

S32 DESIGN STUDIO IDE (S32DS)



The complimentary S32 Design Studio IDE (S32DS) is a comprehensive enablement environment for automotive and industrial applications with no code-size limitations.

OVERVIEW

The S32DS enables editing, compiling, debugging and tracing of user's applications. Based on open-source software, including Eclipse IDE, GNU Compiler Collection (GCC) and GNU Debugger (GDB), the S32 Design Studio IDE offers software developers a straightforward development tool.

NXP software included along with the S32 Design Studio IDE completes the comprehensive enablement environment and reduces development time.

S32DS FEATURES

- S32 Configuration Tools for pin functions, clocks, peripheral drivers and FreeRTOS
- Boot Tools : DCD Tool, IVT Tool, QuadSPI Tool
- DDR tools
- S32 Debugger for S32 Platform and S32 Debug Probe support
- New project wizard to create bare metal or software development kit (SDK) projects
- Integrated runtime software: Real-Time Drivers, S32 SDK, Vision SDK, and Radar SDK
- Advanced FreeRTOS kernel-aware debug support
- Peripherals register view
- Assembly language supported, together with C and C++
- Supports Eclipse plug-ins from the Eclipse ecosystem or from partners
- Supported host operating systems*:
 - Microsoft® Windows® 10/11 with 32&64-bit binaries running on 64-bit OS
 - Ubuntu 20.04 (64 bit)

*Versions prior to S32DS 3.5 supports OS (Windows 7/8, Ubuntu 16.04 (64-bit), 18.04 (64-bit), Debian 8 (64-bit), CentOS 7 (64-bit))

S32DS SUPPORTED DEVICES

	S32DS for S32 Platform	S32DS for Arm®	S32DS for Power Architecture®
SUPPORTED PRODUCTS	S32G S32K1 S32K3 S32K39/37/36 S32M2 S32N5 S32R41 S32R45 SAF85xx SAF86xx S32S247 S32Z2/E2 S32V	S32K1 KEA MAC57D54H	S32R294, S32R274, S32R264 MPC57xx MPC56xx
INTEGRATED NXP TOOLS	<ul style="list-style-type: none"> S32 Configuration Tool <ul style="list-style-type: none"> Pins Wizard Clocks configuration Peripheral/Drivers configuration DCD configuration IVT configuration QuadSPI configuration DDR configuration S32 Flash Tool FreeMASTER 	<ul style="list-style-type: none"> Processor Expert <ul style="list-style-type: none"> Pins Wizard Peripheral/Driver configuration FreeMASTER 	<ul style="list-style-type: none"> Processor Expert <ul style="list-style-type: none"> Pins Wizard Peripheral/Driver configuration FreeMASTER
INTEGRATED NXP SOFTWARE	S32 RTD S32 SDK FreeRTOS AMMCLib Vision SDK Linux® BSP	S32K1 SDK FreeRTOS AMMCLib for KEA and S32K KEA SDK MQX OS/MQX drivers for MAC57D54H	S32 SDK for MPC57xx and S32R FreeRTOS AMMCLib for MCP5xxx Radar SDK
COMPILERS	NXP GCC 11.4* NXP GCC 10.2* NXP GCC 9.2* NXP GCC 6.3.1* Green Hills IAR Wind River Diab	NXP GCC 6.3.1* GCC 4.9* Green Hills IAR	NXP GCC 4.9* Green Hills Diab
DEBUGGERS	<ul style="list-style-type: none"> Built-in GDB interface: <ul style="list-style-type: none"> S32 Debugger/S32 Debug Probe P&E Multilink/Cyclone/ Open SDA Segger J-Link Lauterbach TASKING IAR 	<ul style="list-style-type: none"> Built-in GDB interface: <ul style="list-style-type: none"> P&E /Multilink/Cyclone/ Open SDA Segger J-Link Lauterbach TASKING IAR 	<ul style="list-style-type: none"> Built-in GDB interface: <ul style="list-style-type: none"> P&E Multilink/Cyclone/ Open SDA Lauterbach TASKING, PLS
DEDICATED TOOLS	Vision: <ul style="list-style-type: none"> NXP APU Compiler ISP Assembler ISP and APEX graph tools Radar : <ul style="list-style-type: none"> SPT Visualization Tools (Timeline, Memory) SPT assembler, explorer, graph tool 		Radar: <ul style="list-style-type: none"> SPT assembler SPT explorer SPT graph tool

