SmartICE Performance Analysis Tool for NXP P60-Step-Up!

ASHLING

Overview

Ashling provides a range of tools designed for debugging, program-execution analysis, optimisation and validation of applications running on NXP contact and contactless SmartMX2 smart card controllers.

NXP

SmartICE-XPK for P60-Step-Up!
- ➤ High Performance SmartICE hardware emulator
- ➤ Real-Time Trigger and Trace System
- ➤ Code Coverage Analysis
- ➤ Performance Analysis – Code Execution Analysis
- ➤ Use with Keil µVision debugger or PathFinder source-level debugger

SmartICE

SmartICE is Ashling's USB2.0 based real-time emulator for NXP SmartMX devices

- ➤ See separate datasheet for details on SmartICE tools available in three options –PK, -EPK, -XPK

Performance Analysis Features

The SmartICE Performance Analysis system allows you to monitor software execution in real time non-intrusively. It enables you to be sure of software performance and identify program 'hot-spots' for performance optimisation. Note: SmartICE Performance Analysis option is available only for P60-Step-Up!

- ➤ Analyse Code Execution
  - • Real-Time Non-Intrusive Analysis
  - • Supports measurement of up to 32,768 functions / modules / code ranges
  - • Continuous measurement for up to 360 hours
  - • 10ns timing resolution

Accumulated Count	Accumulated Time	Average Time	Minimum Time	Maximum Time

FUNC_1	0.108550
FUNC_0	0.094970
FUNC_0	0.093460
FUNC_2	0.091890
FUNC_3	0.090390
FUNC_4	0.088970
FUNC_5	0.087510

- ➤ For Modules, Functions and Custom Address Ranges measure
  - • Accumulated execution time
  - • Maximum execution time
  - • Minimum execution time
  - • Average execution time
  - • Accumulated count

Accumulated Count	Accumulated Time	Average Time	Minimum Time	Maximum Time

		7120
pholApdu\PHOLAPDU_SECURITYCHECK	32	5510
phddCrc_P60\PHDDCRC_CALCULATECHECKSUM	21	4060
phddUart_P60\PHDDUART_SETRECEIVEMODE	21	
phddUart_P60\UART_TXLASTBYTE	21	
phIso7816T1\ISO7816T1_SENDBLOCK	17	
phIso7816T1\ISO7816T1_TXSTATEMACHINE	17	
phEvalOs_Kernel\PHEVALOS_KERNEL	16	
phEvalOs_Kernel\PHEVALOS_MODEHANDLER	16	
phEvalOs_Local_Restricted\PHEVALOS_RESTRICTEDMODE	16	
phIso7816L4\PHISO7816L4_PARSEBYTES	16	

Elapsed Time: 000:01:25.977

Search for Function or Entry/Exit pair (requires Freeze if running)

| 0 of 0 | Browse | Search |

☐ Match case

Current Sort Mode: DESCENDING   ☐ Freeze   Close

- ➤ Log Results
  - • Results are presented dynamically on screen and in XML, CSV and text file format reports

www.ashling.com