



# V50.14.x, V50.15.x, and V53.15.x Summary of Firmware Changes

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This document summarizes the following V50.14.x, V50.15.x, and V53.15.x firmware releases:

Firmware Release Number	Release Date	See Page
<a href="#">V53.15.8Z</a>	19 November 2007	<a href="#">page 1</a>
<a href="#">V53.15.5Z</a>	13 August 2007	<a href="#">page 4</a>
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## V53.15.8Z

**Release Date: 19 November 2007**

This firmware release is for use on:

- All S4M™ (203 & 300 dpi) printers
- All ZM400™ & ZM600™ (203, 300, & 600 dpi) printers

This firmware includes all features of previous V50.15.x releases.

## Changes

- XML-Enabled Printing is now supported on printers running v53.15.8Z and later. See the Zebra XML-Enabled printer site at [www.zebra.com/xml](http://www.zebra.com/xml) for additional details. This new feature does not alter the ZPL capabilities of the printer.
- A new SGD command "device.xml.enable" allows users to turn XML-Enabled printing on or off when used as a setvar, or to check the status of the XML-Enabled printing feature when used as a getvar.

- When the "Default Network" selection is made from the front panel, the following settings will be defaulted:
  - IP Address
  - Subnet Mask
  - Gateway
  - WINS server Address
  - Connection Timeout Checking
  - Connection Checking Timeout Value
  - ARP Broadcast Interval
  - Base Raw Port Number
  - IP Protocol
  - Client Identifier Settings
  - Set Antenna
  - Wireless Password
  - Transmit Rate
  - Wireless Card Values
  - Wireless Securities
- When the "Default Printer" selection is made from the front panel, the following wireless print server settings and internal wired print server settings on the ZM400 and ZM600 will be defaulted:
  - Primary Network Device
  - Wired Print Server Search
  - SNMP Settings
  - Set Primary
  - Set SMTP
  - Web Authentication Timeout
- On S4M, the phrase **CANCEL CONTINUE** has been shortened to **CANCEL CONT.**
- New Wireless Securities (see compatibility chart below)
  - WPA2 PSK
  - WPA2 PEAP
  - WPA2 LEAP
  - WPA2 EAP-TLS
  - WPA2 EAP-TTLS
  - WPA2 EAP-FAST
- Displays previously displayed with cursors now display with the gauge blocks.
- When it is necessary to display as asterisk, the phrase on the LCD will be moved one position so that the asterisk can be displayed to the left of the phrase.
- When **FORMAT CARD** is displayed on the LCD, the A memory option will be displayed on the left and the B memory option will be displayed on the right.
- **CONTROL PREFIX, FORMAT PREFIX, DELIMITER CHAR, LEFT POSITION, RTC DATE, RTC TIME** are displayed with the '+' and '-' characters to indicate incrementing and decrementing.
- Support for Host MIB 1514 has been added for the Wireless Plus print server.
- Support for Host MIB 1514 has been added for the internal wired print server on the ZM400 and ZM600.
- The Wireless Plus option board firmware has been updated to version 1.49.1753.

\* See the latest ZPL manual (available at [www.zebra.com](http://www.zebra.com)) for details on new commands.

## Issues Corrected and Items Changed

- Printer web pages now display correctly when the CB21 is used.
- Selected field miss-prints on 300dpi printers when Darkness is set to +25 are resolved.
- Blank lines no longer appear on date fields during long print runs.
- Use of ^FV no longer automatically causes text to be capitalized.
- Formats with two ^FD commands in same field no longer delay printing.
- Graphics sent and stored using the ^GFA ^DF commands are now correctly recalled.
- Greek characters will now print correctly when using a XML format & Swiss 721.
- Issue with graphics printing in wrong orientation is resolved.
- Issue with graphic fields on left half of label being truncated is now resolved.
- Sending a ~JA command to a printer in the same connection while also printing an XML format will cancel the format.
- The maximum MTU for the Internal Wired Print servers on the ZM400/ZM600 has been set to 1460
- S4M now reports its on-line status correctly via the USB port.

