



Aptio® V: Instant-On Camera Support

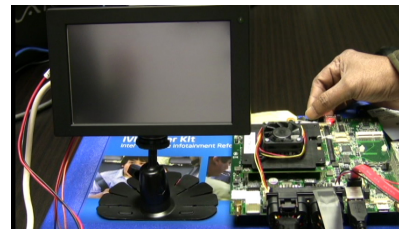
Innovations for Camera Instant-On Capability Add Value and Enhance User Experience

Solutions for Camera Support in the Firmware

Normally, it takes several seconds for a video camera to be activated after a system powers on; however, many applications require camera activation almost immediately after power-on. Additionally, many applications in the embedded and client sectors could benefit from an “instant-on” camera capability to provide features that enhance the product and the user experience. Some examples of embedded applications that would benefit from instant-on camera support include:

- Rear-facing automotive cameras for vehicle backup safety
- Security cameras for corporate and residential protection
- Military and government applications to aid in surveillance, search and rescue, and defense

With these applications in mind, AMI recently created a proof-of-concept demonstration of its camera support capabilities for In-Vehicle Infotainment (IVI) systems. This was done courtesy of our innovations for Instant-On Camera Activation in Aptio® V UEFI BIOS Firmware, utilizing the Intel® Atom™ “Crossville” Platform IVI Development Kit. This demo platform reduced camera activation to 637 milliseconds after power on - successfully demonstrating the value this innovation can offer to embedded systems designers and manufacturers in a wide range of market segments.



Aptio V IVI Demo Specs:

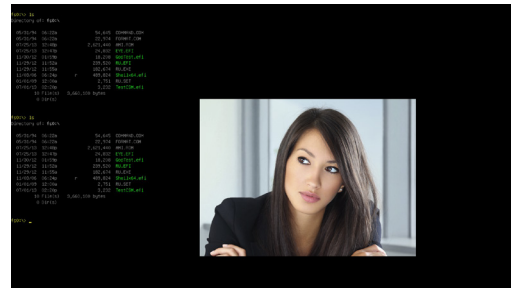
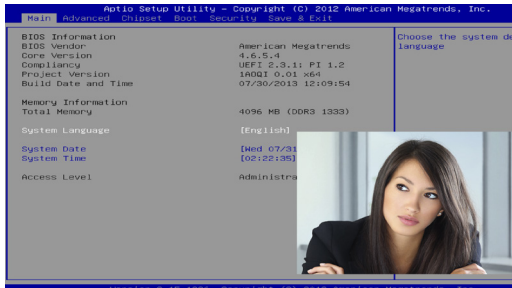
- Intel® Atom™ “Crossville” Platform for IVI Applications
- Powered by Aptio with AMI’s IVI Innovation for Instant-On Camera Activation

Camera activated 637 msec after power-on!

Meeting the Challenges of USB Camera Management during Boot Up

The goal in many client applications is to activate the camera before the Operating System gets control. However, challenges exist in quickly detecting, initializing, and starting the USB camera in the firmware environment. USB camera devices use isochronous transfers to ensure that data flows at a defined rate, so that applications can process it when time is available. These USB devices transfer large amounts of data at a defined schedule.

AMI's Instant-On Camera Activation technology for Aptio successfully manages the high rate of data transfer required by USB camera devices. A recent test of our Instant-On Camera Activation technology using an Alcor Micro HM1355 WebCam USB camera connected via USB to an IA-based notebook device achieved camera activation in just over a half-second. Moreover, AMI can display high quality imagery from the camera in multiple locations in the Aptio interface, including in the background of Shell, the POST Screen, or in BIOS Setup. Additionally, AMI's innovations in USB Camera Management allow for manipulation of the camera output, making it possible to adjust both the resolution within the video screen and its location.



For more information on Instant-On Camera Activation Technology with Aptio V UEFI Firmware from AMI, including video and demonstrations of this technology in action in IVI, notebook computer and other applications, please contact your AMI Sales Representative.

Developers using Aptio® V for embedded and client BIOS start their projects with the industry's leading firmware solution ...

Aptio V leverages the latest UEFI standards as the base for today's BIOS offering - delivering higher flexibility than boot loaders or legacy BIOS products and providing new opportunities for applications in the pre-boot environment. With Aptio V, embedded and client developers use purpose-built development tools in a modular environment, using C-based code and modern firmware standards.

For more information on Aptio V UEFI Firmware from AMI, please visit:

<http://ami.com/Products/BIOSandEFIFirmware/AptioV/>

Notebook USB Camera Instant-On Activation Highlights

- Camera activated in approximately 0.5 seconds!
- USB video camera running:
 - In the background of Shell
 - In the background of the POST Screen
 - In the background of Setup
- Camera display can also change:
 - Resolution within the video screen
 - Location within the video screen



American Megatrends Inc.
5555 Oakbrook Parkway, Building 200
Norcross GA 30093 | t: 770.246.8600
Sales & Product Information
swsales@ami.com | t: 800.828.9264
Technical Support
support@ami.com | t: 770.246.8645
www.ami.com

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