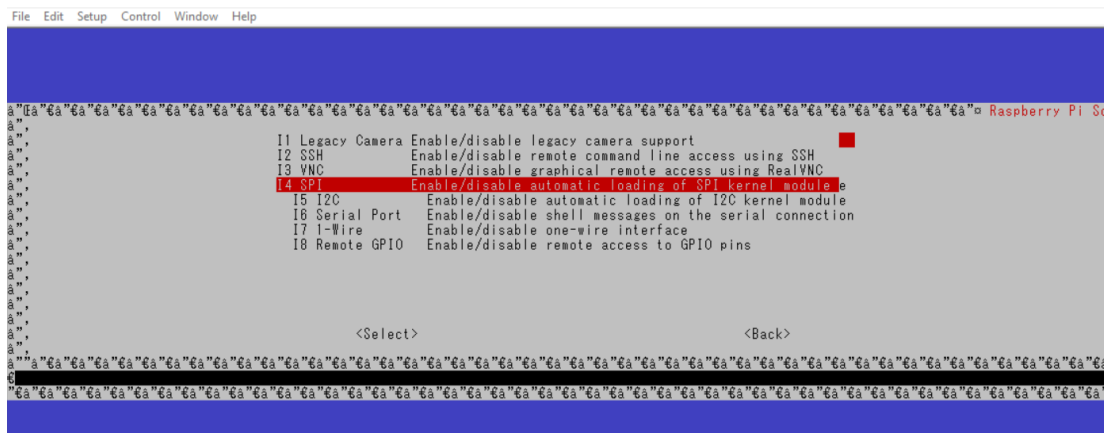
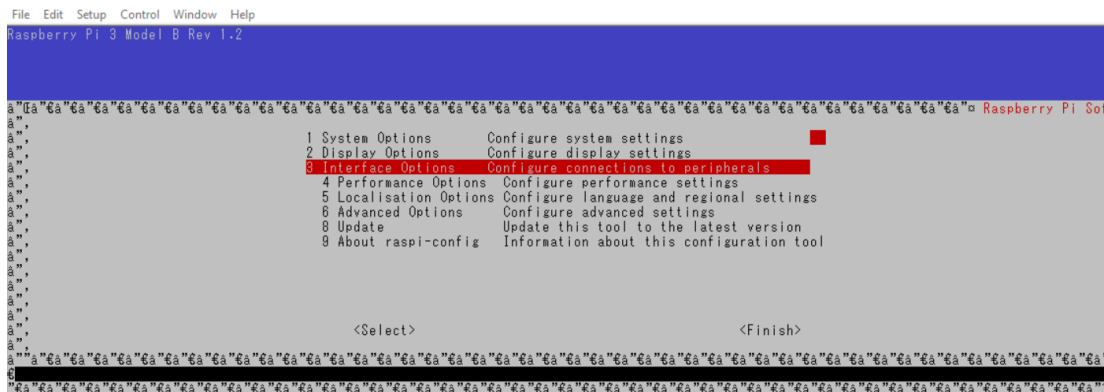




```
File Edit Setup Control Window Help
rodrigo@raspberrypi:~$ sudo raspi-config
```



File Edit Setup Control Window Help



File Edit Setup Control Window Help

```
rodrigo@raspberrypi:~$ sudo apt install git libpci-dev libusb-1.0 libusb-dev
```

