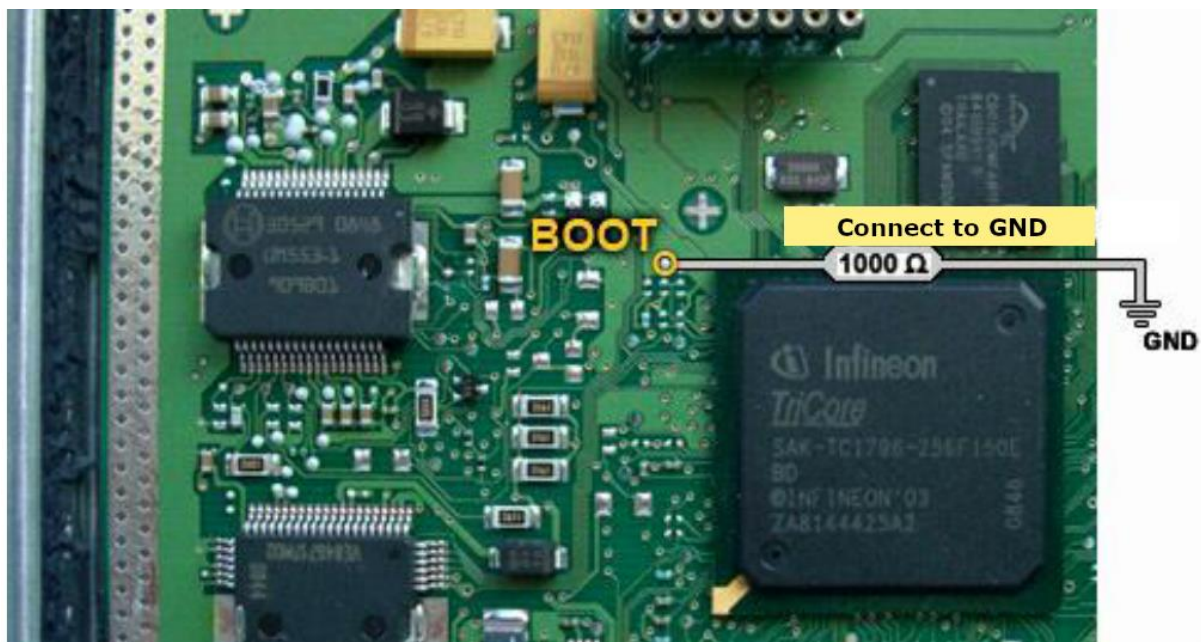


Figure 2 EDC17 CP14/20 BootMode Pin

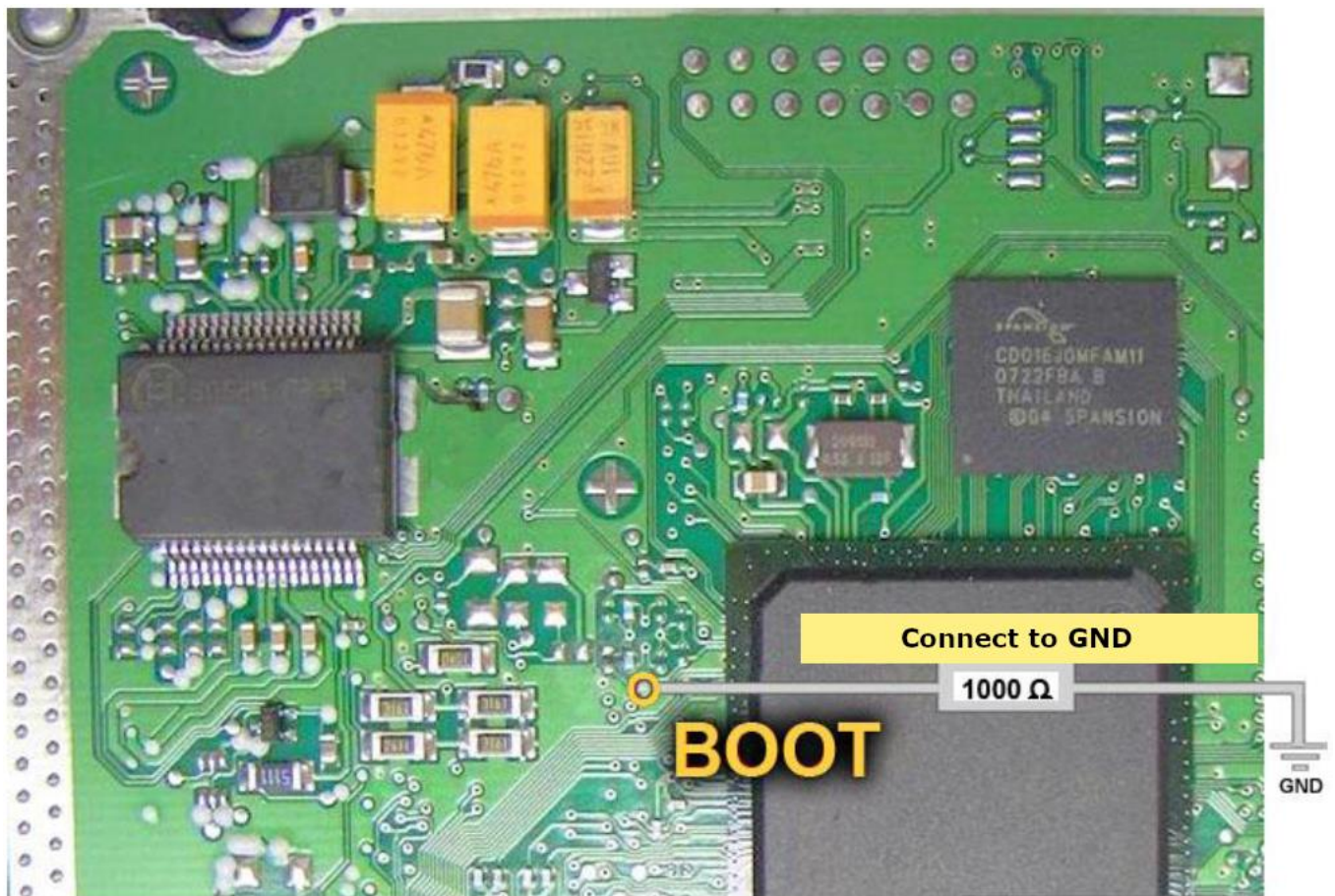


