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# Release Notes - MC95X8 BSP 03.37.02 - WM6.5 Professional

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## Introduction

The MC9500-K raises the bar for premier rugged mobile computing, incorporating breakthrough ergonomic design and features to support the most demanding field mobility applications. Truly in a class of its own, this groundbreaking device is as different on the inside as it is on the outside. Building on signature MC9000 Series, the MC9500-K delivers a more rugged design, more data capture options, true WAN technology independence and application flexibility through customer-swappable WAN subsystems and keypads, more processing power and a game-changing approach to battery and backroom management — all in a lighter, sleeker and easier-to-use form factor.

MC95X8 BSP 03.37.02 SW release is based on the latest Microsoft Window Mobile 6.5 Operating System and offers an enhanced user experience both in look and feel. This release supports 95X8 device with Toshiba 1GB Nand Flash and the skus of both 128MB RAM/512 MB flash sku as well as the new extended memory sku which has 256MB RAM/1G flash.

Update Loader Image 03.37.02 contains the SW required to update an MC95X8 CDMA Phone device to the Rev C software release.

This software is intended to be loaded and run on the MC95X8 CDMA Phone devices. It is important that care be taken to match the device configuration with the appropriate Update Loader package. If an incorrect Update Loader package is loaded, the device may fail to operate properly or even fail to boot.

## Description

### General Enhancements:

- Microsoft WM6.5 (AKU 23137, 5.3.9)
- BTE Explorer Release Notes 2.1.1 Build 27168
- MSP Agent 7.03.46, Airbeam 7.03.46, RD Client 7.03.46  
This software release has been tested on MSP 3.3 and passed MSP Compliance.
- WLAN Fusion version v3.00.2.0.006R
- Team Express Client Licensed version v1.1.2-0214 included as a cab file.
- Included MMAX Demo v4.0.8
- Included DataWedge v3.3.19 as a cab file in \Windows folder.
- Support for 1GB Toshiba Nand Flash
- GPS Firmware: SiRFLocClient3.5.0\_3.5.00.00-C17P3.00, GPS LPL version:1.65.7.040\_1.0.0\_ADA, GPSMux 2.48.4
- WWAN CDMA MC5727 version:
  - a) RIL SW 3.174.0.0
  - b) SWI SDK Ver 3.49.1.0
  - c) SWI VSP Ver 1.18.20.0
  - d) OEM Aux Ver 0.40

e) Modem FW Ver: Sprint - 1.67.02 , Verizon - 1.67.03

- Fixed the issue where USB devices connected through external hubs don't get recognized after a warm/ cold boot
- Fixed issue where USB client would get disconnected because of a PortModeChangeEvent even though the port has not been changed.
- SPR 18183 Fix: Device Cleanbooting in the field without having cleanboot files on the terminal.
- SPR 19313 Fix: Adding new Reg key "NoRemoveOnBattFault" to prevent remounting for battery fault.
- Force eject/reinsert card only if battery fault has occurred and the registry key "NoRemoveOnBattFault" is not set
- Disabled IST Auto Orientation during Touch Calibration & restored IST settings
- SPR18852 Fix: Programmatically setting CAPS\_LOCK does not work
- Fixed: Start button became unresponsive after battery swap options dialog was opened and closed
- Added a mean (new RTLOG APIs) to export real-time logger data in lazy mode for bSmart project & ECRT requirements.
- Fixed: System Info applet does not show Locale info properly in ConfigInfo Tab.
- Added support for 512 MB physical RAM
- Fixed: Realigning the navigation keys in Landscape mode
- Fixed: User is unable to select required partitions as mass storage in USB config applet as some partitions listed twice.
- Fixed: Unable to scan BD address barcode of the device using Whistler.
- Fixed: IST control panel , display tab text is not correct
- Changed MIN\_NO\_RAMDISK\_RAM to 68M for OS, 48M for ULDR.
- Added extended scancode support (from 128 change to up to 256).
- Fixed the RCM\_GetDeviceCaps API call for Classic Configuration.
- Fixed the USB1.1 re-connect problem on resume from critical suspend.
- Fixed: Display SSPMux issue where display does not come up on boot.
- Fixed: ULDR does not show the update of Progress bar properly during update.
- Added AdobeReaderLite v2.5.
- Fixed the combobox issue in BattSwap UI.
- Fixed the problem where some power micro wakeup source is still enabled even in BattSwap mode.
- Noise suppression is available via NoiseSuppression.dll.
  - o Registry keys to control Noise Suppression are located at [HKEY\_LOCAL\_MACHINE\Drivers\BuiltIn\WaveDev\NS]
  - o Noise Suppression registry keys for this release are: "EnableNS = 0, ForceNS = 0, NSAttenuationValue =12
- Orientation is changing from Landscape mode to Portrait even device is in Face Up after Suspend and Resume.
- SPR 16570 Fix: MC75 BSP 21 - AUDIOEX\_GetGain and AUDIOEX\_SetGain do not work to get and set audio gain properly
- SPR 18492 Fix: The registries to configure the IST functionality are not effective after cold boot
- Added UI setting control panel applet:
  - o Enable/Disable the mapping of IE ZOOM control to Volume keys.
  - o Customization of start screen grid view [1 to 4 columns]

