

Summary of Firmware Changes

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V53.17.24Z

Release Date: 6 July 2022

This firmware includes all features of the previous V53.17.22Z and V53.17.22ZB releases, except where noted otherwise. It is for use with the following printer models:

- ZE500 (110mm and 170mm)
- Xi4 (203, 300, and 600 dpi)
- RXi4 (203, 300, and 600 dpi)
- 105SLPlus
- ZM400 (203, 300, & 600 dpi)
- ZM600 (203 & 300 dpi)
- RZ400 (203 & 300 dpi)
- RZ600 (203 & 300 dpi)



NOTE: The S4M now uses V58 firmware.

Changes

1. Security for the printer web page settings has been improved by replacing the previous 4-digit password (set by the ^KP command) with a username and alphanumeric password. The username is set using the "ip.http.admin_name" SGD, and the password is set using the "ip.http.admin_password" SGD.

See the Zebra Programming Guide, available at zebra.com/manuals, for more information about using these SGD commands.

Frequently Asked Questions:

1. “What version of ZebraLink was this new release based on?”

The base version was V53.17.22ZB.

2. “Does this release contain any additional fixes or include fixes from previously provided special releases?”

This release was only modified from the version it was based on by the inclusion of the fixes and changes documented in these notes.

3. “How do I obtain the download file for this release?”

The new version for the V53 branch is available on zebra.com.

Issues Corrected

- The WLAN system has been updated to fix the “Key Reinstallation Attacks” issues reported against the WPA/WPA2 Wi-Fi protocols.

These issues are detailed at krackattacks.com/

Zebra maintains a website with details on this issue at zebra.com/us/en/support-downloads/lifeguard-security/lifeguard-krack.html

V53.17.22ZB

Release Date: 11 December 2017

This firmware includes all features of the previous V53.17.22Z release, except where noted otherwise. It is for use with the following printer models:

- ZE500 (110mm and 170mm)
- Xi4 (203, 300, and 600 dpi)
- RXi4 (203, 300, and 600 dpi)
- 105SLPlus
- ZM400 (203, 300, & 600 dpi)
- ZM600 (203 & 300 dpi)
- RZ400 (203 & 300 dpi)
- RZ600 (203 & 300 dpi)



NOTE: The S4M now uses V58 firmware. The ZM400, ZM600, RZ400, RZ600, 105SLPlus, and Xi4 series continue to use V53 firmware. This firmware includes all ZM400, ZM600, RZ400, RZ600, and Xi4 features of previous v50 and v53 releases.

Changes

None.

Issues Corrected

- The WLAN system has been updated to fix the “Key Reinstallation Attacks” issues reported against the WPA/WPA2 Wi-Fi protocols.

These issues are detailed at krackattacks.com/

Zebra maintains a website with details on this issue at zebra.com/us/en/support-downloads/lifeguard-security/lifeguard-krack.html

V53.17.22Z

Release Date: 13 November 2015

This firmware includes all features of the previous V53.17.21Z release, except where noted otherwise. It is for use with the following printer models:

- ZE500 (110mm and 170mm)
- Xi4 (203, 300, and 600 dpi)
- RXi4 (203, 300, and 600 dpi)
- 105SLPlus
- ZM400 (203, 300, & 600 dpi)
- ZM600 (203 & 300 dpi)
- RZ400 (203 & 300 dpi)
- RZ600 (203 & 300 dpi)



NOTE: The S4M now uses V58 firmware. The ZM400, ZM600, RZ400, RZ600, 105SLPlus, and Xi4 series continue to use V53 firmware. This firmware includes all ZM400, ZM600, RZ400, RZ600, and Xi4 features of previous v50 and v53 releases.

Changes

- Monza 4 series RFID tags (0 through 3) are now supported.
- Monza 5 and 6 RFID tags are now supported.
- The new Zebra logo is now used on the front panel and web pages.