**Table 1 • Wireless Plus PrintServer Security Support**

Securities Supported	Cisco CB21 (CardBus)	Cisco 350 (PCMCIA)	LA-4121 (PCMCIA)	LA-4137CF (Compact Flash)
Open	Yes	Yes	Yes	Yes
KERBEROS	Not Supported	Not Supported	Yes	Yes
WEP 40-bit & 128-bit	Yes	Yes	Yes	Yes
LEAP	Yes	Yes	Yes	Yes
PEAP	Yes	Not Supported	Yes	Yes
EAP- FAST	Yes	Not Supported	Yes	Yes
EAP-TLS	Yes	Not Supported	Yes	Yes
EAP-TTLS	Yes	Not Supported	Yes	Yes
WPA PSK	Yes	Yes	Yes	Yes
WPA LEAP	Yes	Yes	Yes	Yes
WPA PEAP	Yes	Yes	Yes	Yes
WPA EAP- FAST	Yes	Yes	Yes	Yes
WPA EAP-TLS	Yes	Yes	Not Supported	Yes
WPA EAP-TTLS	Yes	Yes	Not Supported	Yes
WPA2 PSK	Yes	Not Supported	Not Supported	Not Supported
WPA2 LEAP	Yes	Not Supported	Not Supported	Not Supported

**Table 1 • Wireless Plus PrintServer Security Support** *(Continued)*

Securities Supported	Cisco CB21 (CardBus)	Cisco 350 (PCMCIA)	LA-4121 (PCMCIA)	LA-4137CF (Compact Flash)
WPA2 PEAP	Yes	Not Supported	Not Supported	Not Supported
WPA2 EAP- FAST	Yes	Not Supported	Not Supported	Not Supported
WPA2 EAP-TLS	Yes	Not Supported	Not Supported	Not Supported
WPA2 EAP-TTLS	Yes	Not Supported	Not Supported	Not Supported

## Wireless Notes

The following items are issues Zebra has noted during testing with various wireless networking products:

- Conflicts can exist between the Symbol LA-4137CF and some Cisco Access Points. This is characterized by the RF card reaching the Maximum Retry timeout.
- Conflicts can exist between the 802.11B Symbol LA-4137CF and 802.11G support on some Access Points. One potential work-around is to disable G support on the Access Point.
- It is recommended to set WPA Handshaking to 1000.
- It is recommended to disable the Aironet Extensions.
- It is recommended to use Cisco Access Point firmware 12.3(8)JAE1 or later.

## V53.15.5Z

**Release Date: 13 August 2007**

This firmware release is for use on:

- All S4M™ (203 & 300 dpi) printers
- All ZM400™ & ZM600™ (203, 300, & 600 dpi) printers

V50 has been changed to V53. This firmware includes all features of previous V50.15.x releases.

## Changes

Support added for:

- The graphic display on the ZM400/ZM600 printers (ability to display Japanese, Simplified & Traditional Chinese, Korean)
- The Internal Wired Print Server on the ZM400/ZM600 models
- The User Selectable “Primary Print Server” which allows the user to configure the printer determine which print server type - wired or wireless - to use as the Active Print Server at power up. Available on the ZM400/ZM600 and for use with the wired and wireless print servers. Controlled via the ^NC command.

- A Network configuration label on ZM400 that can display details on the External Wired, Internal Wired, or Wireless print servers
- The ability to display the “Active Print Server” on the front panel and network configuration label
- Maintenance Alerts (via the ^MI and ^MA commands)\*
- Short Calibration (via the ^MF command)\*
- The ability to change Network Settings via the ^ND command\*
- The ability to reset the head cleaned counter (via the ~RO command)\*
- The ability to set sensor intensity via the ^SI command\*
- The ability to print odometer, maintenance, alert or printhead information via the ~WQ command\*
- Additional Set/Get/Do commands to configure and get status on the printer and print servers\*

\* See the latest ZPL manual (available at [www.zebra.com](http://www.zebra.com)) for complete details on new commands.

## Issues Corrected and Items Changed

- The Unidirectional setting on the S4M menu now correctly disables the ZebraLink features

## V50.15.2Z

**Release Date: 12 February 2007**

This firmware release is for all S4M™ (203 & 300 dpi) printers. It includes features of previous V50.13.x releases.

## Changes

Support added for:

- The Wireless Plus option board for the S4M printer
- The Cisco™ CB21 802.11b/g card, when used with the Wireless Plus option board
- PEAP
- EAP-TLS
- EAP-TTLS
- EAP-FAST
- WPA PSK
- WPA2 PSK
- WPA PEAP

- WPA LEAP
- WPA EAP-TLS
- WPA EAP-TTLS
- WPA EAP-FAST
- Kerberos
- Wireless Set/Get/Do commands, allowing for configuration of wireless settings using Set/Get/Do command strings\*
- New ZPL command – ^WX – for configuring wireless securities\*
- New ZPL command – ^KC – for configuring the wireless client identifier\*
- New ZPL command options for ~DY – support .PAC files (protected access credential) and .NRD files (non readable) \*
- New ZPL command options for ^WS – support a wireless pulse (LSAP packet), wireless pulse interval, channel mask, and international mode\*
- Extended SNMP support for use with a new management information base (MIB), allowing for control of printer settings using SNMP when using the Wireless Plus print server
- New items displayed on the Network Configuration label:
  - Wireless Plus option board firmware
  - Channel Mask setting
  - International Mode setting
  - Wireless Pulse setting and rate
- Eight simultaneous connections for printing via wireless (raw port)
- Updating the Wireless Plus option board when printer firmware is updated. Users will see a **Downloading Firmware** message and status message for both the printer and Wireless Plus option board firmware downloads
- Updated Web pages (to support new wireless features)
- A Wireless Pulse feature, which sends a LSAP packet at a regular interval, has been added\*
- The data LED now flashes in response to the receipt of data, not to the receipt of each wireless packet

\*See the latest ZPL manual (available at [www.zebra.com](http://www.zebra.com)) for complete details on new commands.