*integrated

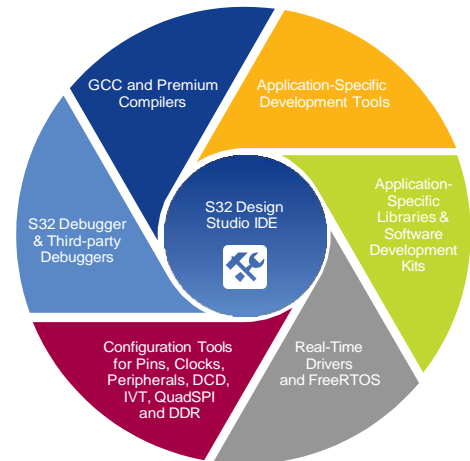
GET STARTED WITH S32 DESIGN STUDIO IDE:

Download it now: www.nxp.com/S32DS

Join our S32DS online community:

<https://community.nxp.com/t5/S32-Design-Studio/bd-p/s32ds>

www.nxp.com



DEBUGGER

The S32 Debugger provides all the standard debugging features critical for testing and locating bugs in your application. It is dedicated to NXP microprocessors and accelerators and is available at the first customer silicon samples.

The S32 Debugger, as an essential part of the S32 Design Studio, is designed to work in conjunction with the S32 Debug Probe and NXP Automotive processors to accelerate all phases of project development.

S32 DEBUGGER FEATURES

- Full integration within S32 Design Studio IDE using GDB interface in Eclipse supporting all standard debug features
- Support for all Arm cores and accelerator cores
- Support for concurrent multicore debugging
- Integrated Flash programmer for Flash over JTAG
- Access to core and peripheral registers through IDE views
- Low level command line interface, GDB python scripting
- Secured device debugging
- Trace Support on Arm Cores with Trace/Profiling Views
- OS aware debugging for FreeRTOS and AUTOSAR/OSEK OS
- Supported host operating systems*:
 - Microsoft® Windows® 10 with 32&64-bit binaries running on 64-bit OS
 - Ubuntu 20.04 (64 bit)

*Versions prior to S32DS 3.5 supports OS (Windows 7/8, Ubuntu 16.04 (64-bit), 18.04 (64-bit), Debian 8 (64-bit), CentOS 7 (64-bit))

S32 DEBUGGER SUPPORTED DEVICES

SUPPORTED DEVICES	CORES Arm/Accelerator /Trace	FLASH Type/ Part No.	DEBUG HW
S32G	Arm Cortex-A53 Arm Cortex-M7 Accelerator: LLCE Trace: Cortex-A53	QSPI Flash: MX25UW12A45G MX25UM51245G	S32 Debug Probe
S32V23X	Arm Cortex-A53 Arm Cortex-M4 Accelerator: APEX, ISP Trace: Cortex-A53	QSPI Flash: S26KL512S	S32 Debug Probe
S32S247	Arm Cortex-R52	Embedded Flash: C55_AE QSPI Flash: MX25UW12A45G	S32 Debug Probe GreenBox II on-board CMSISDAP
S32Z2/E2	Arm Cortex-R52, Cortex M33 Accelerator: CEVA, SPF2 Trace: Cortex-R52 Cortex-M33	QSPI Flash: S26HS512 MT25QL256	S32 Debug Probe
S32R45	Arm Cortex-A53 Arm Cortex-M7 Accelerator: LAX, SPT, Tensilica BBE Trace: Cortex-A53	QSPI Flash: MX25UM51245G	S32 Debug Probe

S32R41	Arm Cortex-A53 Arm Cortex-M7 Accelerator: SPT, Tensilica BBE	QSPI Flash: W25Q64J	S32 Debug Probe
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S32 DEBUG PROBE

S32 Debug Probe (S32DBGPROBE) enables NXP target system debugging via a standard debug port while connected to a developer's workstation via Ethernet or USB.

S32DBGPROBE may also be referred to by industry- standard terms such as a probe, JTAG probe, JTAG emulator or target probe.

S32 Debug Probe can be ordered at nxp.com or from an authorized NXP distributor.

Visit www.nxp.com/S32DebugProbe for more information



QUALITY, STANDARD COMPLIANCE AND TESTING APPROACH

S32 Design Studio IDE is developed according to NXP Software Development Process that is compliant with IATF 16949 and ISO 9001.

www.nxp.com/S32DS

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