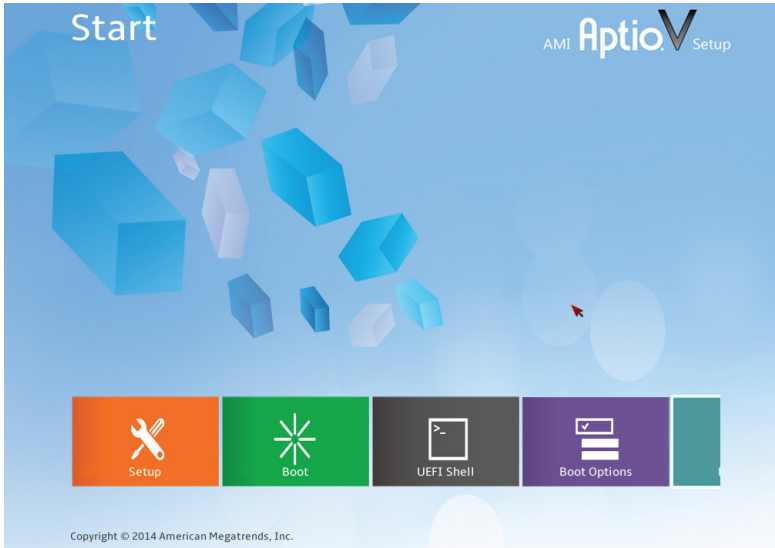


Extensible Setup Architecture (ESA)

Graphical User Interface with Touch Screen Support



Designed for enhanced user experience with the flexibility for OEM customization, branding and support for mouse and touch screen



The Extensible Setup Architecture (ESA) is the AMI firmware user interface designed to work in conjunction with Aptio V. It is made up of a series of drivers and images. ESA is designed to replace existing text setup environment (TSE) functionality with advanced graphical features.

In addition to the main parts of ESA which consist of Front Page, and Setup, it provides support for Message Boxes, Dialogs, Popups, Soft-Keyboard, Hot keys, Resolution support and Option ROM configuration.

ESA CUSTOMIZATION CAPABILITIES

ESA is an Aptio V eModule that provides customizations through AMI's SDL language. ESA was designed to be customizable to address any manufacturer's look and feel requirements. ESA uses a page definition architecture which makes it easy to add new pages for new functionalities.

Aptio ESA offers layout design customization that matches user interface specifications, including modification of existing pages, creating new custom pages, custom controls, custom data sources. Mapping between HII controls and their GUI representation, as well as changing of ESA behavior is supported.

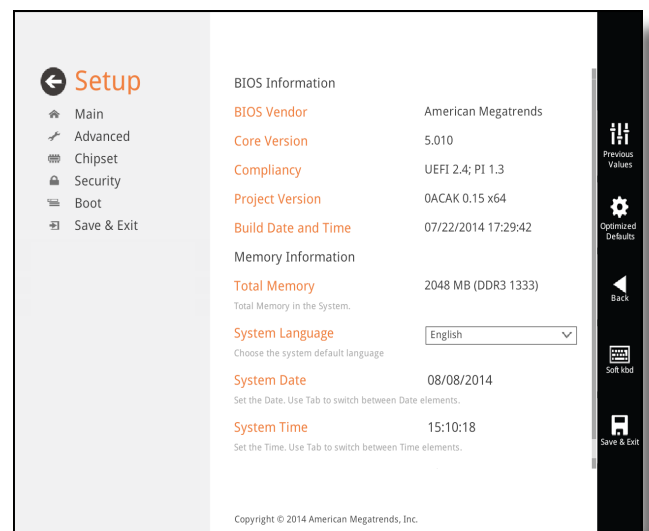
Typical ESA project contain a number of different pages: Front Page, Setup, Message Boxes, Change Password, Boot Order page, BBS pop up, Add Boot/Driver option, Show Progress, Post Pop-ups, etc.