Figure 3 EDC17CP24 BootMode Pin

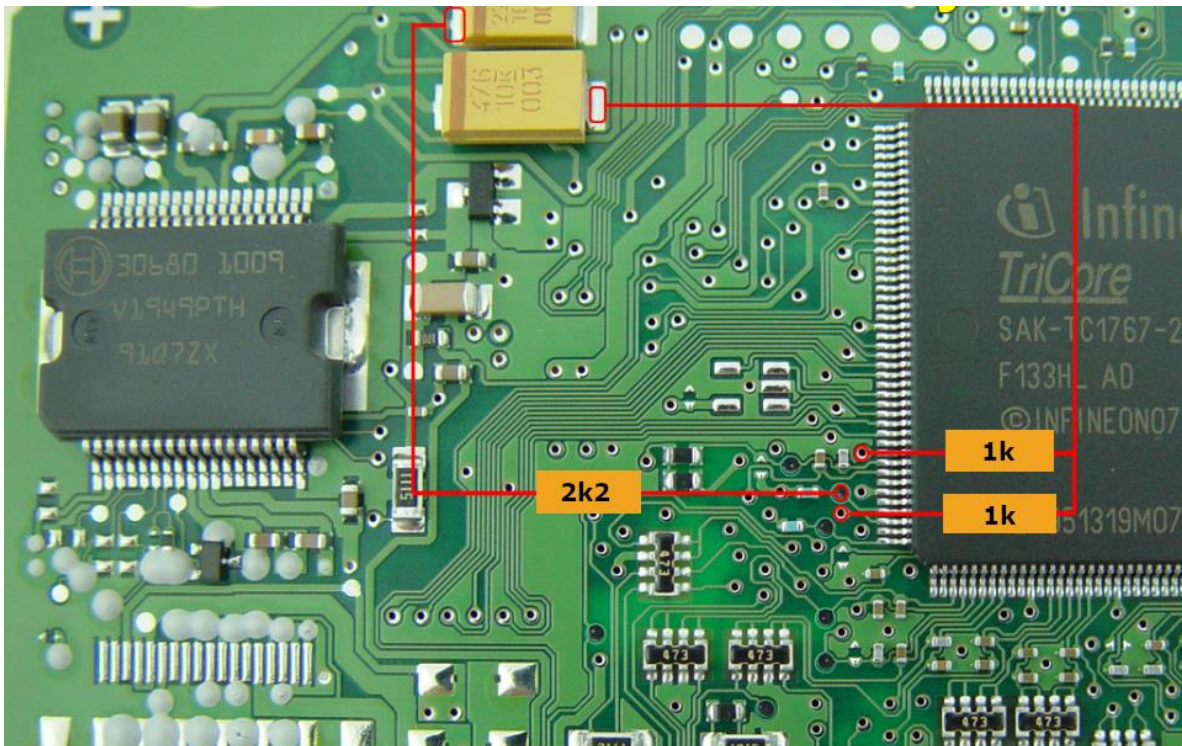


Figure 4 EDC17C46 BootMode Pin

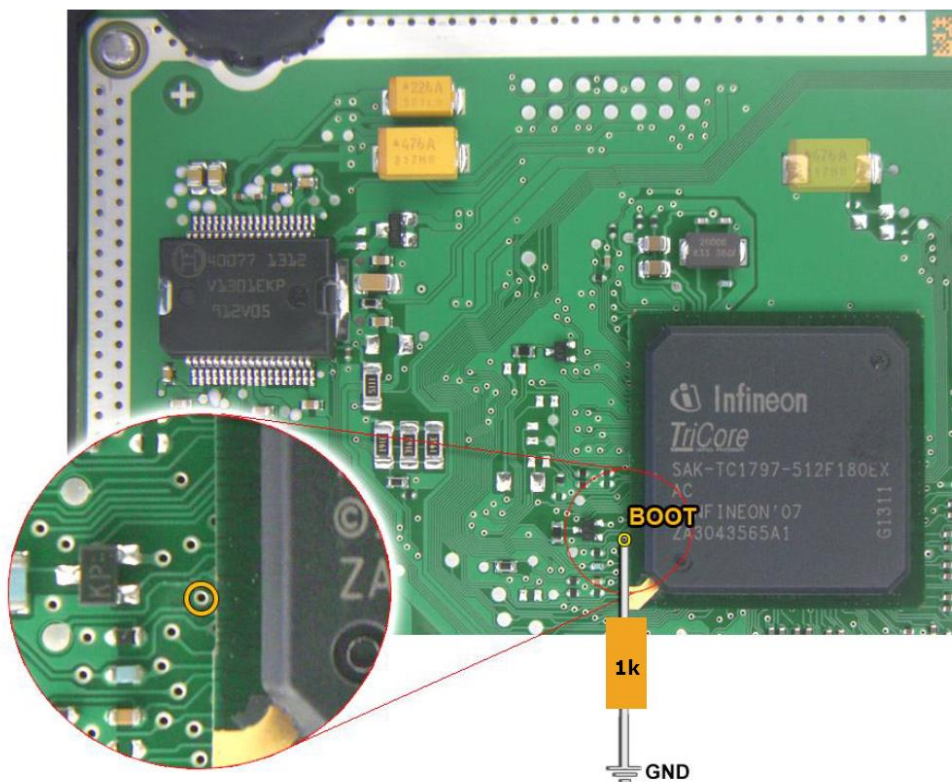