## Features/Fixes in Camera/Scanning:

- **BT Scanning:**
  - o Added Display\_BD\_Address.exe to the OS. This version calls the BT\_Information application to display the barcode (this app is deprecated and support is added only for backwards compatibility)
  - o BTScannerCtlPanel – Added locale-specific strings for DE, ES, FR and IT
  - o Added support for higher resolutions

- o Added support for auto focus
- o Added changes to improve decode beep times. The decode beep happens as soon as a good decode is reported. Hence it should improve the perceived decode times from a user's perspective

- **Camera:**

- o Fixed buffer chaining issue and Changed chaining scheme for start of frame interrupts (to get better frame rates)

- o Added support for higher resolutions

- o Added support for auto focus

- **Imaging:**

- o Added support for camera (now supported as IMG2:)

- o Improved brightness of the capture images using Imaging API for blockbuster

- o Various other improvements to the image acquisition logic

- o Improved frame count logic

- o Set default preview resolution to VGA

- o Added support new enums, Near and Far for FOCUS\_LENGTH cap of image capture API. This helps sensor switching for Long range imager

- **2D Scanning:**

- o Added support for Long range imager smart sensor switching, torch mode and smart LED switching.

- o Added new decoder library which adds support for Long Range Imager. The new decoder library also has many improvements and bug fixes. A new feature added to it is distance

decoding, which helps to read out of spec barcodes (Code-39 and Code-128).

- **Laser scanning:**

- o Added support for SE960 Laser scanner with adaptive scanning feature

- o SPR 18796 – Fixed exception reported on MC3100 when scanning barcodes of length 50 and above with laser scanner

- **RS507:**

- o Added support for quicker beeps after decode

- **General Fixes:**

- o Fixed: Cannot scan barcodes using scanner application after opening scanner application and camera application.

- o Fixed: View finder crashes when VF size left is bigger than right and top is bigger than bottom

- o Added support for a new scan feature: Buffered reads

- o Modified scan driver to support remote feedback on devices. Fixed the existing feature to work with external scanners and enhanced it to support local, remote and both local as well as remote feedback

- o Added support for new symbology Matrix 2of5. Also included new decoder params for M2of5

- o Fixed an issue with RSS to UPCEAN conversion.

- o Removed a condition which prevented Trioptic39 and full ascii from being set simultaneously.

## MC95x8 Specific Changes

- Fixed SPR 18458: The pictures taken with camera exhibit very pink and green colors in different areas.

- Fixed SPR 19122: MC95 - MSR will not work, MSRSamp2 from EMDK For C 2,.2 returns MSR3000\_ERR\_OPENFAILURE if you select a dll other than

- MSRMC50.dll. Even if you later select MSRMC50.dll after that it does not work. Need to cold boot device to recover.

