

# STM32-SK/IAR STR91X-SK/IAR, STR7-SK/IAR

#### IAR<sup>™</sup> starter kits for ST ARM core-based microcontrollers

Data brief

#### **Features**

- The IAR Embedded WorkBench<sup>™</sup> for ARM<sup>®</sup> (EWARM) software package with:
  - KickStart<sup>™</sup> C/C++ compiler for output of code up to 32 Kbytes
  - VisualState<sup>™</sup> code generator, 20-state version
  - C-SPY high-level language debugger
  - Editor, linker and librarian tools
- J-Link in-circuit debugger/programmer with USB interface to host PC and 20-pin JTAG application interface (embedded on some kits)
- Full-featured KickStart<sup>TM</sup> development board with target microcontroller. On-board features are listed in Table 1.

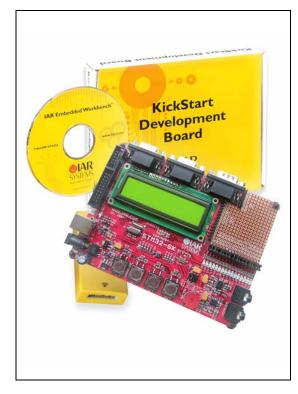
## Description

The IAR KickStart kits are complete, costeffective solutions for starting application development and evaluating STMicroelectronics' ARM core-based microcontrollers.

The KickStart kit's come with all the hardware and software you need to start developing applications including the KickStart development board with target microcontroller, the IAR J-Link in-circuit debugger/programmer (USB/JTAG) and IAR Embedded Workbench<sup>™</sup> for ARM (EWARM) integrated development environment with the KickStart edition of the IAR C/C++ compiler (output code up to 32 Kbytes), built-in Flash loader and sample projects for all device peripherals.

IAR KickStart kits provide evaluation and development support for a full range of ST ARM core-based microcontrollers.

For further information contact your local STMicroelectronics sales office.



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### Starter kit architecture

The **IAR development software** is a suite of software tools for all phases of application development that includes:

- IAR Embedded Workbench for ARM integrated development environment with the KickStart 32KB C/C++ compiler to build the application and the C-SPY<sup>™</sup> debugger for debugging the application while it runs on your microcontroller.
- **VisualSTATE 20-state version** of IAR's graphical design environment with C/C++ code generator for developing application code based on machine states.
- J-Link in-circuit debugger/programmer (USB/JTAG) which integrates fully with EWARM, allowing you to download the application to your target and debug it while it runs on your ST ARM core-based microcontroller. J-Link is embedded on the KickStart development board in the STM32 starter kits.
- **KickStart development board** that provides a full range of features to help developers evaluate and start developing applications for the included microcontroller. The board is powered from the J-Link's USB connection with the host PC.

|                                     | Starter kit         |                     |                      |                   |                   |                   |                   |                   |  |
|-------------------------------------|---------------------|---------------------|----------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--|
| Feature                             | STM3210C<br>-SK/IAR | STM3210E<br>-SK/IAR | STR91X<br>-SK/IAR    | STR750<br>-SK/IAR | STR731<br>-SK/IAR | STR730<br>-SK/IAR | STR712<br>-SK/IAR | STR711<br>-SK/IAR |  |
| Included<br>microcontroller         | STM32F107C          | STM32F103E          | STR912FAW4           | STR750FV2         | STR731FV2         | STR730FZ2         | STR712FR2         | STR711FR2         |  |
| J-Link                              | Embedded            | Embedded            | Standalone           | Standalone        | Standalone        | Standalone        | Standalone        | Standalone        |  |
| 20-pin JTAG<br>connector            | Yes                 | Yes                 | Yes                  | Yes               | Yes               | Yes               | Yes               | Yes               |  |
| Trace tool<br>connector             | 20-pin              | 20-pin              | 38-pin               | N/A               | N/A               | N/A               | N/A               | N/A               |  |
| Power supply from<br>USB connection | Yes                 | Yes                 | Yes                  | Yes               | Yes               | Yes               | Yes               | Yes               |  |
| Backup power<br>supply              | No                  | No                  | 3V button<br>battery | No                | No                | No                | No                | No                |  |
| USART<br>connector(s)               | 2                   | 2                   | 3                    | 3                 | 4                 | 4                 | 2                 | 2                 |  |
| SPI                                 | Yes                 | Yes                 | Yes                  | Yes               | Yes               | Yes               | Yes               | Yes               |  |
| l <sup>2</sup> C                    | Yes                 | Yes                 | Yes                  | Yes               | Yes               | Yes               | Yes               | Yes               |  |
| CAN connector                       | Yes                 | No                  | Yes                  | Yes               | No                | Yes               | Yes               | No                |  |
| USB connector                       | Host<br>OTG         | Host                | Host                 | Host              | Host              | No                | No                | Host              |  |
| Ethernet connector                  | Yes                 | N/A                 | Yes                  | N/A               | N/A               | N/A               | N/A               | N/A               |  |
| User LEDs                           | 4                   | 4                   | 16                   | 16                | 16                | 16                | 2                 | 2                 |  |
| LCD display                         | Graphical           | Graphical           | Yes (2x16)           | Yes (2x16)        | Yes (2x16)        | Yes (2x16)        | No                | No                |  |

