

WEC7 BSP support for customized i.MX6X platforms

iWave Systems, a genuine embedded solutions provider announced its support for Windows Embedded Compact (WEC7) Board Support Package (BSP) requirements for customized i.MX6 Platforms. Being a pioneer in SOM solutions, iWave has extended its astuteness in software solutions.

Windows Embedded Compact 7 (WEC7) is the latest in the series of Real Time Operating Systems (RTOS) from Microsoft and is designed to target enterprise specific solutions such as Industrial Controllers, Consumer Electronic devices and also Automotive Infotainment Systems. WEC7 is designed to support multiple CPU architectures like SH, ARM and x86. Silverlight 3.0, Multi touch, 3GB physical RAM are major feature additions in WEC7 compared to WinCE 6.0.

Freescale's i.MX6 series of processors are scalable multicore platforms that include single, dual and quad core families based on ARM Cortex A9 architecture. The i.MX6 Quad family encompasses a quad core platform running up to 1.2 GHZ with 1MB of L2 cache and 64-bit DDR3, 32-bit LPDDR2 support. With high- performance Multimedia processing and integrated power management, i.MX6 series is built for the new era of smart devices.

A Board Support Package (BSP) is a software which supports an operating system on development boards. Usually built with a bootloader, a BSP contains device drivers for all the devices on the board.

BSP development is a specialized task that needs knowledge of low-level system software, a thorough understanding of hardware and good knowledge of the OS internals.

With over several years of developing reference BSPs for Silicon Vendor chips, iWave has extensive expertise in designing, implementing and customizing BSPs. We have ported WinCE 5.0, WinCE 6.0 BSP's to our i.MX27, i.MX51 development platforms. We have also ported WEC7 on our i.MX53 and i.MX6 development platforms. Our firmware expertise combined with our reference BSPs ensure device makers fast and reliable products.

WEC7 BSP has been customized to support the i.MX6 processor platform with the availability of all the major peripherals and devices. With UART debug, CAN and Ethernet this BSP will provide efficient debug and communication support. With SD/MMC, USB and SATA this BSP provides efficient storage mechanisms. With OpenGL and OpenVG BSP provides rich graphics which is further accelerated by the 2D and 3D hardware accelerator support available in i.MX6 processor. With Silverlight 3.0 and Expression Blend user can develop rich graphical user interface. Active sync is available to synchronize the device.

BSP support includes following features in general:

Bootloader	Device drivers	Graphics	Multimedia	Others
Eboot	UART Debug	OpenGL	Music Player	Active Sync support
Xloader	RGB LCD interface	OpenVG	Photo Viewer	Connect and Consumer media
	LVDS interface		Video Player	Expression blend
	HDMI			Adobe Flash 10.1
	VGA			Hive Registry on SD/MMC
	SD/MMC			Silverlight 3.0
	USB Host			
	GPU			
	USB Device			
	RTC			
	CAN			
	Touch			
	Camera			
	TV-IN			
	Audio			
	SPI			
	ESAI			
	SATA			
	Ethernet (10/100/1000mbps)			

Our expertise in developing BSP includes:

- Developing bootloader
- Developing device drivers

To support the peripherals on the custom board:

- Customization of OS design:
Configuration and customization of the BSP OS design for final release
- Debugging and performance analysis of the OS

Our Engineering team provides development services for:

- Customization of existing drivers
- Creating new device drivers
- Developing end applications for Medical, Automotive and Defence domains based on Windows Embedded platforms