Overview

This Host FatFs example supports UFI and SCSI U-disk device.
The application prints the attached device information when U-disk device is attached. The application executes some FatFs APIs to test the attached device.

System Requirement

Hardware requirements

- Mini/micro USB cable
- USB A to micro AB cable
- Hardware (Tower module/base board, and so on) for a specific device
- Personal Computer (PC)

Software requirements

- The project path is:
  <SDK_Install>/boards/<board>/usb_examples/usb_host_msd_fatfs/<rtos>/<toolchain>.

  Note

  The <rtos> is Bare Metal or FreeRTOS OS.

Getting Started

Hardware Settings

- The Jumper settings:
  J13 1-2, J9 7-8, Remove all jumpers from J23.

  Note

  Set the hardware jumpers (Tower system/base module) to default settings.

Prepare the example

1. Download the program to the target board.
2. Power off the target board and power on again.
3. Connect devices to the board.

Note

For detailed instructions, see the appropriate board User's Guide.

Run the example

1. Connect the board UART to the PC and open the COM port in a terminal tool.
2. Plug in a HUB or a U-disk device to the board. The attached information prints out in the terminal.
3. The test information prints in the terminal. The "success" message prints when a FatFs API succeeds. The "fail" message prints when a FatFs API fails. The test completes when either the FatFs API fails or all the tests are done. The following figure is an example for attaching one U-disk device.

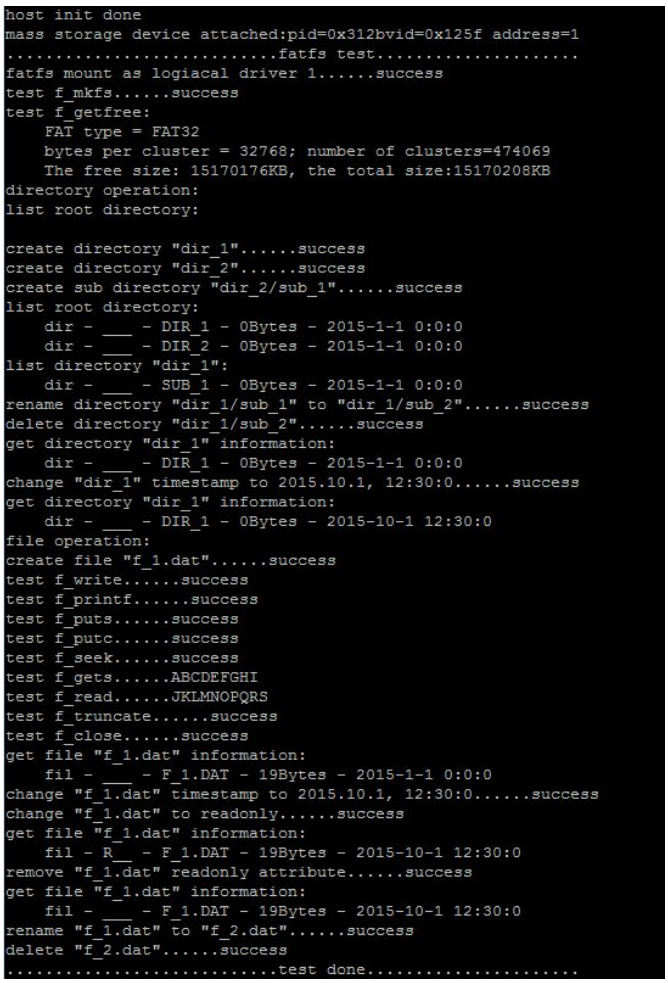

Figure 1: Attach U-disk device

4. To test the throughput, set the MSD_FATFS_THROUGHPUT_TEST_ENABLE to (1) in the file host_msd_fatfs.h. An additional 64 K RAM is required to test the throughput. The macro is only supported on TWR-K65F180M Tower System module and IAR IDE.
   The throughput test process is as follows:
   - Enable MSD_FATFS_THROUGHPUT_TEST_ENABLE.
   - Format the U-disk in the PC. Select the "Allocation unit size" 32 K.
   - Insert the U-disk. The throughput test starts.
     The following image shows an example.

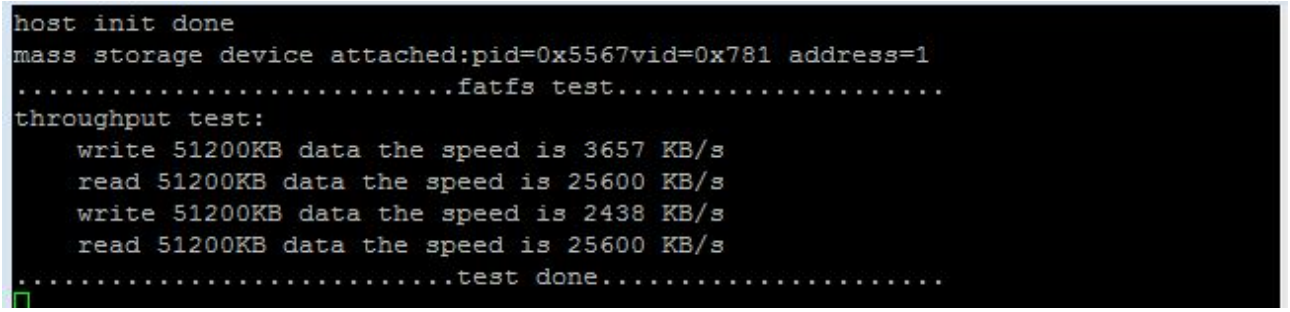

Figure 2: Throughput test

Note

The throughput test only supports the TWR-K65F180M Tower System module.