File Edit Setup Control Window Help

```
rodrigo@raspberrypi:~$ sudo apt install git libpci-dev libusb-1.0 libusb-dev
Leyendo lista de paquetes... Hecho
Creando árbol de dependencias... Hecho
Leyendo la información de estado... Hecho
E: No se ha podido localizar el paquete libusb-1.0
E: No se pudo encontrar ningún paquete usando «*» con «libusb-1.0»
```

```
rodrigo@raspberrypi:~$ sudo apt-get install flashrom
Leyendo lista de paquetes... Hecho
Creando árbol de dependencias... Hecho
Leyendo la información de estado... Hecho
flashrom ya está en su versión más reciente (1.2-5).
fijado flashrom como instalado manualmente.
0 actualizados, 0 nuevos se instalarán, 0 para eliminar y 0 no actualizados.
rodrigo@raspberrypi:~$
```

```
rodrigo@raspberrypi:~$ flashrom --help
flashrom v1.2 on Linux 6.1.21-v8+ (aarch64)
flashrom is free software, get the source code at https://flashrom.org

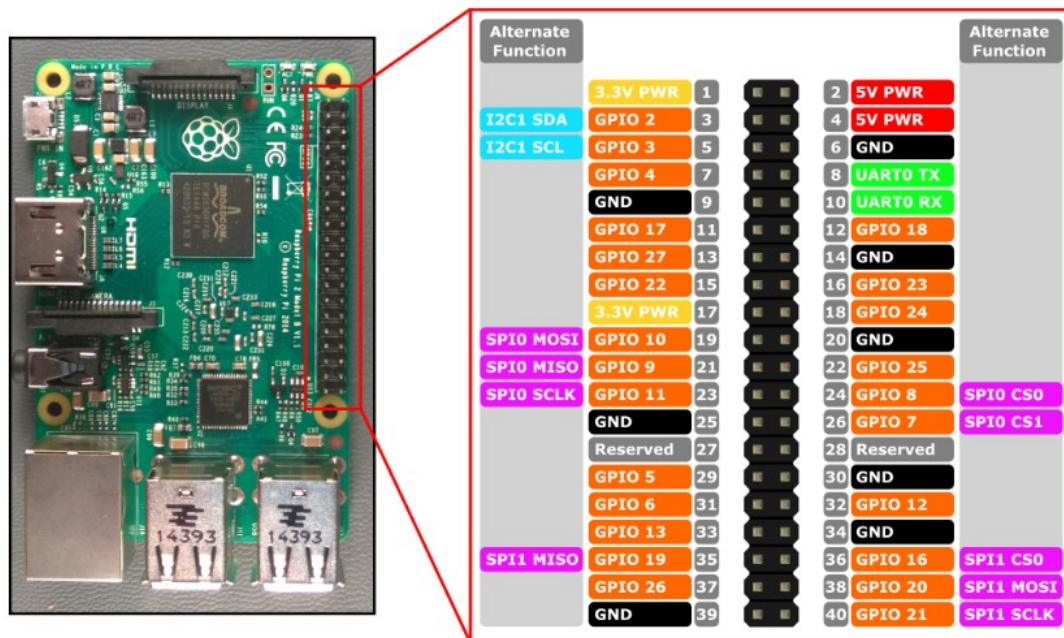
Usage: flashrom [-h|-R|-L]
       -p <programname>[:<parameters>] [-c <chipname>]
           (--flash-name|--flash-size|
            [-E|(-r|-w|-v) <file>]
            [(-l <layoutfile>|--ifd| --fmap|--fmap-file <file>) [-i <imagenam>]...])
            [-n] [-N] [-f])
       [-V[V[V]]] [-o <logfile>]
```

flashrom -p linux_spi:dev=/dev/spidev0.0,spidev=2000 -V

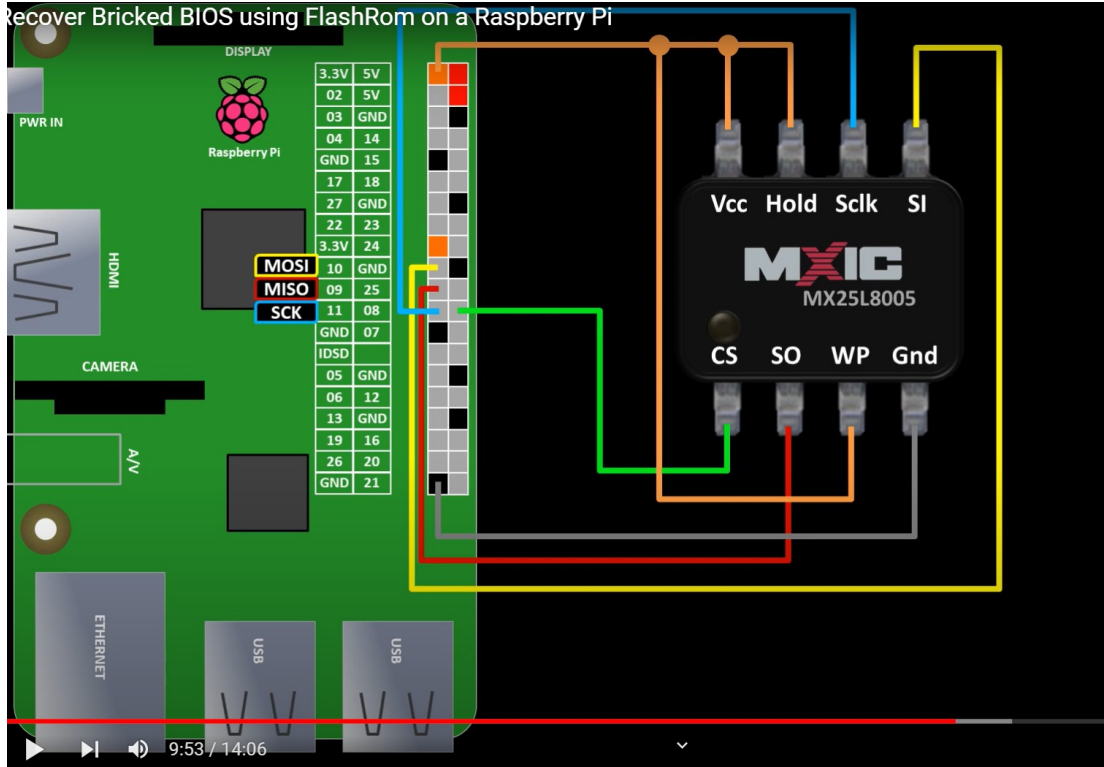
flashrom -p linux_spi:dev=/dev/spidev0.0,spidev=2000 -r <SaveFileName>

