



# STM32-SK/RAIS,STR91X-SK/RAI,STR7-SK/RAIS STM32-D/RAIS,STR9-D/RAIS,STR7-D/RAIS

## Raisonance REva starter kits for ST ARM core-based microcontrollers

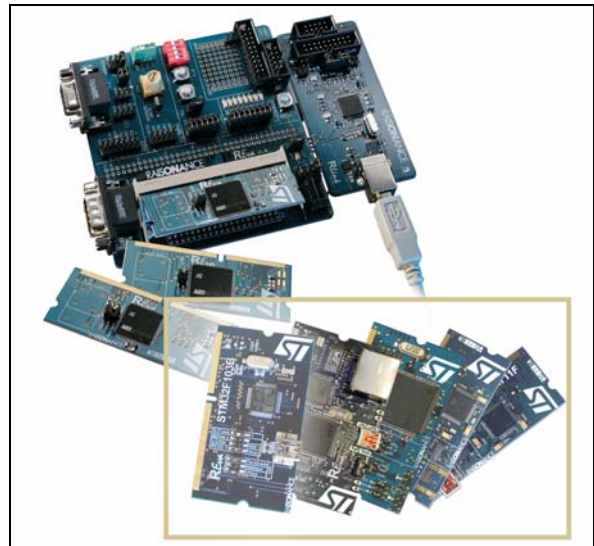
Data brief

### Features

- Raisonance software toolset with:
  - GNU C compiler
  - RIDE integrated development environment
  - High-level language debugger, editor, project manager and SIMICE simulator
  - RFlasher dedicated programming interface
- Embedded RLink in-circuit debugger/programmer with USB interface to host PC and 20-pin JTAG application interface
- Unlimited programming of the target device
- Debugging of applications with debug code limitation up to 64 Kbytes
- Interchangeable daughterboards featuring different target microcontrollers allowing development of applications for a wide range of ST microcontrollers
- REva universal evaluation motherboard with:
  - One standard SO-DIMM connector to plug in interchangeable daughterboards.
  - Digital and analog I/O evaluation features, including on-board LEDs, buttons, switches, external analog connector, temperature sensor and potentiometer
  - I<sup>2</sup>C EEPROM and bus
  - RS-232 driver and 2 DB9 connectors
  - Prototyping area
  - VDD settings for 1.8V, 3.3V and 5V
  - USB powered, no external power required

### Description

The **Raisonance REva Starter Kits** are complete, low-cost solutions for starting application development and evaluating the features of STMicroelectronics ARM<sup>®</sup> Cortex<sup>™</sup>-M3, ARM966E<sup>™</sup> and ARM7TDMI<sup>™</sup> core-based microcontrollers. Kits come with all the hardware and software that developers need to start developing applications, including the



REva evaluation board, microcontrollers, embedded RLink JTAG in-circuit debugger/programmer and Raisonance Integrated Development Environment (RIDE).

The REva starter kits are available for a full range of 32-bit and 8-bit microcontrollers.

For more information, refer to the microcontrollers support site on [www.st.com](http://www.st.com).

**Table 1. Device summary**

|               | Part number   | Order code   |
|---------------|---------------|--|
| Starter kit   | STM32-SK/RAIS | STM3210C-SK/RAIS<br>STM3210B-SK/RAIS               |
|               | STR91X-SK/RAI | STR91X-SK/RAI                                      |
|               | STR7-SK/RAIS  | STR750-SK/RAIS<br>STR730-SK/RAIS<br>STR71X-SK/RAIS |
| Daughterboard | STM32-D/RAIS  | STM32107C-D/RAIS<br>STM32103B-D/RAIS               |
|               | STR9-D/RAIS   | STR912-D/RAIS                                      |
|               | STR7-D/RAIS   | STR750-D/RAIS<br>STR730-D/RAIS                     |

## Starter kit architecture

### Ride7 software

Raisonance's integrated development environment drives the hardware and offers seamless control of all software development tools (compiler, assembler, linker, debugger) from an intuitive graphical interface. Ride7 fully integrates control of the GNU C tools.