## Issues Corrected and Items Changed

- The hyphen character is now allowed in a UCC 128 Application Identifier number 240.
- IPP is not supported on the Wireless option boards

**V50.15.2Z Supported Wireless Securities**

From [Table 2](#) select a wireless radio card that supports the security type being used on your WLAN.

**Table 2 • Security Types Supported by Different Wireless Radio Cards**

Manufacturer	Cisco		Symbol	
Firmware/Products	V50.15.2Z: S4M			
Securities Supported	Cisco CB21 (CardBus)	Cisco 350 (PCMCIA)	LA-4121 (PCMCIA)	LA-4137 (Compact Flash)
EAP-TLS	Yes	Not Supported	Not Supported	Not Supported
EAP-TTLS	Yes	Not Supported	Not Supported	Not Supported
EAP-FAST	Yes	Not Supported	Not Supported	Not Supported
PEAP	Yes	Not Supported	Not Supported	Not Supported
WPA- EAP-TLS	Yes	Yes	Not Supported	Not Supported
WPA- EAP-TTLS	Yes	Yes	Not Supported	Not Supported
WPA- EAP-FAST	Yes	Yes	Not Supported	Not Supported
WPA- PEAP	Yes	Yes	Not Supported	Not Supported
WPA - LEAP	Yes	Yes	Not Supported	Not Supported
WPA - PSK	Yes	Yes	Not Supported	Not Supported
WPA2 - PSK (no key rotation)	Yes	Not Supported	Not Supported	Not Supported
LEAP	Yes	Yes	Yes	Yes
WEP	Yes	Yes	Yes	Yes
Kerberos	Not Supported	Not Supported	Not Supported	Yes

## V50.14.0

**Release Date: 23 May 2005**

This firmware release is for all S4M™ (203 & 300 dpi) printers. It includes all features of previous V50.13.x releases.

### New Features

- Added a Left Position option to the LCD of the S4M menu.
- Zebra's Global Printing Solution with Unicode™ encoding allows most of the world's languages, including Arabic and Asian characters, to be printed without needing to develop the unique code pages for each language or slow label processing. Maximum printing performance can be achieved without language-specific code page development, label design, font licensing, or modification of business applications for different languages. It is now possible to design one label format, printing on one printer model, from one version of your business application software that can be used around the world.

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#### Supported Scripts

• Arabic	• Devanagari	• Hangul	• Katakana
• Bopomofo	• Greek	• Hebrew	• Latin
• Cyrillic	• Han	• Hiragana	• Thai

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#### Supported Encodings

• ASCII	• Johab	• UTF-8	• Code Page 1252
• Shift-JIS	• UHangul	• UTF-16	• GB 18030
• JIS	• GB2312	• UCS-2	• Big 5 HKSCS
• Wansung	• BIG5	• Code Page 850	• Code Page 874

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#### Supported Languages

• Albanian	• Estonian	• Italian	• Serbian
• Arabic	• Farsi	• Japanese	• Slovak
• Azerbaijani	• Finnish	• Kazakh	• Slovene
• Bulgarian	• French	• Malay	• Spanish
• Chinese (Traditional)	• German	• Moldavian	• Swedish
• Chinese (Simplified)	• Greek	• Korean	• Tajik
• Croatian	• Hebrew	• Norwegian	• Thai
• Czech	• Hindi	• Polish	• Turkish
• Danish	• Hungarian	• Portuguese	• Ukrainian
• Dutch	• Icelandic	• Romanian	• Urdu
• English	• Indonesian	• Russian	• Vietnamese

## Issues Corrected

- Implemented an updated driver file from Symbol to prevent possible connection issues with the 4137 Symbol Wireless Card.
- Corrected an issue which prevented some graphics from rotating correctly on the S4M.
- Corrected an issue which could cause serialized data to print out of order.

## New ZPL Commands

- ^FL – Font Linking
- ^HT – Host Linked Fonts List.
- ^LF – List Font Links
- ^PA – Advanced Text Properties
- ^TB – Text Blocks

See the latest ZPL manual (available at [www.zebra.com](http://www.zebra.com)) for complete details on new commands.