flashrom -p linux_spi:dev=/dev/spidev0.0,spidev=2000 -w <FileNameToLoad>

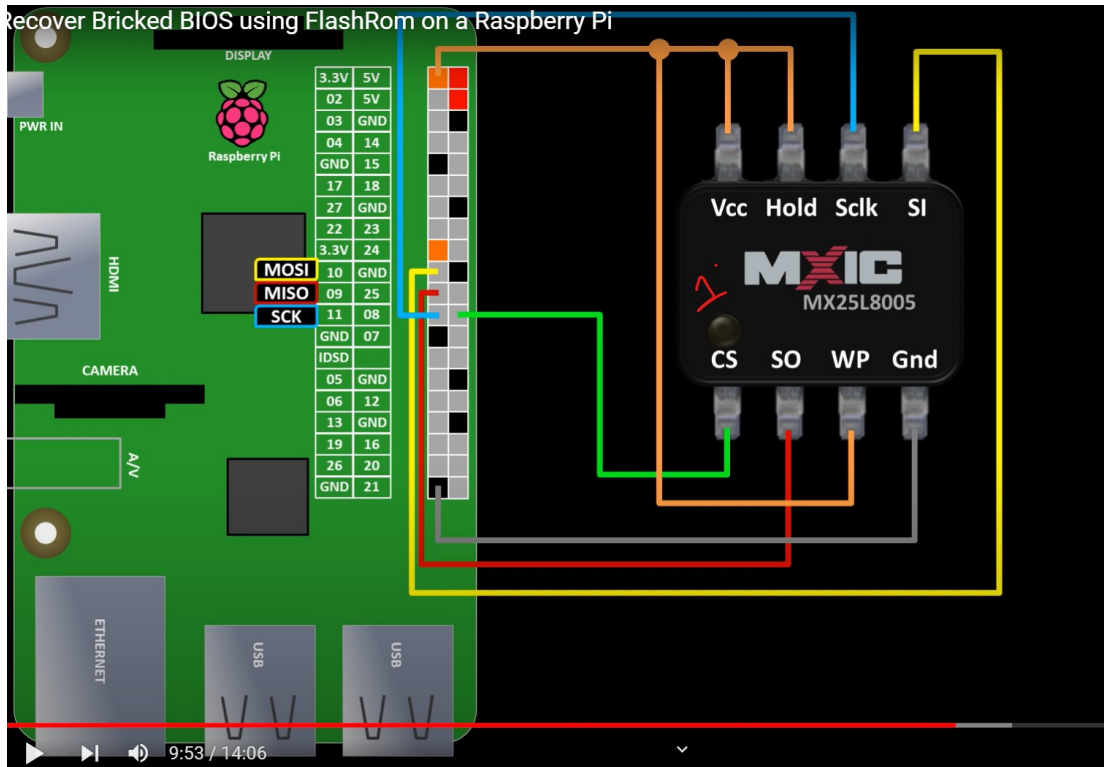
RPi pin	SPI flash
25	GND
24	CS
23	SCK
21	DO
19	DI
17	VCC 3.3V and /HOLD and /WP