- Fixed: On Non-QWERTY KBD type. After activating (ALT, CTRL), it cannot be deactivated by pressing (ALT, CTRL) again.
- Fixed SPR 18552: MC95 Imager - Pictures taken using Imager API are much darker than on MC9090 using Imager API
- Fixed SPR 19587: Reduced the drive strength for the AC97 SYSCCLK from 4mA to 2mA.
- Added support to display Charging icon when USB Charging.
- Modified SymbolBacklight driver to default to an External Power timeout of 30 mins so the Backlight and keylight will turn off when USB charging after 30 mins.
- Default Internet Explorer page would have link to **Motorola Home Page** since MaxDemo is part of the OS image.
- Fixed: Terminal lock up when scanning code128 (or ean128) with more then 50 characters.

**Note:**

“Datawedge” will not be installed on Cleanboot hence Titanium Screen would not have Datawedge entry. However, Datawedge.cab is available in \Windows folder for the user to install.

After installation, user can find Datawedge shortcut on the Titanium screen. If the user wants to install DataWedge at Clean Boot, then the following registry key should be put in .reg file and placed in \Application folder and then the terminal should be clean booted.  
[HKEY\_LOCAL\_MACHINE\SOFTWARE\Motorola\DWStartUp]  
"DontInstallOnStartUp"=dword:00000000

**Known Issues:**

- o Unable to upload APF files in to MSP server for MC95xx products.  
Workaround: MC959x RevC OS size has been increased to 128MB OS. So the size of the APF file becomes 128MB. IIS has this limitation. User need to keep the APF file in "Program Files\Motorola MSP\PackagesToInstall" directory directly.
- o “GettingStarted” entry has been removed from the Titanium screen. After a cold/warm boot, “GettingStarted” icon position will be moved lower in Start->Programs.
- o Default Team Express Private call key is not mapped to center trigger key.

**Bluetooth - BTExplorer Release Notes 2.1.1 Build 27168**

**Fixed issues in StoneStreet BT Stack:**

- Added support to disable PIN Dlg while in SSP pairing.
- Added a reg key to make LeaveRadioOn as a default option.
- Fixed issue related to problems with A2DP audio while interacting with the OS (Specifically while using the WAN connection to access web pages). The new A2DP implementation no longer gaps in the majority of cases. It will always be possible to disrupt A2DP if the platform load is high enough, but in the typical use case this issue no longer occurs.
- Fixed issue related to the SystemIdleResetTimer configuration option. We will now prevent the device from sleeping when BT data is actively being transmitted. The existing registry value will now have the expected result (determines if the device should allow sleep while a BT connection is present, but NOT sending data).
- Fixed issue related to the handling of the Hands-Free and Headset pop-up context menus. Also corrected a similar issue related to A2DP favorite pop-up context menus.
- Fixed issue related to the display of 2 OK buttons on certain WM 6.5 AKUs (6.5.3 or later). We have added a registry value (set by default on the MPA2 platform) that will enable a new layout in BTExplorer which eliminates the extra OK button. We have made this configurable so that devices using pre-6.5.3 operating systems can retain their previous layout. As more devices are migrated to 6.5.3 or later the registry value can be set as required.
- Complete rework of the A2DP-Source streaming implementation. The new implementation has improved overall A2DP performance, raised maximum usable bit rates, and broadened