Most of customization is achieved through modifying the attributes for different controls / control groups, including:

- Replacing images – backgrounds, buttons, control parts
- Changing text size and colors
- Changing or adding the fonts – including multi-language support
- Repositioning controls/changing spacing between controls
- Changing text captions for controls
- Hot key mapping to existing TSE actions

HIGHLIGHTS:

- Integrated Soft Keyboard with drag and drop
- Drag and drop for changing boot order
- Vector graphics
- Supports True Type Fonts with multi-language support
- Front page with drag/drop support for the buttons
- Front page provides a great branding opportunity
- Resizable layout (based on the text size)
- Scalable page layout for different resolutions
- Smooth scrolling of the setup pages
- Mouse over highlight for the buttons
- Animated page transitions and page elements
- Reflash module interface for recovery support



KEY FEATURES

- Build time selection for text or graphics engine
- Designed for Mouse and Touch
- Integrated Soft Keyboard with drag and drop
- UEFI 2.5 support
- Each HII form is displayed as a graphical page template
- Change Boot Order Page
- Control Refresh and Interactive controls
- Driver health support
- Password support
- PostManager compatibility
- Multi-language support
- Dynamic pages and menus
- BBS boot priorities
- IDE security
- Error Manager
- Add/Del Driver/Boot option
- Reflash module support
- Secure Boot Selection

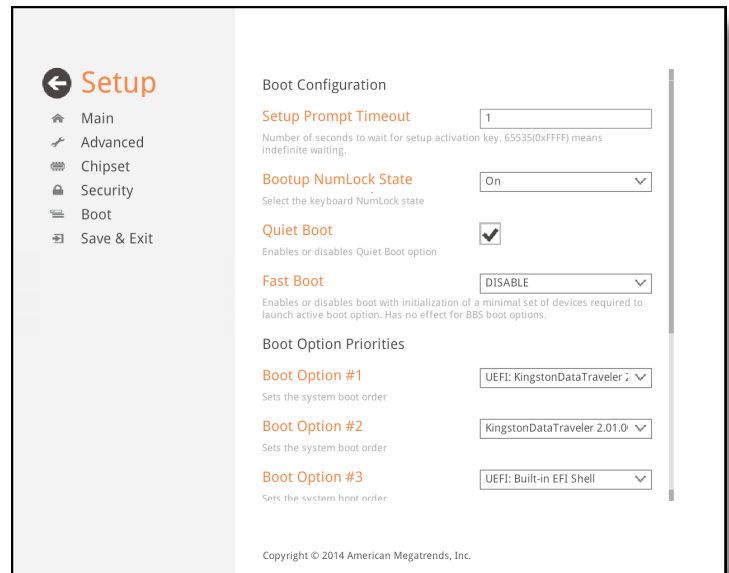
ADVANCED GUI FEATURES

- Builds on top of GLOS (Graphics Library for Pre-OS)
- Vector graphics
- Multiple TTF fonts for different languages
- Front page with Drag/drop support for the buttons
- Multi-line support (wrapping) for all text
- Resizable layout (based on the text size)
- Scaling page layout to native resolution
- Smooth scrolling of the setup pages
- Mouse over highlight (for the buttons)
- Semi-transparent background in the message boxes
- Drag/drop support for changing boot order & SoftKbd
- Animation on page transition in Setup (2D)
- Animated Page elements
- OpenGL animation on the front page (Spinning globe)
- Hot key support
- Progress Bar

ESA SDL CUSTOMIZATIONS

SDL achieves most of the GUI customizations through modification of controls/control groups:

- Replacing images – backgrounds, buttons, control parts
- Changing text size and colors
- Changing or adding the fonts – including multi-language
- Repositioning controls on the page / changing spacing between controls
- Change text caption controls
- Hot key mapping to existing TSE actions



OEM GRAPHICAL DESIGN

ESA includes GLOS, page rendering infrastructure and BIOS interfaces that enable OEMs to implement a custom Graphical Design with minimal implementation effort. Key capabilities include:

- Create OEM look and feel based on OEM usability standards
- Ability to create custom graphical pages and pop-ups
- Ability to create new GUI controls
- Ability to control user input behaviors (key, mouse and touch)
- Implement GUI preboot solutions like diagnostics and provisioning in addition to setup



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