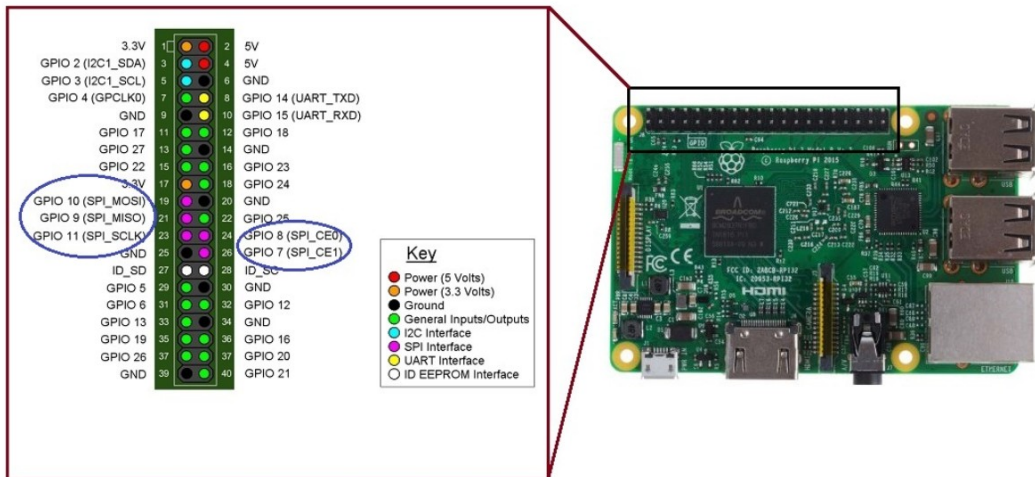


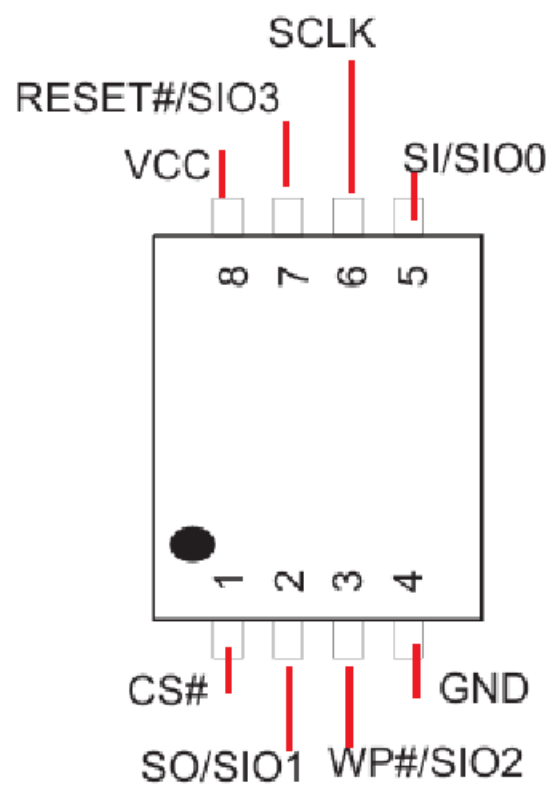
Recover Bricked BIOS using FlashRom on a Raspberry Pi