In addition to RLink, Ride7 also drives the Signum JTAGjet in-circuit debugging and programming tool for ARM core-based microcontrollers, which supports trace using the STR9 microcontroller's Embedded Trace Macrocell™.

### REva motherboard

The REva universal evaluation motherboard is designed for quick and easy evaluation of a complete range of device features. All REva motherboards in starter kits for STM32, STR9 and STR7 provide the following on-board evaluation and development features:

- SO-DIMM connector for connection of interchangeable daughterboard featuring ST microcontrollers
- 20-pin JTAG interface connector
- Power supply from USB connection (embedded RLink)
- Two USART connectors
- SPI
- I<sup>2</sup>C
- SPI
- CAN connector
- Eight user LEDs
- Potentiometer connected to ADC
- Two user push buttons and a reset button
- Wrapping area

REva motherboards in STM32 starter kits include additional evaluation features including an LCD, MEMs and buzzer.

### Embedded RLink

The RLink in-circuit debugging and programming tool has a JTAG application board interface and a USB connection to the host PC.

The RLink allows unlimited programming of the target microcontroller Flash memory. It also allows debugging of applications with debug code up to half the size of the device Flash if Flash is less than or equal to 64 Kbytes and up to 64 Kbytes if Flash is more than 64 Kbytes. An upgrade license file to extend debug capability is available from Raisonance.

### REva daughterboards

These interchangeable boards feature different target microcontrollers, making it easy to evaluate and develop applications for a complete range of MCUs from a single evaluation platform.

The REva daughterboard microcontrollers and features are detailed in [Table 2](#).

**Table 2. REva daughterboard microcontrollers and features**

| MCU daughterboard | MCU specific features  | Included in starter kit | Daughterboard order code |
|-------------------|--|-------------------------|--------------------------|
| STM32F10xC        | Ethernet connector<br>USB OTG connector<br>CAN connector<br>Audio jack and loudspeaker                 | STM3210C-SK/RAIS        | STM32107C-D/RAIS         |
| STM32F10xB        | USB connector  | STM3210B-SK/RAIS        | STM32103B-D/RAIS         |
| STR912F           | Ethernet connector<br>USB connector<br>CAN connector<br>ETM connector footprint for trace tool support | STR91X-SK/RAI           | STR912-D/RAIS            |
| STR750F           | USB connector<br>Boot mode configuration jumper<br>CAN configuration jumper                            | STR750-SK/RAIS          | STR750-D/RAIS            |
| STR730F           | CAN configuration jumpers  | STR730-SK/RAIS          | STR730-D/RAIS            |
| STR712F           | CAN configuration jumpers  | STR71X-SK/RAIS          | -                        |
| STR711F           | USB mini-B connector   |                         | -                        |

## Ordering information

REva starter kits can be ordered from Raisonance or from your nearest ST distributor or sales office.

Kits are currently available for:

- STM32 connectivity line microcontrollers (ST order code: **STM3210C-SK/RAIS**)
- STM32 performance and access line microcontrollers with 128K Flash (ST order code: **STM3210B-SK/RAIS**)
- STR91xF microcontrollers (ST order code: **STR91X-SK/RAI**)
- STR75xF microcontrollers (ST order code: **STR750-SK/RAIS**)
- STR73xF microcontrollers (ST order code: **STR730-SK/RAIS**)
- STR71xF microcontrollers (ST order code: **STR71X-SK/RAIS**)

For more information and documentation, please refer to the Raisonance web site, [www.raisonance.com](http://www.raisonance.com) or to the STMicroelectronics microcontroller support site at [www.st.com/mcu](http://www.st.com/mcu).