Issues Corrected

- Print Quality for the ZE500 has been enhanced to more closely match that of the PAX4 series.
- The Data Ready Signal will now assert only when a printable label format is sent.
- The printer will now print VOID if the RFID tag on the label is already locked.
- The printer will now correctly reprint a serialized label when the Start Print/Reprint functions are used.
- Data encoded in an RFID tag will no longer be repeated when using the ^RU command to populate data into an ^FN field that is used for tag encoding.
- NXP G2iM chips will now generate a unique number when the ^RU command is used.
- The print servers IP address can no longer be set by the discovery protocol.
- Using embedded commands in a Field Block (^FB) field are now correctly supported.
- The print server will remain on-line after a very high level of NetBIOS traffic.
- Code 128 Auto with F1 command in the data stream will now print.
- The Datamatrix barcode has been enhanced to support more combinations of standard ASCII and extended ASCII character strings.

V53.17.21Z

Release Date: 24 April 2014

This firmware includes all features of the previous V53.17.20Z release, except where noted otherwise. It is for use with the following printer models:

- ZE500 (110mm and 170mm)
- Xi4 (203, 300, and 600 dpi)
- RXi4 (203, 300, and 600 dpi)
- 105SLPlus
- ZM400 (203, 300, & 600 dpi)
- ZM600 (203 & 300 dpi)
- RZ400 (203 & 300 dpi)
- RZ600 (203 & 300 dpi)



NOTE: The S4M now uses V58 firmware. The ZM400, ZM600, RZ400, RZ600, 105SLPlus, and Xi4 series continue to use V53 firmware. This firmware includes all ZM400, ZM600, RZ400, RZ600, and Xi4 features of previous v50 and v53 releases.

Changes

None.

Issues Corrected

- Fixed an issue where the control panel LCD can become either unreadable or blank. Update to this firmware to resolve the issue.

V53.17.20Z

Release Date: 28 March 2014

This firmware release is for use on the following printers:

- ZE500 (110mm and 170mm)
- Xi4 (203, 300, and 600 dpi)
- RXi4 (203, 300, and 600 dpi)
- 105SLPlus
- ZM400 (203, 300, & 600 dpi)
- ZM600 (203 & 300 dpi)
- RZ400 (203 & 300 dpi)
- RZ600 (203 & 300 dpi)

This firmware includes all features of the previous V53.17.19Z.



NOTE: The S4M now uses V58 firmware. The ZM400, ZM600, RZ400, RZ600, 105SLPlus, and Xi4 series continue to use V53 firmware. This firmware includes all ZM400, ZM600, RZ400, RZ600, and Xi4 features of previous v50 and v53 releases.

Changes

- Support for the RFID capable ZE500R 4-in unit has been added,
- RFID Read power on the RXi4 has been optimized.
- Draft Mode is enabled for the ZE500 and ZE500R models, using the SetGetDo command "media.draft_mode". Possible settings are "enabled" and "disabled". The default is "disabled".
- Support for ^RU and ^RL have been added to the ZE500R, RXi4, RZ400, and RZ600 printers
- The RFID Program position setting is now persistent through a label length change.

Issues Corrected

- The ZE500 will correctly feed to the tear position after a power cycle.
- Take Label will now display when in Peel & Applicator Mode.
- The Data Ready Signal now operates as expected when encoding RFID tags in Applicator mode.
- The German translation for "RFID-SETUP" on the printers web page is now "RFID-EINSTELLUNG".

V53.17.19Z

Release Date: 19 December 2013

This firmware release is for use on the following printers:

- ZE500 (110mm and 170mm)
- Xi4 (203, 300, and 600 dpi)
- RXi4 (203, 300, and 600 dpi)
- 105SLPlus
- ZM400 (203, 300, & 600 dpi)
- ZM600 (203 & 300 dpi)
- RZ400 (203 & 300 dpi)
- RZ600 (203 & 300 dpi)

This firmware includes all features of the previous V53.17.18Z.



NOTE: The S4M now uses V58 firmware. The ZM400, ZM600, RZ400, RZ600, 105SLPlus, and Xi4 series continue to use V53 firmware. This firmware includes all ZM400, ZM600, RZ400, RZ600, and Xi4 features of previous v50 and v53 releases.

