



# INDART, STXF-INDART/USB ST7FLIT0-IND/USB, ST7C334-INDART

## In-circuit debugging and in-circuit programming tool for ST7

Data brief

### Features

- In-circuit debugging features:
  - Source level and symbolic debugging
  - Unlimited instruction breakpoints
  - Execution control including instruction stepping
  - Advanced breakpoints on data, access type, access range, stack...(depending on model)
  - Watch variables, registers and peripherals
- In-circuit programming features: Blank check/erase/read/verify for Flash EEPROM memory and option bytes

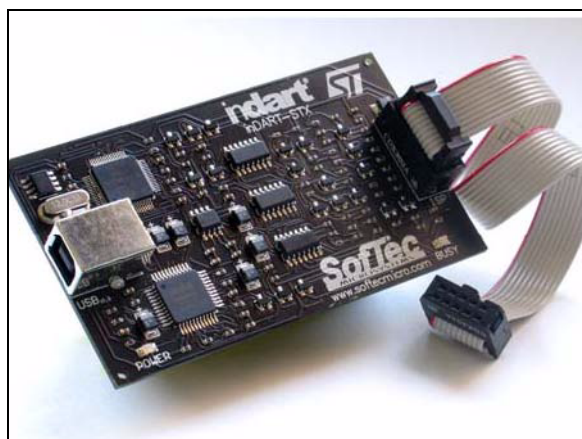
### Description

The inDART is a powerful, low-cost in-circuit debugging (ICD) and in-circuit programming (ICP) tool, developed for ST7 in partnership with Softec Microsystems™.

The inDART takes advantage of the ST7 Visual Develop (STVD7) integrated development environment and ST7 in-circuit communication (ICC) capability to deliver ICD and ICP for a wide range of ST7 Flash microcontrollers.

Hardware and software debugging features include real-time code execution, stepping and breakpoints.

The inDART offers parallel or USB connection to the host PC, depending on the model, and 10-pin ICC connection for connecting to evaluation or application board.



The inDART kit contains:

- inDART ICC interface board to connect the host PC to an evaluation or application board
- Evaluation board that includes an ST7 (except for the STXF-INDART)
- inDART edition of the STVD7 integrated development environment:

Table 1. Device summary

inDART order code	Microcontroller
STXF-INDART/USB	All ST7 Flash MCUs
ST7FLIT0-IND/USB	ST7FLITE0x
see <a href="http://www.smh-tech.com">www.smh-tech.com</a>	ST7FLITE2x
see <a href="http://www.smh-tech.com">www.smh-tech.com</a>	ST72F264
see <a href="http://www.smh-tech.com">www.smh-tech.com</a>	ST72F521
see <a href="http://www.smh-tech.com">www.smh-tech.com</a>	ST72C104 ST72C215 ST72C216 ST72C254
ST7C334-INDART	ST72C124 ST72C314 ST72C334
see <a href="http://www.smh-tech.com">www.smh-tech.com</a>	ST7FLITE0x
see <a href="http://www.smh-tech.com">www.smh-tech.com</a>	ST72F26x

## Ordering information

InDART starter kits can be ordered from Softec Microsystems™ or from your nearest ST distributor or sales office. Use the following table to determine which InDART MCU is best adapted to your requirements.

**Table 2. InDART details**

Microcontroller	Order code	Advanced breakpoints	Real time	Evaluation board (MCU)	Host PC connection
All ST7 Flash MCUs	STXF-INDART/USB	Yes <sup>(1)</sup>	Yes <sup>(2)</sup>		USB
ST7FLITE0x	ST7FLIT0-IND/USB	Yes <sup>(1)</sup>	Yes <sup>(2)</sup>	Yes (ST7FLite09 – DIP16)	USB
ST7FLITE2x	see <a href="http://www.smh-tech.com">www.smh-tech.com</a>	Yes <sup>(1)</sup>	Yes <sup>(2)</sup>	Yes (ST7FLite29 – DIP16)	USB
ST72F264	see <a href="http://www.smh-tech.com">www.smh-tech.com</a>	Yes <sup>(1)</sup>	Yes <sup>(2)</sup>	Yes (ST7F2649 – SDIP32)	USB
ST72F521	see <a href="http://www.smh-tech.com">www.smh-tech.com</a>	Yes <sup>(1)</sup>	Yes <sup>(2)</sup>	Yes (ST7F521 – TQFP64) <sup>(3)</sup>	USB
ST72C104 ST72C215 ST72C216 ST72C254	see <a href="http://www.smh-tech.com">www.smh-tech.com</a>		Yes	Yes (ST7C254 – SDIP32)	Parallel
ST72C124 ST72C314 ST72C334	ST7C334-INDART		Yes	Yes (ST7C334 – DIP56)	Parallel
ST7FLITE0x	see <a href="http://www.smh-tech.com">www.smh-tech.com</a>		Yes	Yes (ST7FLite09 – DIP16)	Parallel
ST72F26x	see <a href="http://www.smh-tech.com">www.smh-tech.com</a>		Yes	Yes (ST7F264 – SDIP32)	Parallel

1. Advanced breakpoints only for MCUs with on-chip debug module

2. Real time, with breakpoint limitation for MCUs without on chip debug modules

3. This evaluation board also supports ST72F32x

For more information and documentation, please refer to the Softec Microsystems™ web site or the STMicroelectronics microcontroller support site on [www.st.com](http://www.st.com).

## Revision history

**Table 3. Document revision history**

Date	Revision	Changes
01-Feb-2005	1	Initial release.
30-Mar-2009	2	Modified references to inDart-ST7 to InDART, in line with product family name.
30-May-2011	3	Modified <a href="#">Table 1: Device summary</a> and <a href="#">Table 2: InDART details</a> . Added INDART to root part number list.

**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.**

**UNLESS EXPRESSLY APPROVED IN WRITING BY AN AUTHORIZED ST REPRESENTATIVE, ST PRODUCTS ARE NOT RECOMMENDED, AUTHORIZED OR WARRANTED FOR USE IN MILITARY, AIR CRAFT, SPACE, LIFE SAVING, OR LIFE SUSTAINING APPLICATIONS, NOR IN PRODUCTS OR SYSTEMS WHERE FAILURE OR MALFUNCTION MAY RESULT IN PERSONAL INJURY, DEATH, OR SEVERE PROPERTY OR ENVIRONMENTAL DAMAGE. ST PRODUCTS WHICH ARE NOT SPECIFIED AS "AUTOMOTIVE GRADE" MAY ONLY BE USED IN AUTOMOTIVE APPLICATIONS AT USER'S OWN RISK.**

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.

© 2011 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)