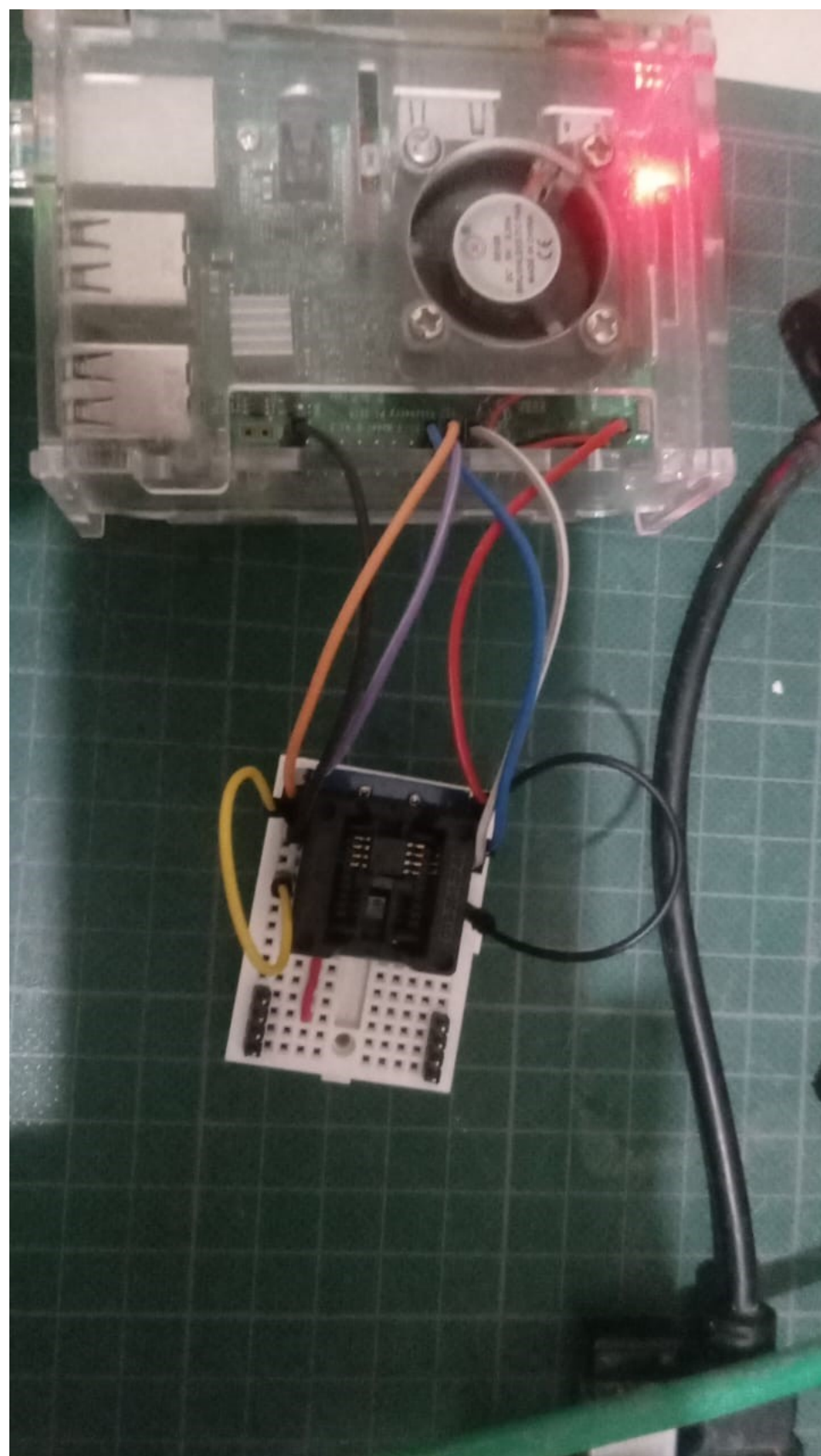


Recover Bricked BIOS using FlashRom on a Raspberry Pi










```

rodrigo@raspberrypi: /Desktop/ROOM $ flashrom -p linux_spi:dev=/dev/spidev0.0 -w build_GIGAByte16M.rom -c MX25L12835F/MX25L12845E/MX25L12865E
flashrom v1.2 on Linux 6.1.21-v8+ (aarch64)
flashrom is free software, get the source code at https://flashrom.org

Using clock_gettime for delay loops (clk_id: 1, resolution: 1ns).
Using default 2000kHz clock. Use 'spispeed' parameter to override.
Found Macronix flash chip "MX25L12835F/MX25L12845E/MX25L12865E" (16384 kB, SPI) on linux_spi.
Reading old flash chip contents... done.
Erasing and writing flash chip... Erase/write done.
Verifying flash... VERIFIED.
rodrigo@raspberrypi: /Desktop/ROOM $ flashrom -p linux_spi:dev=/dev/spidev0.0 -r build_GIGAByte16M_SPI.rom -c MX25L12835F/MX25L12845E/MX25L12865E
flashrom v1.2 on Linux 6.1.21-v8+ (aarch64)
flashrom is free software, get the source code at https://flashrom.org

Using clock_gettime for delay loops (clk_id: 1, resolution: 1ns).
Using default 2000kHz clock. Use 'spispeed' parameter to override.