- device compatibility.
- Minor changes to L2CAP, GAVD, and SDP protocol layers. Resolved other miscellaneous A2DP related issues.
- Resolved issue that was causing BTE Explorer to go into a non-connectable state following a battery fault condition.
- Added information to the BTE Explorer OEM Reference Manual detailing the use of the OEMGetBthPowerState and OEMSetBthPowerState API.
- Resolved issue that prevented BTE Explorer from being configured to perform JustWorks pairing without requiring user confirmation. Following this change the flags detailed in the OEM Reference Manual should all have the intended effect.
- Updated Unicode handling code in Bluetopia SDK sample application.
- Removed references to HCI\_Delete\_Stored\_Link\_Key from Bluetopia SDK sample applications.
- A single DLL will work with both newer and older AKUs (5.2.23090 and earlier) to prevent the HandsFree problem introduced by changes to a header file in the newer AKU (5.2.23096).
- Fixed Landscape orientation GUI issue.
- Fixed Secure Simple Pairing related Landscape orientation GUI issue.
- Fixed an issue that was preventing actual names of PAN services to be visible to BTE Explorer user. They were getting overwritten with generic names. Also, PAN-G service now have a user chosen name for PAN-U with (Group Ad-Hoc networking) string appended to it.
- A new registry DWORD “SSStackBootState” has been added under HKEY\_LOCAL\_MACHINE\Software\SymbolBluetooth to provide option to turn Stonestreet Bluetooth stack ON during boot time.
  - When set to 1, the Stonestreet stack will be turned ON during boot. The default value of the registry is 0.

### **Fixed Issues in MSP Agent 7.03.46**

- Fixed issue with installing PFX files for use by Fusion (SPR 19070, HelpServe 258, Assembla 999).
- Fixed issue with 3 byte country codes in MobileCompanion (HelpServe 250).
- Fixed issue in ProcessManager when command-line had embedded space (Assembla 928).
- Added logic to abboot.exe to retry loading airbeam.dll (HelpServe 234, SPR 19110)
- Fixed issue where sense of wait was incorrectly inverted in new built-in ProcessManager setting (Assembla 854).
- Added change to installer to create the recently added registry entries for the stage log and control log paths (Assembla 870, 871).
- Change AirBEAM copyright message to 2001-2010.
- Added change to ignore space character in wedge mode scanning.
- Added error log message when setting fail.
- Added check for missing extension in File setting.
- Added logic to PC service update package to update plug-in registration.
- Modified default airbeam.reg to add CRCMODE30 and remove LAUNCHONFAIL.
- Moved ProcessManager setting handler into client.
- Added new option in Confirm condition to force pass after maximum defers (Assembla 706).
- Added Agent.WindowsPC setting to support enable/disable UI and reboot.
- Integrated support for registry, file and XML provisioning settings.
- Added Agent.EnableDisable setting and logic to stop agent.
- Removed support for identity.flashsize attribute (Assembla 370).
- Added change to report embedded XP OS type (XPE).
- Added logic to validate reboot requests.
- Added logic to bypass bundle messages if headless.
- Added semaphore to protect access to setting handler.



- Enabled reboot on PC.
- Changed RD to prompt "Remove from cradle" for Network.WLAN.Family setting.
- Added MPAService commandline arguments for agent and RD UI
- Added change for bypassing certificate installation confirmation dialog on localized OS builds.
- Added change to FTPS client for vsftpd socket shutdown issue.
- Added change to agent to not cause regDOC CRC change based on "free license". (Assembla 642).
- Added check to avoid scrambling already scrambled FTP password.
- Included FPPluginProfile.exe.
- Changed logic in Fusion public setting to not block on connection attempt (Assembla 449).
- Added support for MC9190.
- Added support for new setting persistence mode (Assembla 603).
- Removed RDClient window title
- Change Windows PC client to report Control agent.feature attribute.
- Fixed issue with logic that cleaned package cache.
- Fixed issue with logic that replaced package in package cache with new version.
- Changed installer to treat APAC units as generic (Assembla 515).
- Added support for job completion API (Assembla 573).
- Added logic for launching autostage client (Assembla 508).
- Added logic to invoke **MotoDC** for Windows PC client.
- Added logic to append 'B' for global radio device names (Assembla 506).
- Added support for Network.WLAN.Family setting (Assembla 452).
- Added support for power condition for PC client.
- Added change to FTP get to use WIN32 calls for PC client.
- Added fix for processing condition blob in RD client command-line.
- Added change to disable ESC key from exiting MSP agent (Assembla 408).
- Added change to attempt to restore keyboard focus to foreground window after MSP agent launches (Assembla 409).
- Added new identity attribute to return MPA platform version, where available (Assembla 410).
- Added logic to return correct model for MC55A0 (Assembla 412).
- Added support for identity.flashsize attribute (Assembla 370).
- Added support for quotes on RD client command-line arguments (Assembla 338).
- Fixed issue when adapter name too long. Issue occurred with modem connections.
- Fixed issue with embedded blobs > 32K. Change required for new File plug-in.
- Added InstallMSPCert.exe utility.
- Added change for wedge mode to handle control characters in barcode.
- Added changes for localized string files.
- Added change to installer to support installing localized string files, if present.
- Legacy WLAN plug-in modified to not restore WZC settings.
- Legacy WLAN plug-in modified to correctly restore Mobile Companion profiles if RD fails.
- Legacy WLAN plug-in modified to support configuring domain name.
- Added change to RD scan wedge logic to fix issue discovered on APAC devices.
- Added fix to recognize Fusion 3.2 (minor version is 20).