Issues Corrected

- Fixed an issue where the front panel LCD can become either unreadable or blank. Update to this firmware to resolve the issue.

V53.17.18Z

Release Date: 22 March 2013

This firmware release is for use on the following printers:

- ZE500 (110mm and 170mm)
- Xi4 (203, 300, and 600 dpi)
- RXi4 (203, 300, and 600 dpi)
- 105SLPlus
- ZM400 (203, 300, & 600 dpi)
- ZM600 (203 & 300 dpi)
- RZ400 (203 & 300 dpi)
- RZ600 (203 & 300 dpi)

This firmware includes all features of the previous V53.17.17.



NOTE: The S4M now uses V58 firmware. The ZM400, ZM600, RZ400, RZ600, 105SLPlus, and Xi4 series continue to use V53 firmware. This firmware includes all ZM400, ZM600, RZ400, RZ600, and Xi4 features of previous v50 and v53 releases.

Issues Corrected

- Using a "\" followed by any non-numeric character (for example, "\"(a\") in a Field Block field (^FB) is now correctly supported.
- Enhanced memory management to resolve text field not printing issue.

V53.17.17

Release Date: 15 March 2013

This firmware release is for use on the following printers:

- ZE500 (110mm and 170mm)
- Xi4 (203, 300, and 600 dpi)
- RXi4 (203, 300, and 600 dpi)
- 105SLPlus
- ZM400 (203, 300, & 600 dpi)
- ZM600 (203 & 300 dpi)
- RZ400 (203 & 300 dpi)
- RZ600 (203 & 300 dpi)

This firmware includes all features of the previous V53.17.16Z.



NOTE: The S4M now uses V58 firmware. The ZM400, ZM600, RZ400, RZ600, 105SLPlus, and Xi4 series continue to use V53 firmware. This firmware includes all ZM400, ZM600, RZ400, RZ600, and Xi4 features of previous v50 and v53 releases.

Issues Corrected

- Manual Calibration has been improved to cover more scenarios.

V53.17.16Z

Release Date: 21 December 2012

This firmware release is for use on the following printers:

- ZE500 (110mm and 170mm)
- Xi4 (203, 300, and 600 dpi)
- RXi4 (203, 300, and 600 dpi)
- 105SLPlus
- ZM400 (203, 300, & 600 dpi)
- ZM600 (203 & 300 dpi)
- RZ400 (203 & 300 dpi)
- RZ600 (203 & 300 dpi)

This firmware includes all features of the previous V53.17.15Z.



NOTE: The S4M now uses V58 firmware. The ZM400, ZM600, RZ400, RZ600, 105SLPlus, and Xi4 series continue to use V53 firmware. This firmware includes all ZM400, ZM600, RZ400, RZ600, and Xi4 features of previous v50 and v53 releases.

Issues Corrected

- The printer will not reprint complete jobs when the buffer is full and an error condition occurs.

New Programming Commands Added

The following programming commands have been implemented in this firmware.:

- `device.command_override.add`
- `device.command_override.clear`
- `device.command_override.list`
- `device.command_override.active`
- `device.applicator.start_print`
- `device.applicator.feed`
- `device.applicator.pause`
- `device.applicator.reprint`
- `device.applicator.service_required`
- `device.applicator.media_out`
- `device.applicator.ribbon_out`
- `device.applicator.data_ready`
- `device.applicator.rfid_void`
- `device.applicator.ribbon_low`
- `device.applicator.end_print`
- `media.draft_mode`

More information on these commands is available in the Programming Guide.

V53.17.15Z

Release Date: 11 September 2012

This firmware release is for use on the following printers:

- ZE500 (110mm and 170mm)
- Xi4 (203, 300, and 600 dpi)
- RXi4 (203, 300, and 600 dpi)
- 105SLPlus
- ZM400 (203, 300, & 600 dpi)
- ZM600 (203 & 300 dpi)
- RZ400 (203 & 300 dpi)
- RZ600 (203 & 300 dpi)

This firmware includes all features of the previous V53.17.13Z.



