

IBx Drivers

[ibx](#), [intel](#), [braswell](#), [software](#), [stm32](#)

Overview

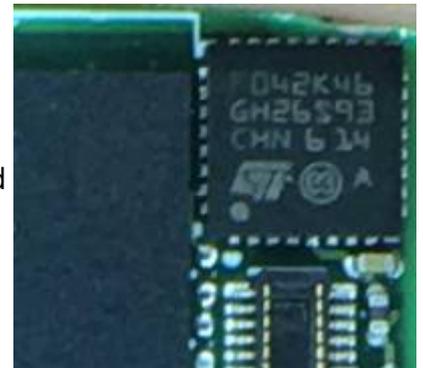
For some hardware features additional drivers/libraries are needed.

STM32 / MCU

Hardware

Overview

The STM32 family of 32-bit Flash microcontrollers based on the ARM® Cortex®-M processor is designed to offer new degrees of freedom to MCU users. It offers a 32-bit product range that combines very high performance, real-time capabilities, digital signal processing, and low-power, low-voltage operation, while maintaining full integration and ease of development.



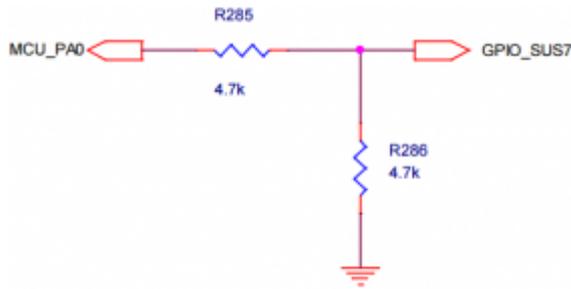
The **SR IB-E8000** and **IB-N3710** got the **STM32F042K4U6** on the MicroSom.

Documents	Link
STM32 reference manual	Download
STM32 datasheet	Download

The STM32F042x microcontrollers incorporate the high-performance ARM® Cortex®-M0 32-bit RISC core operating at a 48 MHz frequency, high-speed embedded memories (up to 32 Kbytes of Flash memory and 6 Kbytes of SRAM), and an extensive range of enhanced peripherals and I/Os. All devices offer standard communication interfaces (one I2C, two SPIs/one I2S, one HDMI CEC and two USARTs), one USB Full speed device (crystal-less), one CAN, one 12-bit ADC, four general-purpose 16-bit timers, a 32-bit timer and an advanced-control PWM timer.

(source: datasheet)

STM32 supports HDMI CEC and other features.



Testpoints

Notice that this is an example implementation on the SolidPC carrier.

MCU: STM32: PA1..PA4 pins



Testpoint TP19, TP20 and TP18 is located next to UART1 (covered when the Som is assembled)
 TP21 (left one) can be found on the opposite side of the PCB.

Additional Testpoint-information: [SolidPC Testpoints](#)

Software

Thanks too our community developer GDA who created a working firmware for the stm32.

The firmware, libcec port, RainshadowAdapter-work is not maintained by Solid-Run.

Firmware STM32

The latest .bin file can be found here:

```
https://github.com/gdachs/cecbridge/raw/rainshadow/Debug/CECbridge.bin
```

LibreElec (Kodi)

All work concerning LibreElec can be found here:

```
https://github.com/vpeter4/LibreELEC.tv/commits/solidpc
```

The easiest way to get CEC running under Kodi is to use the latest SolidPC LibreElec image here:

```
http://vpeter.libreelec.tv/solidpc/
```

flash it to your storage and run

```
flashStm /usr/share/solidpc/CECbridge.bin
```

The flash process will take some time.

After a reboot cec functionality should work.

Rainshadow/RainConf

RainConf communicates directly with the STM32. (All processes need to be stopped which use LibCEC)

How to build rainconf:

Hint: RainConf needs P8-Platform library

Which can be found here: <https://launchpad.net/~yavdr/+archive/ubuntu/main>

```
git clone https://github.com/gdachs/rainconf.git
cd rainconf
mkdir build
cd build
cmake ../src
make
sudo make install
```

LibCEC

```
git clone https://github.com/gdachs/libcec.git
cd libcec
git checkout rainshadow
mkdir build
cd build
cmake -DHAVE_RAINDSHADOW_API=1 ..
make
sudo make install
```

Links

- [STM32 Website](#)

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<https://wiki.solid-run.com/> - Wiki | SolidRun

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<https://wiki.solid-run.com/doku.php?id=products:ibx:software:development:drivers>

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