### **Known issues in Platform:**

- Whistler Device BT pairing Confirmation Message is repeatedly Displayed.
- Continous Beep Sound is heard when Center trigger key is pressed. This is specific to Team Express client.
- Workaround to fix Pop sound at the beginning of a recording. The following registry key should be set to enable it.

```
[HKLM\Drivers\BuiltIn\Wavedev]
ADCMicBiasPowerAlwaysOn=1
```

It may not completely eliminate the pop. It should minimize the pop for both internal microphone and wired-headset microphone.

## Known issues in the Windows Mobile Products:

- By default Input panel applet is not displayed in Start->Settings->Personal page due to a known issue from Microsoft wherein the user will not be able to close the Input panel applet.

As a workaround if enabled, the applet can be closed using the "OK" button on the hard keyboard.

Remove the below registry entry and reboot, to display the "Input" applet under Settings\Personal page.

**"Redirect"=""**

which is present in the following section:

[HKEY\_LOCAL\_MACHINE\ControlPanel\Input]

- When switching between Control Panel Applets, the previously opened Applet's title is shown on the currently opened applet.

- After warm boot Screen orientation is changing from Portrait to Landscape mode.

## Contents

1. 95x8w65HenUL033702.zip – UpdateLoader Package.
2. 95x8w65HenAB033702.APF – AirBeam package.
3. IMPORTANT NOTES FOR Upgrading & Downgrading MC959x\_RevC.doc

## Device Compatibility

This software release has been approved for use with the following Symbol devices.

Device	Operating System
MC95x8	Windows Mobile 6.5 Professional

## Installation Requirements

MC95X8 device must contain a released version of WM6.5 Software

## Installation Instructions

### **IMPORTANT NOTES FOR Updating and Downgrading MC959x Device to/from BSP37 (v3.37.02) RevC**

#### **Upgrading to v3.37.02 RevC SW:**

- If your device is running BSP27 (v2.27.08) Windows Mobile 6.5, you can simply use the BSP37 (RevC SW v3.37.02) Update Loader package to update from BSP27 to BSP37
- If your device is running BSP19 (v1.19.11), you must first update your device to the released version of BSP27 (v2.27.08). Once the device is running BSP27, you can then perform the update to BSP37 (v3.37.02).

#### **Downgrading to BSP27/BSP19:**

- If your device has 256MB RAM, you are only permitted to downgrade to BSP27(v2.27.08)

(Go to System Info Applet on the device to find the RAM size: Start->Settings->System->"System Info" Applet->"Misc" Page)

- If your device has 128MB RAM and running with BSP37 (v3.37.02), you are permitted to downgrade to either BSP27 (v2.27.08) or BSP19 (v1.19.11). However, if you want to downgrade to BSP19 (v1.19.11), you must first downgrade to BSP27 (v2.27.08) before performing the downgrade to BSP19 (v1.19.11). (Go to System Info Applet on the device to find the RAM size: Start->Settings->System->"System Info" Applet->"Misc" Page)

## Part Number and Release Date

18 Jan 2011

1. 95x8w65HenUL033702.zip
2. 95x8w65HenAB033702.APF