NOTE: The S4M now uses V58 firmware. The ZM400, ZM600, RZ400, RZ600, 105SLPlus, and Xi4 series continue to use V53 firmware. This firmware includes all ZM400, ZM600, RZ400, RZ600, and Xi4 features of previous v50 and v53 releases.

Issues Corrected

- Printer will now continue printing when the Real Time Clock (RTC) reaches 00:00:00.
- Head Resistor value will now be included in the ^HH result.
- The Head Resistor value on the Advance Setup (setadv) web page is now read only.
- Host response message management after a Cancel All (~JA) has been improved.
- Certificate support for WPA/WPA2 has been enhanced to allow for more certificate types.
- The ^FT command can now be used with Codablock (^BB).
- The RFID antenna setting is now persistent through a power cycle.
- Data Matrix barcode now correctly utilizes Real Time Clock data.

Changes

N/A

V53.17.13Z

Release Date: 15 June 2012

This firmware release is for use on the following printers:

- Xi4 (203, 300, and 600 dpi)
- RXi4 (203, 300, and 600 dpi)
- ZM400 (203, 300, & 600 dpi)
- ZM600 (203 & 300 dpi)
- RZ400 (203 & 300 dpi)
- RZ600 (203 & 300 dpi)

This firmware includes all features of the previous V53.17.12Z.



NOTE: The S4M now uses V58 firmware. The ZM400, ZM600, RZ400, RZ600, and Xi4 series continue to use V53 firmware. This firmware includes all ZM400, ZM600, RZ400, RZ600, and Xi4 features of previous v50 and v53 releases.

Issues Corrected

- Issue with non-printing RFID void labels on Xi4 (which all print at 14ips) has been fixed.
- Issue with not printing at 14ips on Xi4 has now been fixed.

Changes

N/A

V53.17.12Z

Release Date: 23 May 2012

This firmware release is for use on the following printers:

- Xi4 (203, 300, and 600 dpi)
- RXi4 (203, 300, and 600 dpi)
- ZM400 (203, 300, & 600 dpi)
- ZM600 (203 & 300 dpi)
- RZ400 (203 & 300 dpi)
- RZ600 (203 & 300 dpi)

This firmware includes all features of the previous V53.17.11ZB.



NOTE: The S4M now uses V58 firmware. The ZM400, ZM600, RZ400, RZ600, and Xi4 series continue to use V53 firmware. This firmware includes all ZM400, ZM600, RZ400, RZ600, and Xi4 features of previous v50 and v53 releases.

Issues Corrected

- The reporting for "Number of formats in the Receive buffer" has been corrected.
- Unicode characters that do not have an entry in the current DAT table and are used in a QR code are now processed correctly.
- ^HZA now correctly reports the Antenna Port settings.

- An RSS type CC-C barcode that has an encoding error will no longer print a corrupted barcode. Instead, no barcode is printed.
- The behavior of the Delayed Cut feature has been enhanced so that after a non-printing format is sent to the printer, the printer will cut when the ~JK command is sent.
- Odometer writing has been optimized to enhance printer throughput.
- When running in print modes other than Applicator, printing will not stop if Start Print is set to level mode and Start Print signal is held asserted.
- The Start Print pulse mode now works in all print modes.
- When Slew and Backfeed speeds are set and saved, those settings will be persistent through a power cycle.
- Print Quality of short barcodes on **PAX4** printers has been enhanced.
- The date off-set for Real Time clock fields now carry over correctly when the day count is greater than or equal to the month offset maximum count.
- The printer web pages will now be available when Format Prefix is changed from the default value.
- Support for SHA224, SHA256, SHA384, SHA512 certificates has been added to the ZebraNet b/g Print Server.
- WEP128 with Shared Authentication is now supported on the ZebraNet b/g Print Server.
- The Internal Wired Print Server & ZebraNet b/g Print Server now support the -n option for FTP.
- LPR support has been enhanced to support additional protocol use scenarios on the ZebraNet b/g Print Server and Internal Wired Print Server.
- When a print server is installed the format card menu no longer displays the option of formatting A: memory.
- Print server web pages are now available after a network reset.
- The print server contact link now points to the Zebra Support Web Site.
- The ZebraNet b/g Print Server and Internal Wired Print Server have been optimized to handle additional port scanning scenarios.
- Front Panel/ZBI interactions have been optimized to avoid conflicts.

