

CEIBO

inDART-STX/521

Design Kit for STMicroelectronics ST72F321/521 (USB)

- Real-Time Code Execution Without Probes--Works with All Packages
- Standard Chip Used--No Bondouts, 100% Electrical Characteristics Guaranteed
- Seamlessly Integrates Into your Favorite Development Environment: STMicroelectronics STVD7 or Metrowerks CodeWarrior (Both Are Provided)
- Built-In ISP Programmer
- USB Connection to the PC
- Includes **inDART-STX/D** + Evaluation Board with a Sample ST72F521 Microcontroller (TQFP64 Package)

Specifications:

inDART-STX/521 is a Design Kit package which includes the inDART-STX in-circuit debugger/programmer unit plus an evaluation board specific for ST72F321 and ST72F521 FLASH microcontrollers (in TQFP64 package). inDART-STX/521 takes advantage of STMicroelectronics STVD7 (Visual Debug) Integrated Development Environment and the ISP (In-System Programming) feature to program the FLASH memory of the microcontrollers. Together with STVD7, inDART-STX/521 provides users with everything they need to write, compile (evaluation versions of Cosmic and Metrowerks C Compilers are provided), download, in-circuit emulate and debug user code. inDART-STX/521 is also supported by Metrowerks CodeWarrior IDE--an evaluation version of which is provided as well. Full-speed program execution allows users to perform hardware and software testing in real time. inDART-STX/521 is connected to the host PC through an USB port, while the 10-pin probe of the debuggers fit into the target's standard ISP connector. The instrument is powered by the USB bus, so an external power supply is not required.

Evaluation Board

This package includes a full-featured evaluation board specific for ST72F321 and ST72F521 microcontrollers (TQFP64 14x14). The evaluation board includes DIP-switches, jumpers, LEDs, push-buttons, a potentiometer, prototyping area and a standard ISP connector and can be used for evaluation/experiments in the absence of a target application board.

The inDART Technology

Contrariwise to traditional in-circuit emulation (where the target application is executed and emulated inside the emulator), inDART-STX uses the very same target microcontroller to carry on in-circuit execution. This means that all microcontroller's peripherals (timers, A/D converters, I/O pins, etc.) are not reconstructed or simulated by an external device, but are the very same target microcontroller's peripherals. Moreover, the inDART-STX debugging approach ensures that the target microcontroller's electrical characteristics (pull-ups, low-voltage operations, I/O thresholds, etc.) are 100% guaranteed.

Program Execution Notes

inDART-STX executes programs in real-time. However, under some circumstances, program

execution is not performed in real-time. This happens when working with HDFlash target devices (such as ST72F321, 324, 521, 621, 651, etc.) and one or more breakpoints are set. For detailed information, please refer to the inDART-STX for ST7 user's manual and user's manual addendum.

Design Kit Advantages

The evaluation boards included in the various Design Kit packages feature a specific microcontroller with the addition of a ready-to-use ISP interface. Just plug the inDART-STX ISP cable into the evaluation board's ISP connector, load the provided sample application into the user interface and you're ready to work. It's an hassle-free way of immediately working with your target device. Additionally, evaluation boards feature LEDs, push-buttons, DIP-switches, potentiometers and a prototyping area. Of course, the inDART-STX in-circuit debugger/programmer unit included in Design Kit packages is the same unit included in all other packages--it still supports all of the devices of the ST72F FLASH family as well as all of the devices of the ST FIVE 508 FLASH family.

ST7 Software Updates

The System Software CD provided with the instrument contains the STMicroelectronics STVD7 IDE, an evaluation versions of the Cosmic C Compiler and an evaluation version of Metrowerks CodeWarrior for ST7.

Programming Library (DLL)

The optional IPL-ST7 Programming Library is a DLL which includes all of the low-level functions that allow users to set up the instrument and perform, from within their own Windows application, most of the programming commands and functions of the DataBlaze user interface. The IPL-ST7 Programming Library contains C written routines, and can be used to interface the instrument from within, for example, a Microsoft Visual C or Visual Basic application, as well as any other programming language that supports the DLL mechanism. The IPL-ST7 Programming Library can be purchased both as an accessory to every instrument of the inDART-ST7 series and inDART-STX for ST7 series, or separately. Full documentation and examples are included. An USB software protection key is provided with every copy of IPL-ST7: the protection key must be plugged into any USB port on the PC where the library functions of IPL-ST7 are used.

Supported Devices

ST72F321R6T
ST72F321R7T
ST72F321R9T
ST72F521R6T
ST72F521R7T
ST72F521R9T