STM3240G-SK/KEI

Keil™ starter kit for STM32F4 series microcontrollers (STM32F407IG MCU)

Data brief

Features

- The Keil MDK-Lite development tools:
  - µVision®4 IDE/Debugger for application programming and debugging
  - ARM C/C++ compiler
  - RTX real-time kernel, a multi-tasking operating system for embedded applications
  - MDK-Lite supports applications with up to 32 KB code-size
- ULINK-ME in-circuit debugger/programmer with USB interface to host PC and 20-pin JTAG or 10-pin CoreSight debug interface
- Full-featured Keil evaluation board with a 168 MHz STM32F407IG MCU

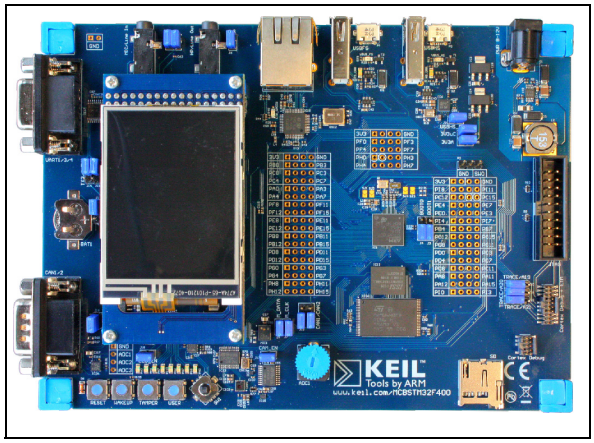

Table 1. Device summary

Reference	Order code
Keil™ starter kit for STM32F4 series microcontrollers	STM3240G-SK/KEI

Description

The Keil starter kit is a complete, cost-effective solution for starting application development and evaluating the STMicroelectronics STM32F4 series ARM Cortex™-M4 processor-based microcontrollers.

The STM3240G-SK/KEI starter kit provides all the hardware and software you need to start developing applications for the STM32 ARM core-based families of microcontrollers. It comes complete with a full-featured evaluation board (including Ethernet, USB HS, VGA camera, external memories, CAN, USARTs, Audio, and QVGA Touchscreen LCD), Keil's MDK-ARM Lite Edition (32 KB) development tools, and the ULINK-ME™ (USB/JTAG) adapter.

Keil starter kits are available for a full range of ST ARM core-based microcontrollers.

Starter kit architecture

Keil development software is a suite of software development tools for creating and debugging microcontroller applications that includes:

- **µVision® integrated development environment**, which integrates the ARM Compilation Tools and Keil's debugging software so that users can quickly and easily develop and debug their applications while they run on a target microcontroller.
- **ARM Compilation Tools (RVCT)** 32 Kbyte code-size limited version of the optimizing C/C++ compiler for ARM™ core-based microcontrollers.
- **ULINK-ME™ USB/JTAG in-circuit debugger / programmer**, which integrates fully with µVision, allowing users to download the application to the target and debug it while it runs on the ST ARM core-based microcontroller on the evaluation board.
- **Keil™ evaluation board**, an application board that provides a full range of features to help users evaluate and start developing applications for the included STM32F407IG microcontroller. The Keil MCBSTM32F400 evaluation board includes the following key features:
  - 168 MHz STM32F407IG ARM Cortex-M4 processor-based MCU in 176-pin BGA package
  - On-chip memory: 1 MB Flash, 192 KB SRAM
  - On-board memory: 2 MB SRAM, 8 MB NOR Flash, 512 MB NAND Flash, 8 KB EEPROM (I^2C) with NFC (wireless near field communication) interface
  - 2.4 inch color QVGA TFT LCD with resistive touch-screen
  - 10/100 Ethernet port
  - USB 2.0 Full Speed - USB, USB-OTG, and USB Host
  - USB 2.0 High Speed - USB, USB-OTG, and USB Host
  - CAN interface
  - Serial/UART port
  - MicroSD Card interface
  - 5-position joystick
  - Push-buttons for Reset, Wakeup, Tamper and User
  - 8 LEDs directly connected to port pins
  - 3-axis digital Accelerometer
  - 3-axis digital Gyroscope
  - Analog voltage control for ADC input (potentiometer)
  - Audio CODEC/DAC with line-in/out and speaker/microphone
  - Digital microphone
  - Digital VGA camera
  - All MCU signals are connected to headers grouped by ports
  - Two jumpers to select boot mode
  - Power supply via: High Speed (micro) USB connector, Full Speed (micro) USB connector, Power jack (8 V-12 V)
  - Debug interface connectors: 20-pin JTAG (0.1 inch connector), 10-pin Cortex debug (0.05 inch connector), 20-pin Cortex debug + ETM Trace (0.05 inch connector)

Ordering information

Keil starter kits can be ordered from Keil or from your nearest ST distributor or sales office for STM32F4 series microcontroller (ST order code: STM3240G-SK/KEI).

For more information and complete documentation, please refer to the Keil web site or the STMicroelectronics microcontroller support site on www.st.com.

Revision history

Table 2. Document revision history

Date	Revision	Changes
18-Nov-2011	1	Initial release.
11-May-2012	2	Modified Features and Description for clarification.

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