Changes

- Xi4, ZM400, and ZM600 printers now support a `device.command_override` Set-Get-Do command, which allows the user to define a list of commands for the printer to ignore. The commands to ignore can be expressed as comma delimited list or as a file stored in the E: drive memory location. Refer to the Programming Guide for more details.
- The Xi4 printers now support a “data ready activation” Set-Get-Do command—`device.applicator.data_ready_activation`—with choices `print` and `format`.
 - `print` indicates the data ready is activated on printing labels only.
 - `format` indicates the data ready is activated on all formats.
- The Xi4 printers now support a Applicator Port signal Inversion Feature.
- Czech and Romanian translations have been added to the Xi4, ZM400, and ZM600 printers.

V53.17.11ZB

Release Date: 05 December 2011

This firmware release is for use on the following printers:

- Xi4 (203, 300, and 600 dpi)
- RXi4 (203, 300, and 600 dpi)
- S4M (203 & 300 dpi)
- ZM400 (203, 300, & 600 dpi)
- ZM600 (203 & 300 dpi)
- RZ400 (203 & 300 dpi)
- RZ600 (203 & 300 dpi)

This firmware includes all features of the previous V53.17.11ZA.

Issues Corrected

- When running in print modes other than Applicator mode, printing will not stop if the Start Print signal is set to level mode and the Start Print signal is held asserted.
- Using different raw ports on internal wired print servers and wireless print servers is now supported.
- The internal wired print server has been enhanced to tolerate higher levels of traffic.
- The internal wired and wireless print servers will now maintain connectivity when receiving DHCP option 60 requests.

V53.17.11ZA

Release Date: 28 October 2011

This firmware release is for use on the following printers:

- Xi4 (203, 300, and 600 dpi)
- RXi4 (203, 300, and 600 dpi)
- S4M (203 & 300 dpi)
- ZM400 (203, 300, & 600 dpi)
- ZM600 (203 & 300 dpi)
- RZ400 (203 & 300 dpi)
- RZ600 (203 & 300 dpi)

This firmware includes all features of the previous V53.17.11Z.

Issues Corrected

None.

Changes

The Cut on Error parameter (e) has been added to the ^PQ — Print Quantity command:
^PQq,p,r,o,e

^PQ — Print Quantity

Description: The ^PQ command gives control over several printing operations. It controls the number of labels to print, the number of labels printed before printer pauses, and the number of replications of each serial number.

Format: ^PQq,p,r,o,e

Parameters	Details
q = total quantity of labels to print	Accepted Value: 1 to 99,999,999 Default Value: 1
p = pause and cut value (labels between pauses)	Accepted Value: 1 to 99,999,999 Default Value: 0 (no pause)
r = replicates of each serial number	Accepted Value: 0 to 99,999,999 replicates Default Value: 0 (no replicates)
o = override pause count	Accepted Values: N = no Y = yes Default Value: N <ul style="list-style-type: none">If the o parameter is set to Y, the printer cuts but does not pause, and the printer does not pause after every group count of labels has been printed.If the o parameter is set to N (default), the printer pauses after every group count of labels has been printed.
e = cut on error label (RFID void is an error label)	Accepted Values: N = no Y = yes Default Value: Y <ul style="list-style-type: none">If the e parameter is set to Y and a cutter exists, then a cut will be made after any voided RFID label.If the e parameter is set to N and a cutter exists, a cut will be made after a voided RFID label ONLY if a cut would be made after the non-voided label and this was the last retry.