## Revision history

**Table 3. Document revision history**

| Date        | Revision | Changes   |
|-------------|----------|---|
| 1-Aug-2005  | 1        | Initial release.  |
| 21-Sep-2005 | 2        | Added STR730-SK/RAIS and features.<br>Added JTAGjet in hardware driven by RIDE.   |
| 7-Jun-2006  | 3        | Added ordering codes and product information for the STR91X-SK/RAI.<br>Added REva motherboard table of features.  |
| 16-Jun-2006 | 4        | Corrected ordering codes in Table 1.  |
| 14-Feb-2007 | 5        | Addition of the STR750-SK/RAIS.<br>Updated Table 1 and Table 2 for STR750.  |
| 4-Oct-2007  | 6        | Modified document title.<br>Added STM3210B-SK/RAIS and features.<br>Modified presentation of daughter board features (removed Table 1).   |
| 25-Jun-2009 | 7        | Added STM3210C-SK/RAIS STM32107C-D/RAIS and features.<br>Modified presentation of daughter board features (added Table 1).<br>Modified document title.  |
| 22-Apr-2013 | 8        | Modified programming and debugging information in <a href="#">Features</a> .<br>Modified supported family information in <a href="#">Description</a> .<br>Updated <a href="#">Embedded RLink</a> and <a href="#">Ordering information</a> . |

**Please Read Carefully:**

Information in this document is provided solely in connection with ST products. STMicroelectronics NV and its subsidiaries ("ST") reserve the right to make changes, corrections, modifications or improvements, to this document, and the products and services described herein at any time, without notice.

All ST products are sold pursuant to ST's terms and conditions of sale.

Purchasers are solely responsible for the choice, selection and use of the ST products and services described herein, and ST assumes no liability whatsoever relating to the choice, selection or use of the ST products and services described herein.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted under this document. If any part of this document refers to any third party products or services it shall not be deemed a license grant by ST for the use of such third party products or services, or any intellectual property contained therein or considered as a warranty covering the use in any manner whatsoever of such third party products or services or any intellectual property contained therein.

**UNLESS OTHERWISE SET FORTH IN ST'S TERMS AND CONDITIONS OF SALE ST DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY WITH RESPECT TO THE USE AND/OR SALE OF ST PRODUCTS INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE (AND THEIR EQUIVALENTS UNDER THE LAWS OF ANY JURISDICTION), OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.**

**ST PRODUCTS ARE NOT AUTHORIZED FOR USE IN WEAPONS. NOR ARE ST PRODUCTS DESIGNED OR AUTHORIZED FOR USE IN: (A) SAFETY CRITICAL APPLICATIONS SUCH AS LIFE SUPPORTING, ACTIVE IMPLANTED DEVICES OR SYSTEMS WITH PRODUCT FUNCTIONAL SAFETY REQUIREMENTS; (B) AERONAUTIC APPLICATIONS; (C) AUTOMOTIVE APPLICATIONS OR ENVIRONMENTS, AND/OR (D) AEROSPACE APPLICATIONS OR ENVIRONMENTS. WHERE ST PRODUCTS ARE NOT DESIGNED FOR SUCH USE, THE PURCHASER SHALL USE PRODUCTS AT PURCHASER'S SOLE RISK, EVEN IF ST HAS BEEN INFORMED IN WRITING OF SUCH USAGE, UNLESS A PRODUCT IS EXPRESSLY DESIGNATED BY ST AS BEING INTENDED FOR "AUTOMOTIVE, AUTOMOTIVE SAFETY OR MEDICAL" INDUSTRY DOMAINS ACCORDING TO ST PRODUCT DESIGN SPECIFICATIONS. PRODUCTS FORMALLY ESCC, QML OR JAN QUALIFIED ARE DEEMED SUITABLE FOR USE IN AEROSPACE BY THE CORRESPONDING GOVERNMENTAL AGENCY.**

Resale of ST products with provisions different from the statements and/or technical features set forth in this document shall immediately void any warranty granted by ST for the ST product or service described herein and shall not create or extend in any manner whatsoever, any liability of ST.

ST and the ST logo are trademarks or registered trademarks of ST in various countries.

Information in this document supersedes and replaces all information previously supplied.

The ST logo is a registered trademark of STMicroelectronics. All other names are the property of their respective owners.

© 2013 STMicroelectronics - All rights reserved

STMicroelectronics group of companies

Australia - Belgium - Brazil - Canada - China - Czech Republic - Finland - France - Germany - Hong Kong - India - Israel - Italy - Japan - Malaysia - Malta - Morocco - Philippines - Singapore - Spain - Sweden - Switzerland - United Kingdom - United States of America

[www.st.com](http://www.st.com)