Table 1. KickStart development board key features

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| Feature                                  | Starter kit         |                     |                   |                   |                   |                   |                   |                   |  |
|--|---------------------|---------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--|
|  | STM3210C<br>-SK/IAR | STM3210E<br>-SK/IAR | STR91X<br>-SK/IAR | STR750<br>-SK/IAR | STR731<br>-SK/IAR | STR730<br>-SK/IAR | STR712<br>-SK/IAR | STR711<br>-SK/IAR |  |
| SD/MMC connector                         | Yes                 | Yes                 | Yes               | Yes               | No                | No                | No                | No                |  |
| Potentiometer<br>connected to ADC        | Yes                 | Yes                 | Yes               | Yes               | Yes               | Yes               | Yes               | Yes               |  |
| User, tamper, wake-<br>up push button(s) | 3                   | 3                   | 3                 | 5                 | 5                 | 5                 | 3                 | 3                 |  |
| Reset button                             | Yes                 | Yes                 | Yes               | Yes               | Yes               | Yes               | Yes               | Yes               |  |
| Wrap area                                | No                  | Yes                 | Yes               | Yes               | Yes               | Yes               | Yes               | Yes               |  |
| Additional features                      |                     |                     |                   |                   |                   |                   |                   |                   |  |
| Stepper motor                            | Yes                 | Yes                 | No                | No                | No                | No                | No                | No                |  |
| MEMS<br>accelerometer                    | Yes                 | Yes                 | No                | No                | No                | No                | No                | No                |  |

 Table 1.
 KickStart development board key features (continued)

## **Ordering information**

IAR KickStart kits can be ordered from IAR or from your nearest ST distributor or sales office. Kits are currently available for:

- STM32 connectivity line microcontrollers (ST order code: STM3210C-SK/IAR)
- STM32 performance and access line microcontrollers with up to 512K Flash (ST order code: STM3210E-SK/IAR)
- STR91xF microcontrollers (ST order code: STR91X-SK/IAR)
- STR75xF microcontrollers (ST order code: STR750-SK/IAR)
- STR731F microcontrollers (ST order code: STR731-SK/IAR)
- STR730F microcontrollers (ST order code: STR730-SK/IAR)
- STR712F microcontrollers (ST order code: STR712-SK/IAR)
- STR711F microcontrollers (ST order code: STR711-SK/IAR)

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



# **Revision history**

| Date        | Revision | Changes  |
|-------------|----------|--|
| 1-Apr-2005  | 1        | Initial release.   |
| 27-Sep-2005 | 2        | Added STR730-SK/IAR and table of on-board features.                                  |
| 7-Jun-2006  | 3        | Added STR91X-SK/IAR and STR731-SK/IAR and key features.                              |
| 4-Oct-2006  | 4        | Added STR750-SK/IAR and key features.  |
| 4-Oct-2007  | 5        | Modified document title.<br>Added STM3210B-SK/IAR and key features.                  |
| 17-Oct-2008 | 6        | Added STM3210E-SK/IAR and key features.  |
| 18-Jun-2009 | 7        | Added STM3210C-SK/IAR and key features.<br>Removed STM3210B-SK/IAR and key features. |

Table 2.Document revision history



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