Example: This example shows the control over print operations:

^PQ50,10,1,Y: This example prints a total of 50 labels with one replicate of each serial number. It prints the total quantity in groups of 10, but does not pause after every group.

^PQ50,10,1,N: This example prints a total of 50 labels with one replicate of each serial number. It prints the total quantity in groups of 10, pausing after every group.

V53.17.11Z

Release Date: 07 April 2011

This firmware release is for use on:

- Xi4 (203, 300, and 600 dpi)
- RXi4 (203, 300, and 600 dpi)
- S4M (203 & 300 dpi)
- ZM400 (203, 300, & 600 dpi)
- ZM600 (203 & 300 dpi)
- RZ400 (203 & 300 dpi)
- RZ600 (203 & 300 dpi)

This firmware includes all features of the previous V53.17.9Z.

Issues Corrected

- Meter display has been modified for better display on printer.
- Random numbers will no longer be displayed for "x of y printed" content on front panel.
- Polish translation for **TEAR OFF** has been updated.
- Polish translation for **RIBBON OUT** has been updated.
- Support for using FNC1 in code 128 now complies to AIM ITS/99-005 4 November 1999.
- FTP connections are no longer incorrectly closed during data transmission.
- Print servers now properly handles fragmented TCP packets.
- Issues found when printing via LPD have been resolved.
- Issue with wireless print servers not connecting to certain access points when using WPA-PSK is resolved.
- Issue with authentication failure when using PEAP on IAS2008 server is resolved.
- Issue with wireless print servers losing communication for extended periods of time with certain controllers when configured for WPA-LEAP is resolved.
- Applicator mode no longer affects printer when printing at power up.
- *PAX4* Printhead resistance value is now persistent after power cycles.
- Russian translations for **WEB** and **DELAYED CUT** have been updated.
- ~JS has been updated function correctly when lower case letters are used in parameters.
- Print server will now try to renew DHCP address once lease is up.
- File names with more than 8 characters will no longer be changed during the defragmentation process.
- RAM management has been improved to reduce out of memory errors.

Changes

- The ZebraNet Wireless Plus Print Server option board firmware has been updated to version 2.12.1761.
- The ZebraNet Internal Wireless Plus Print Server option board firmware has been updated to version 2.12.1761.
- The ZebraNet b/g Print Server is now supported for the S4M, ZM400/ZM600 series, Xi4 series, RZ400/RZ600, and RXi4 series printers.

V53.17.9Z

Release Date: 03 September 2010

This firmware release is for use on:

- Xi4 (203, 300, and 600 dpi)
- RXi4 (203, 300, and 600 dpi)
- S4M (203 & 300 dpi)
- ZM400 (203, 300, & 600 dpi)
- ZM600 (203 & 300 dpi)
- RZ400 (203 & 300 dpi)
- RZ600 (203 & 300 dpi)

This firmware includes all features of the previous V53.17.7Z.

Issues Corrected

- Only one .DAT file will be listed as the selected file on the printers web page (as chosen by the ^SE command).
- The RFID enabled Xi4 menu will no longer stop responding when the RFID calibration is performed when the printer is paused.
- The printer will now correctly calibrate labels shorter than 6 in. after loading printer defaults.

Changes

None.

V53.17.7Z

Release Date: 09 July 2010

This firmware release is for use on:

- Xi4 (203, 300, and 600 dpi)
- RXi4 (203, 300, and 600 dpi)
- S4M (203 & 300 dpi)
- ZM400 (203, 300, & 600 dpi)
- ZM600 (203 & 300 dpi)
- RZ400 (203 & 300 dpi)
- RZ600 (203 & 300 dpi)

This firmware includes all features of the previous V53.17.6Z.



NOTE: The RZ400 and RZ600 printers previously used the R53.16.6 firmware.

