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# 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

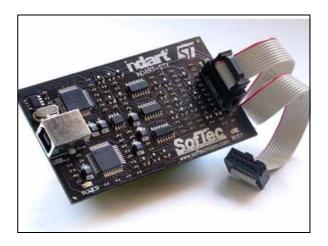
#### **Description**

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<sup>™</sup>.

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 www.smh-tech.com	ST7FLITE2x		
see www.smh-tech.com	ST72F264		
see www.smh-tech.com	ST72F521		
see www.smh-tech.com	ST72C104 ST72C215 ST72C216 ST72C254		
ST7C334-INDART	ST72C124 ST72C314 ST72C334		
see www.smh-tech.com	ST7FLITE0x		
see www.smh-tech.com	ST72F26x		

## **Ordering information**

InDART starter kits can be ordered from Softec Microsystems<sup>™</sup> 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		Yes <sup>(2)</sup>	Yes (ST7FLite09 – DIP16)	USB
ST7FLITE2x	see www.smh-tech.com	Yes <sup>(1)</sup>	Yes <sup>(2)</sup>	Yes (ST7FLite29 – DIP16)	USB
ST72F264	see www.smh-tech.com	Yes <sup>(1)</sup>	Yes <sup>(2)</sup>	Yes (ST7F2649 – SDIP32)	USB
ST72F521	see www.smh-tech.com	Yes <sup>(1)</sup>	Yes <sup>(2)</sup>	Yes (ST7F521 – TQFP64) <sup>(3)</sup>	USB
ST72C104 ST72C215 ST72C216 ST72C254	see www.smh-tech.com		Yes	Yes (ST7C254 – SDIP32)	Parallel
ST72C124 ST72C314 ST72C334	ST7C334-INDART	334-INDART		Yes (ST7C334 – DIP56)	Parallel
ST7FLITE0x	see www.smh-tech.com		Yes	Yes (ST7FLite09 – DIP16)	Parallel
ST72F26x	see www.smh-tech.com		Yes	Yes (ST7F264 – SDIP32)	Parallel

<sup>1.</sup> Advanced breakpoints only for MCUs with on-chip debug module

For more information and documentation, please refer to the Softec Microsystems<sup>™</sup> web site or the STMicroelectronics microcontroller support site on 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 <i>Table 1: Device summary</i> and <i>Table 2: InDART details</i> .  Added INDART to root part number list.

<sup>2.</sup> Real time, with breakpoint limitation for MCUs without on chip debug modules

<sup>3.</sup> This evaluation board also supports ST72F32x

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