WEC7 BSP 3.2.0 MR2 v1.0
for SECO INTEL boards
USER GUIDE

Document Revision History

Revision	Date	Author	Changes
1.0	29th July 2015	MM	First release

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1. Preface

This document describes the procedure to install WEC7 BSP and compile a Windows® Embedded Compact 7 image for SECO's **E6xx**, **x2000** and **E38xx** modules.

2. Supported boards

SECO WEC7 BSP support the following boards:

- **QuadMo747-E6xx**
- **QuadMo747-E6xx/XT**
- **QuadMo747-x2000**
- **SECOMExp-x2000**
- **SECOpITX-x2000**
- **Q7-BT**

3. System Requirements

To run the procedure described in the following chapters, it is necessary to have a Development PC with the following requirements:

- One of these OS:
  - Windows XP SP3
  - Windows Vista SP2
  - Windows 7 and any available service packs
  - Windows 8/8.1 and any available service packs
- Visual Studio 2008 SP1 installed

- Windows Embedded Compact 7 Platform Builder installed (better to install all available updates). Make sure to install the x86 option when installing WEC7.

4. BSP Installation

WEC7 BSP for SECO INTEL boards is a modified copy of original INTEL BSP that you can find in ***INTEL_SECO_WEC7_INTEL_Packages_V320MR10*** folder.

SECO modifications mainly consist of Platform Builder catalog adjustments to make it easier configure OS for SECO boards.

Developers can follow two solutions for BSP installation:

1. Install original INTEL BSP present on ***INTEL_SECO_WEC7_INTEL_Packages_V320MR10*** folder, following the relative documentation. This will install BSP source codes on ***C:\WINCE700\platform\INTEL_CS*** folder.
2. Install SECO INTEL BSP following this steps:
   a. Unzip ***INTEL_SECO_WEC7_SRC_V3.2.0.MR2_1.0.zip*** package to a folder of your choise.
   b. Run ***INTEL_SECO_V320MR2_10.exe*** present on ***INTEL_SECO_WEC7_SRC_V320MR10*** folder.
   c. After this, you can find BSP source codes on ***C:\WINCE700\platform\INTEL_CS_SECO*** folder and a sample project on **C:\WINCE700\OSDesigns\INTEL_SECO_MR2** folder.

Both solution for BSP installation are usable (also jointly).

5. Build OS image

After the BSP is installed, the example OS design solution can be used to build WEC7 images.

1. Select from catalog the BSP component to add to the OS according to your needs:
2. Select your SECO module from:

   Third Party\BSP\INTEL_CS_SECO:X86\Device Drivers\SECO Device

   - QuadMo747-E6xx / QuadMo747-E6xx/XT
   - QuadMo747-x2000 / SECOMExp-x2000 / SECOpITX-x2000
   - Q7-BT
3. Select your display video resolution ***(only for E6xx/x2000 boards)*** from:

   Third Party\BSP\INTEL_CS_SECO:X86\Device Drivers\EMGD Display Driver

   - 640x480@18bit or 24bit
   - 800x480@18bit or 24bit
   - 800x600@18bit or 24bit
   - 1024x600@18bit or 24bit
   - 1024x768@18bit or 24bit
   - 1280x786@18bit or 24bit
   - 1366x768@18bit or 24bit
4. Select your audio support basing on Audio Codec present on your board or carrier board, from:

   Third Party\BSP\INTEL_CS_SECO:X86\Device Drivers\Audio

- Audio Support (ALC886)
- Audio Support (ALC888)

5. Enable ATAPI, Ethernet, Serial Port and USB Support respectively from :
   - *Third Party\BSP\INTEL_CS_SECO:X86\Device Drivers\ATAPI Support*
   - *Third Party\BSP\INTEL_CS_SECO:X86\Device Drivers\Serial Port Support*
   - *Third Party\BSP\INTEL_CS_SECO:X86\Device Drivers\USB Support*
6. From ***Build->Configuration Manager->Active solution configuration*** select ***INTEL_CS_SECO X86 Release*** configuration
7. Select ***Build->Advanced Build Commands->Sysgen*** to start the build process.

6. BIOS settings

Before booting with WEC7 image, is necessary to set the following configuration in BIOS settings:

1. Enter in BIOS setings pressing ESC at boot
2. Enter in SCU menu
3. Press F9 to load optimal default value
4. Set **DISABLE** in **xHCI Mode** on **USB Configuration** menu if you want to use USB device with USB hub (USB 3.0 driver doesn't support Hubs)
5. Set **PCI Mode** on **LPSS & SCC Devices Mode** on **LPSS & SCC Configuration** menu
6. Set **ENABLED** on **LPSS DMA #1 Support** on **LPSS & SCC Configuration** menu
7. Set **ENABLED** on **LPSS HSUART #1 Support** on **LPSS & SCC Configuration** menu
8. Set **ENABLED** on **LPSS SPI #1 Support** on **LPSS & SCC Configuration** menu
9. Set **ENABLED** on **LPSS DMA #12 Support** on **LPSS & SCC Configuration** menu
10. Set **ENABLED** on **LPSS I2C #1 Support** on **LPSS & SCC Configuration** menu
11. Set **IDE** on **Chipset SATA Mode** on **SATA Configuration** menu

7. Additional documentations

You can find additional Intel BSP documentations in folder:

INTEL_SECO_WEC7_INTEL_Packages_V320MR10

where are present all original Intel BSP's and drivers.

In **Intel_WEC7_BSP_3.2.0_GOLD.zip** package you can find:

- *490123.pdf*

In **BYT_WEC7_2013_IO_BSP_MR2.zip** you can find:

- *332152_MR2_BSP_WEC7 WEC2013 Atom E3800 Celeron N2807N2930J1900 Release Notes.pdf*
- *332153-001US_BYT WEC IO MR2 External Developer Manual.pdf*
- *332154-001US MR2_BSP_WEC7 WEC2013_Intel Atom E3800 Product Family Intel Celeron N2807 N2930 J1900 Release_User Guide.pdf*

In ***INTEL_EMGD_BYT_WEC7_MR2_36.16.2_2006.zip*** package you can find:

- *UsersGuide.pdf*