Issues Corrected

- The internal integrated wired 10/100 print server will now remain on-line after sending a large .grf file using the ~DG command.
- **Invalid selection. Press Enter to continue** no longer appears when hitting Enter during a telnet (port 23) session.
- The printer will no longer pause between printed labels when configured for Applicator Port Mode 1.
- The reset counter will now remain at zero when ~R01 is sent after a power cycle.
- The printer can now successfully process the SGD command `file.run` consistently.

Changes

- V53 now supports RFID functionality on Xi4 printers, when the RFID hardware is present.
- Updated the ^CM — Change Memory Letter Designation command to include the multiple alias parameter (see below).

^CM — Change Memory Letter Designation

Description: The ^CM command allows you to reassign a letter designation to the printer's memory devices. If a format already exists, you can reassign the memory device to the corresponding letter without forcing, altering, or recreating the format itself.

Using this command affects every subsequent command that refers to specific memory locations.

Format: ^CMa,b,c,d

Parameters	Details
a = memory alias for B:	Accepted Values: B:, E:,R:, A:, and NONE Default Value: B:
b = memory alias for E:	Accepted Values: B:, E:,R:, A:, and NONE Default Value: E:
c = memory alias for R:	Accepted Values: B:, E:,R:, A:, and NONE Default Value: R:
d = memory alias for A:	Accepted Values: B:, E:,R:, A:, and NONE Default Value: A:
e = multiple alias	Accepted Values: M, or no value Default Value: no value <ul style="list-style-type: none"> • This parameter is supported on Xi4 and ZM400/ZM600 printers using firmware V53.17.7Z or later. • This parameter is supported on G-Series printers using firmware versions v56.17.7Z and v61.17.7Z or later. • This parameter is supported on printers using firmware V60.17.7Z or later.

Comments: Unless the e (multiple alias) parameter is used, when two or more parameters specify the same letter designator, all letter designators are set to their default values.

It is recommended that after entering the ^CM command, ^JUS is entered to save changes to EEPROM. Any duplicate parameters entered will reset the letter designations back to the default.

If any of the parameters are out of specification, the command is ignored.



NOTE: Examples 2, 3 and 4 below are the only valid uses of the multiple alias parameter.



Example: This example designates letter E: to point to the B: memory device, and the letter B: to point to the E:memory device.

```
^XA
^CME,B,R,A
^JUS
^XZ
```



Example: This example designates that content sent to, or read from the B: or E: memory locations will be sent to or read from the E: memory location.

```
^XA
^CME,E,R,A,M
^JUS
^XZ
```




Example: This example designates that content sent to, or read from the A: or E: memory locations will be sent to or read from the E: memory location.

^XA
^CMB,E,R,E,M
^JUS
^XZ



Example: This example designates that content sent to, or read from the A:, B: or E: memory locations will be sent to or read from the E: memory location.

^XA
^CME,E,R,E,M
^JUS
^XZ

V53.17.6Z

Release Date: 17 March 2010

This firmware release is for use on:

- All S4M (203 & 300 dpi) printers
- All ZM400 & ZM600 (203, 300, & 600 dpi) printers
- All Xi4 (203, 300, and 600 dpi) printers

This firmware includes all features of the previous V53.17.5Z.

Changes

None.

Issues Corrected

- Print density on the 110Xi4 (600 dpi), when using synthetic media, has been made comparable to the 110XiIIIPlus (600 dpi).

V53.17.5Z

Release Date: 18 January 2010

This firmware release is for use on:

- All S4M (203 & 300 dpi) printers
- All ZM400 & ZM600 (203, 300, & 600 dpi) printers
- All Xi4 (203, 300, and 600 dpi) printers

This firmware includes all features of the previous V53.17.4Z.

Changes

None.

Issues Corrected

- Wireless Print Server will no longer send a continuous DHCP-DISCOVER when "DHCP" is the only selected addressing method.

V53.17.4Z

Release Date: 31 December 2009

This firmware release is for use on:

- All S4M (203 & 300 dpi) printers
- All ZM400 & ZM600 (203, 300, & 600 dpi) printers
- All Xi4 (203, 300, and 600 dpi) printers

This firmware includes all features of the previous V50.15.x, V53.15.x, V53.16.x, and V53.17.x versions.

