



STM32-SK/KEIL STR91X-SK/KEI, STR7-SK/KEIL

Keil™ starter kits for ST ARM core-based microcontrollers

Data brief

Features

- The ARM® RealView™ Microcontroller Development Kit complete development software package with:
 - μ Vision3™ integrated development environment for application programming and debugging
 - ARM RealView Compilation Tools C/C++ compilation tools for output of code up to 16 Kbytes
 - RTX real-time kernel, a multi-tasking operating system for embedded applications
- ULINK™ in-circuit debugger/programmer with USB interface to host PC and 20-pin JTAG application interface
- Full-featured Keil evaluation board with target microcontroller. On-board features are listed in [Table 1](#).

Description

The **Keil starter kits** are complete solutions for starting application development and evaluating STMicroelectronics' ARM core-based microcontrollers.

They come with all the hardware and software you need to start developing applications for the STM32, STR9 and STR7 ARM core-based families of microcontrollers. The kits come complete with Keil's *uVision3* integrated development environment for ARM and the 16 Kbyte code-size limited version of the ARM RealView Compilation Tools, a full-featured evaluation board (including USB, USART, SPI, ADC) and target microcontroller, with the ULINK (USB/JTAG) in-circuit debugger/programmer.

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:

- **uVision3** integrated development environment, which integrates the ARM RealView 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 RealView Compilation Tools (RVCT)** 16K code-size limited version of the optimizing C/C++ compiler for ARM™ core-based microcontrollers.
- **ULINK™** USB/JTAG in-circuit debugger / programmer, which integrates fully with *uVision3*, 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 microcontroller.

Table 1. Evaluation board key features

Feature	Starter kit						
	STM3210C-SK/KEIL	STM3210E-SK/KEIL	STM3210B-SK/KEIL	STR91X-SK/KEI	STR750-SK/KEIL	STR73xF	STR71xF
Included microcontroller	STM32F107C	STM32F103E	STM32F103B	STR912FAW4	STR750FV2	STR730FZ2	STR710FZ2
20-pin JTAG connector	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10-pin ARM Cortex-debug connector	Yes	No	No	No	No	No	No
Trace tool connector	20-pin	20-pin	N/A	38-pin (footprint)	N/A	N/A	N/A
External power supply included	No	No	No	No	No	No (7-12V DC)	No (7-9V DC)
Power supply from USB	Yes	Yes	Yes	Yes	Yes	No	No
USART connector(s)	1	1	1	2	2	4	2
SPI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
I ² C	Yes	Yes	Yes	Yes	Yes	Yes	No
CAN connector	Yes (2)	Yes	Yes	Yes	Yes	Yes	Yes
USB connector	Yes (micro)	Yes	Yes	Yes	Yes	No	Yes
Ethernet connector	Yes	N/A	N/A	Yes	N/A	N/A	N/A
User LEDs	8	8	8	8	8	16	8
LCD display	QVGA with touchscreen	QVGA	Yes (2x16)	Yes (2x16)	Yes (2x16)	No	No
SD/MMC card connector	Yes (Micro)	Yes (Micro)	Yes	Yes	Yes	No	No

Table 1. Evaluation board key features (continued)

Feature	Starter kit						
	STM3210C-SK/KEIL	STM3210E-SK/KEIL	STM3210B-SK/KEIL	STR91X-SK/KEI	STR750-SK/KEIL	STR73xF	STR71xF
Potentiometer connected to ADC	Yes	Yes	Yes	Yes	Yes	Yes	No
User and wake-up push button(s)	4	4	3	3	3	2	3
Reset button	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wrap area	Yes	Yes	Yes	Yes	Yes	Yes	No
Additional features							
External RAM	No	1M - FSMC	No	No	No	No	No
External Flash	8K - I2C	8M - SPI	No	No	No	No	No
Joystick	Yes	Yes	No	No	No	No	No
Audio: Line-out/Headphone	Yes	No	No	No	No	No	No
Audio: Line-in/Microphone	Yes	No	No	No	No	No	No
Motion sensor/accelerometer	Yes	No	No	No	No	No	No

Ordering information

All Keil starter kits can be ordered from Keil. Starter kits are available from your nearest STMicroelectronics distributor or sales office for the following:

- STM32 connectivity line microcontrollers (ST order code: **STM3210C-SK/KEIL**)
- STM32 performance and access line microcontrollers with 512K Flash (ST order code: **STM3210E-SK/KEIL**)
- STM32 performance and access line microcontrollers with 128K Flash (ST order code: **STM3210B-SK/KEIL**)
- STR91xF microcontrollers (ST order code: **STR91X-SK/KEI**)
- STR750xF microcontrollers (ST order code: **STR750-SK/KEIL**)

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

Revision history

Table 2. Document revision history

Date	Revision	Changes
14-Jun-2007	1	Initial release.
04-Oct-2006	2	Added STR750-SK/KEIL and product characteristics
04-Oct-2007	3	Modified document title. Added STM3210B-SK/KEIL and product characteristics
17-Oct-2008	4	Added STM3210E-SK/KEIL and product characteristics
18-Jun-2009	5	Added STM3210C-SK/KEIL and product characteristics.

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