```

construya el archivo BIOS con 16 megas en mente 0x100 000 es igual a 16 megabytes 0x800 000 es 8 megabytes 0x40 000 es 4 megabytes

usaremos una combinacion de 16 megabytes para el tamaño de la ROM y 0x80 000 para el tamaño del CBFS (la mitad de la ROM)

nota: si recibe un mensaje de error al grabar el IC no force la escritura en la memoria SPI, esto puede dañar al componente, corrija el archivo en la compilación antes de continuar

use la opcion de lectura sin especificar el tipo de integrado para detectar el IC

```
flashrom -p linux_spi:dev=/dev/spidev0.0 -r build_GIGAByte16M_SPI.rom -c
MX25L12835F/MX25L12845E/MX25L12865E
```

aplique la opcion de borrado antes de grabar el nuevo contenido

```
flashrom -p linux_spi:dev=/dev/spidev0.0 -E -c MX25L12835F/MX25L12845E/MX25L12865E
```

```
flashrom -p linux_spi:dev=/dev/spidev0.0 -w build_GIGAByte16M.rom -c
MX25L12835F/MX25L12845E/MX25L12865E
```

```

Macronix  MX25L12835F/      PREW      16384  SPI

          MX25L12845E/

          MX25L12865E

```




nota: si recibe un mensaje de error al grabar el IC no force la escritura en la memoria SPI, esto puede dañar al componente, corrija el archivo en la compilación antes de continuar

minipro -p MX25L12835F@SOP8 -w /home/rodrigo/Desktop/ROOM/build_GIGABYTE.rom

minipro -p MX25L12835F@SOP8 -r /home/rodrigo/Desktop/ROOM/build_GIGABYTE_BUP.rom

```
raspberrypi - rodrigo@raspberrypi: ~/Desktop/ROOM VT
File Edit Setup Control Window Help
rodrigo@raspberrypi: ~/Desktop/ROOM $ ls
BACKUP BACKUP_COPY BIOS_BAC build_GIGABYTE16M_BUP.rom build_GIGABYTE16M.rom comparison COMPARE coreboot.rom
rodrigo@raspberrypi: ~/Desktop/ROOM $ ls
BACKUP BACKUP_COPY BIOS_BAC build_GIGABYTE16M_BUP.rom build_GIGABYTE16M.rom comparison COMPARE coreboot.rom
rodrigo@raspberrypi: ~/Desktop/ROOM $ sudo minipro -p MX25L12835F@SOP8 -w /home/rodrigo/Desktop/ROOM/build_GIGABYTE16M_BUP.rom
Found TL866CS 03.2.89 (0x245)
Warning: Firmware is out of date.
Expected 03.2.86 (0x256)
Found 03.2.89 (0x245)
Device code: 80114069
Serial code: 550013CE7328D195C06D20BD
Chip ID: 0xC22018 OK
Reading Code... 208.21Sec OK
Verification OK
```

diff Desktop/ROOM/coreboot.rom Desktop/ROOM/comparison -s

cmp Desktop/ROOM/BACKUP Desktop/ROOM/BACKUP -l

hexdump Desktop/ROOM/coreboot.rom

md5sum Desktop/ROOM/BACKUP

```
rodrigo@raspberrypi: ~/Desktop/ROOM $ ls
BACKUP BIOS_BAC build_GIGABYTE16M.rom build_GIGABYTE16M_SPI3.rom comparison coreboot.rom
BACKUP_COPY build_GIGABYTE16M_BUP.rom build_GIGABYTE16M_SPI2.rom build_GIGABYTE16M_SPI.rom COMPARE
rodrigo@raspberrypi: ~/Desktop/ROOM $ md5sum build_GIGABYTE16M.rom
5152f2196effca15c928d4249731f943 build_GIGABYTE16M.rom
rodrigo@raspberrypi: ~/Desktop/ROOM $ md5sum build_GIGABYTE16M_SPI3.rom
5152f2196effca15c928d4249731f943 build_GIGABYTE16M_SPI3.rom
rodrigo@raspberrypi: ~/Desktop/ROOM $ md5sum build_GIGABYTE16M_SPI2.rom
d5929b7a5ad99f511fc83d7d0b48b85f build_GIGABYTE16M_SPI2.rom
rodrigo@raspberrypi: ~/Desktop/ROOM $ md5sum build_GIGABYTE16M_SPI.rom
5152f2196effca15c928d4249731f943 build_GIGABYTE16M_SPI.rom
```

