Phoenix CoreArchitect™

INCREASE DEVELOPER PRODUCTIVITY

Unleash the power of Microsoft® Visual Studio® on UEFI firmware. Firmware development requires a number of iterations: code change, build, re-flash, debug. The PCA Visual Studio debug extension IDE reduces context-switching overhead and simplifies the process.

ONE TOOL FOR THE ENTIRE DEVELOPMENT CYCLE

- PCA includes features for every stage of firmware development: project management, source code control and editing, build and deployment of a binary, and debugging.
- The PCA Solution Manager organizes solutions in a convenient tree structure in a single place. Create new solutions or open existing ones from within the same intuitive interface.

SPEED-UP DEVELOPMENT WITH PCA PRODUCTIVITY TOOLS

- SCT Configuration tool organizes hundreds of symbols to simplify customization efforts
- Wizards and templates automate creation of new drivers and files
- EDKII UEFI driver wizard integration
- Newly built binary is automatically flashed onto the target
- Debugging session starts immediately after flashing is complete
- Verification that the UEFI binary on the target matches the built source on the host debugger
- Visual Studio Intellisense features
  - Auto-complete, syntax checking, and syntax highlighting and coloring
  - In-line protocol structure drop-down list
  - Syntax highlighting
  - File and Symbol search

SCALABILITY ACROSS VISUAL STUDIO VERSIONS, PROJECT TYPES, AND DEBUG INTERFACES

- VS2012, and VS2013
- VS2005 and VS2008 (reduced feature set)
- Serial port, USB 2.0, and USB 3.0 debug interfaces
- SCT2, SCT3, SCT4, EDK II, and ServerCore project types
- Phoenix DebugEngine and EDKII SourceLevelDebugPkg debug communication protocols

EMULATED ENVIRONMENT DEVELOPMENT

- Allows development of software without the need for an actual hardware target
- Phoenix emulated UEFI environment for SCT2 and SCT3 source code via WinHost
- UDK emulated UEFI environment for SCT4, EDK II, and ServerCore source code via Nt32Pkg

PCA Features

PCA PROJECT MANAGER

Productivity Tools

- Solution Manager
- Intellisense
- SCT Configuration Tool
- Project Wizards and Templates
- EDKII UEFI Driver Wizard
- Auto-deployment Flash Tools
- Auto-launch Debug Sessions
- Debugger/Debugee Binary Verification

Source Code Support

- SCT 2
- SCT 3
- SCT 4
- EDK II
- ServerCore

Emulated Environments

- WinHost for SCT2 & SCT 3
- Nt32Pkg for SCT4, EDK II, & ServerCore

PCA DEBUGGER

Debug Protocols

- Phoenix DebugEngine
- EDK II SourceLevelDebugPkg

Debug Transports

- Serial Port
- USB 2.0
- USB 3.0

Extended Debug Tools

- Extended breakpoints
- PCI Configuration Viewer
- I/O Register Viewer
- MSRs and CPUID Viewer
- GDT Table Viewer
- Debug Register Viewer
- Target Reset and Power Off

SOFTWARE SUPPORT

- Windows 7, 8, 8.1, and 10
- VS2005, VS2008, VS2012 and VS2013

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