



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

Keil™ starter kits for ST ARM core-based microcontrollers

Data Brief

## Features

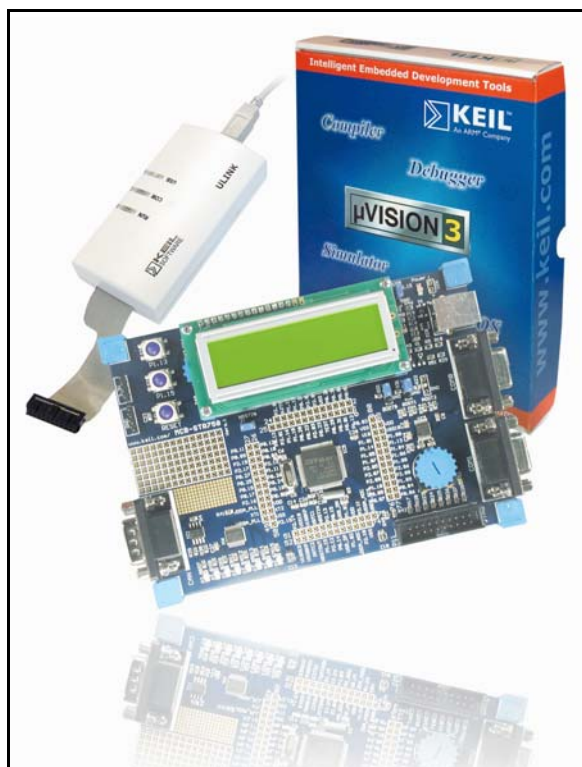
- The ARM® RealView™ Microcontroller Development Kit complete development software package with:
  - $\mu$ Vision3™ integrated development environment for application programming and debugging
  - ARM RealView Compilation Tools C/C++ compilation tools for output of code up to 16 Kbytes
  - RTX real-time 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 integrating 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 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					
	STM32F10xE	STM32F10xB	STR91xF	STR75xF	STR73xF	STR71xF
Included microcontroller	STM32F103E	STM32F103B	STR912FAW4	STR750FV2	STR730FZ2	STR710FZ2
20-pin JTAG connector	Yes	Yes	Yes	Yes	Yes	Yes
Trace tool connector	20-pin	N/A	38-pin (footprint)	N/A	N/A	N/A
External power supply included	No	No	No	No	No (7-12V DC)	No (7-9V DC)
Power supply from USB	Yes	Yes	Yes	Yes	No	No
USART connector(s)	1	1	2	2	4	2
SPI	Yes	Yes	Yes	Yes	Yes	Yes
I <sup>2</sup> C	Yes	Yes	Yes	Yes	Yes	No
CAN connector	Yes	Yes	Yes	Yes	Yes	Yes
USB connector	Yes	Yes	Yes	Yes	No	Yes
Ethernet connector	N/A	N/A	Yes	N/A	N/A	N/A
User LEDs	8	8	8	8	16	8
LCD display	Graphical	Yes (2x16)	Yes (2x16)	Yes (2x16)	No	No
SD/MMC card connector	Yes (Mini)	Yes	Yes	Yes	No	No
Potentiometer connected to ADC	Yes	Yes	Yes	Yes	Yes	No
User and wake-up push button(s)	4	3	3	3	2	3
Reset button	Yes	Yes	Yes	Yes	Yes	Yes
Wrap area	Yes	Yes	Yes	Yes	Yes	No

Table 1. Evaluation board key features (continued)

Feature	Starter kit					
	STM32F10xE	STM32F10xB	STR91xF	STR75xF	STR73xF	STR71xF
<b>Additional features</b>						
External RAM	1M - FSMC	No	No	No	No	No
External Flash	8M - SPI	No	No	No	No	No
Joystick	Yes	No	No	No	No	No

## Ordering information

Starter kits can be ordered from Keil and associated distributors and sales offices. The following Keil starter kits are also available from STMicroelectronics and ST distributors:

- Starter kit for STM32F10xE (ST order code: **STM3210E-SK/KEIL**)
- Starter kit for STM32F10xB (ST order code: **STM3210B-SK/KEIL**)
- Starter kit for STR91xF (ST order code: **STR91X-SK/KEI**)
- Starter kit for STR750xF (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](http://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

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