sudo minipro -p SST25VF080B -r GigabyteBackupMP.rom

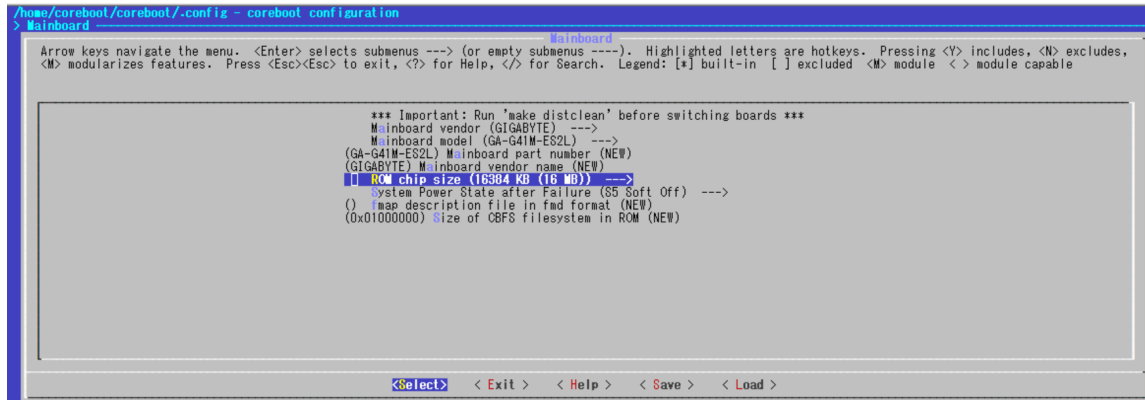
```
rodrigo@raspberrypi: ~/Desktop/ROOM/GigabyteOriginalSPI/MiniproSPI $ sudo minipro -p SST25VF080B -r GigabyteBackupMP.rom
Found TL866CS 03.2.89 (0x245)
Warning: Firmware is out of date.
Expected 03.2.86 (0x256)
Found 03.2.89 (0x245)
Device code: 80114069
Serial code: 550013CE7328D195C06D20BD
Chip ID: 0x8F258E OK
Reading Code... 13.09Sec OK
rodrigo@raspberrypi: ~/Desktop/ROOM/GigabyteOriginalSPI/MiniproSPI $ md5sum GigabyteMain.rom GigabyteMainMP.rom
fec80d683f26a0f32e04751a187c02f8c GigabyteMain.rom
fec80d683f26a0f32e04751a187c02f8c GigabyteMainMP.rom
```

sudo flashrom -p linux_spi:dev=/dev/spidev0.0 -r GigabyteMain.rom

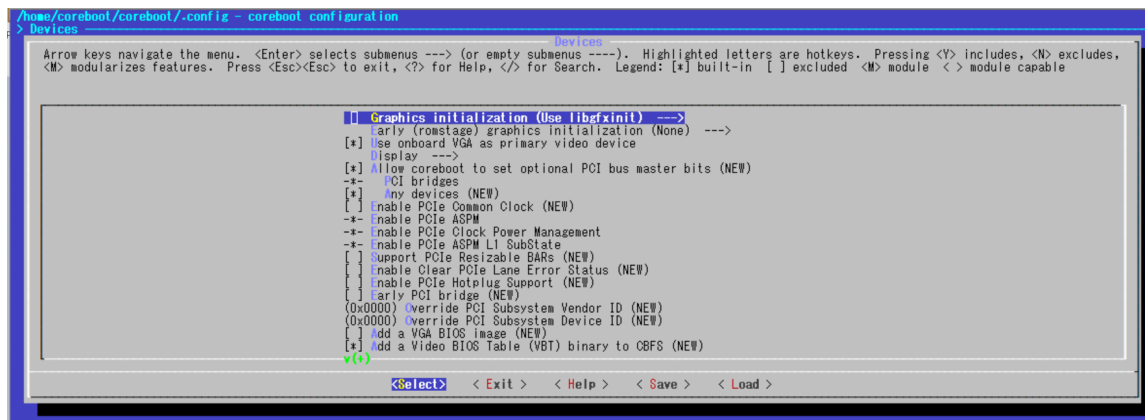
```
rodrigo@raspberrypi: ~/Desktop/ROOM/GigabyteOriginalSPI/MiniproSPI $ sudo flashrom -p linux_spi:dev=/dev/spidev0.0 -r GigabyteMain.rom
flashrom v1.2 on Linux 6.1.21-v8+ (aarch64)
flashrom is free software, get the source code at https://flashrom.org

Using clock_gettime for delay loops (clk_id: 1, resolution: 1ns).
Using default 2000KHz clock. Use 'spispeed' parameter to override.
Found SST flash chip "SST25VF080B" (1024 kB, SPI) on linux_spi.
Reading flash... done.
rodrigo@raspberrypi: ~/Desktop/ROOM/GigabyteOriginalSPI/MiniproSPI $
```