Figure 5 EDC17C54 BootMode Pin

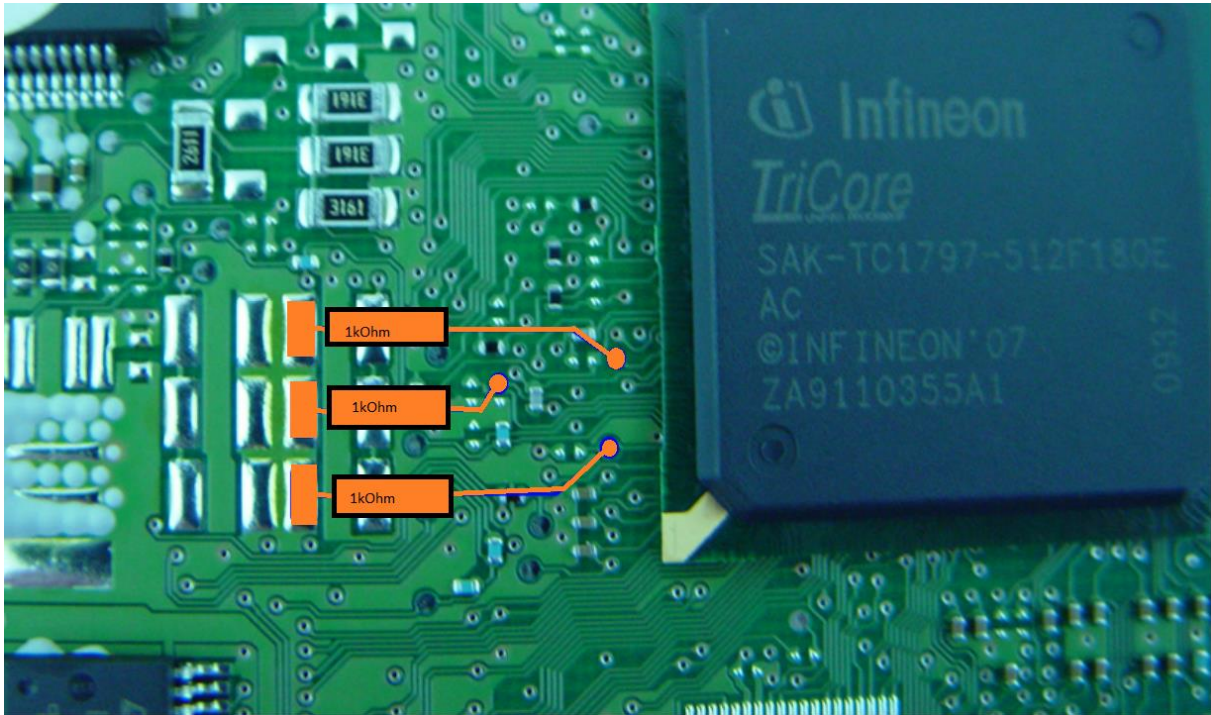


Figure 6 EDC17CP44 Bootmode connections

Have FUN !