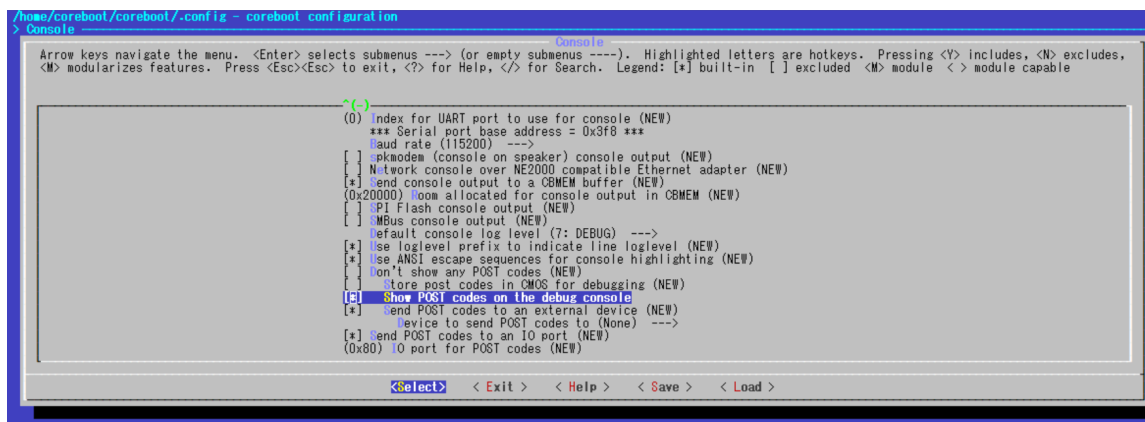
MainBoard: Elegimos el nombre del fabricante, el modelo de la tarjeta y el tamaño del IC de SPI la opción de CBFS que sea 1 000 000, guardamos los cambios (importante)



Devices: Habilitamos la segunda opción "VGA as primary device" con sus opciones por defecto (frame buffer text), guardamos los cambios

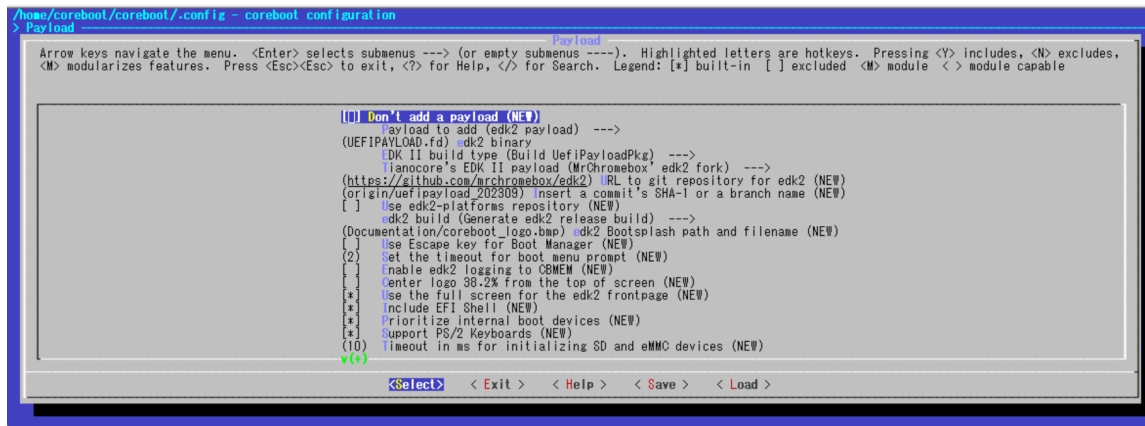


Console: habilitamos la opcion "SHOW post codes on debug console " y guardamos cambios



Payload: Elegimos UEFI payload e indicamos la dirección del archivo de Payload UEFIPAYLOAD.fd (version

32-64 revisar EDK2 compilacion)



UEFI PAYLOAD32.fd no usaremos esta