Changes

None.

Issues Corrected

- Print Server will now completely close a connection after a connection timeout
- A print job will resume after the print head is opened, closed and an error has been cleared
- Multiple connections being opened and closed at the same time will no longer cause labels to print out of order

V53.17.2ZA

Release Date: 12 October 2009

This firmware release is for use on:

- All S4M (203 & 300 dpi) printers
- All ZM400 & ZM600 (203, 300, & 600 dpi) printers
- All Xi4 (203, 300, and 600 dpi) printers

This firmware includes all features of the previous V50.15.x, V53.15.x, V53.16.x, and V53.17.x versions.

Changes

The `ip.mirror.reset_delay` command allows you to configure the number of seconds between when the printer receives the last byte of the last file from the `/commands` directory and when the printer resets during a mirror event. The default is five seconds. This new command makes it possible to place files that require processing by the ZPL or SGD engines in the `/command` directory. Zebra recommends placing files that require processing by the ZPL or SGD engines into the `/command` directory and using the `ip.mirror.reset_delay` command, rather than performing character substitution on content being placed in the `/files` directory. The default setting for the `ip.mirror.reset_delay` command is 5 seconds, in some cases it may be necessary to use a longer delay to allow for full processing of longer or more complex files.

The `/commands` directory — with the use of the `ip.mirror.reset_delay` command — is now for files that need processing by the ZPL or SGD engine. This includes:

- Stored formats using the `^DF` command
- Saved formats using the `^IS` command
- Graphics and font files that do need processing to be stored (content using the `~DY`, `~DG`, `~DS`, `~DT`, and `~DU` commands)

The `/files` directory is for use with files that do not require processing by the ZPL or SGD engines. This includes:

- `.ttf`, `.png` or `.bmp` files (that previously would have been sent using `~DY`)
- `.wml` files
- ZBI programs
- Wireless certificate files
- `.nrd` files (containing either certificate content or command content)

ip.mirror.reset_delay



Description This command specifies the number of seconds between when the printer receives the last byte of the last file from the `/commands` directory and when the printer resets during a mirror event.

Type `getvar`; `setvar`



NOTE: This command is available in V53.17.2ZA, V56.17.3ZA, V60.17.2ZA, V61.17.3ZA and later versions.

This table identifies the command for this format:

Commands	Details
getvar	This command retrieves the number of seconds between when the printer receives the last byte of the last file from the /commands directory and when the printer resets during a mirror event. Format: ! U1 getvar "ip.mirror.reset_delay"
setvar	This command sets the number of seconds between when the printer receives the last byte of the last file from the /commands directory and when the printer resets during a mirror event. Format: ! U1 setvar "ip.mirror.reset_delay" "value" Accepted Values: 0 - 900 (seconds) Default Value: "5"



Example: This setvar example shows the value set to "10".

```
! U1 setvar "ip.mirror.reset_delay" "10"
```

When the setvar value is set to "10", the getvar result is "10".



NOTE: The default setting for the `ip.mirror.reset_delay` command is 5 seconds; in some cases it may be necessary to use a longer delay to allow for full processing of longer or more complex files.

Issues Corrected

- When a ^SE command is used, and a .dat file is in use, the printer will now correctly resume a print job after the print head is open and closed.
- A printer will now be available for communication with after a firmware download via USB.
- The value for "wlan.ip.addr" will now be cleared after a reset.
- The internal print server on the ZM400/ZM600 and Xi4 will now completely close the connection when a LPD connection times out.

V53.17.2Z

Release Date: 02 September 2009

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 the previous V50.15.x, V53.15.x, and V53.16.x.

Changes

Russian / Polish	The control panel of the ZM series units now support Russian and Polish.								
Head Cold Warning	The Head Cold warning is now disabled by default.								
Mirror	<p>Mirror is a feature that gives you the ability to:</p> <ul style="list-style-type: none">• Centrally manage and monitor the deployment of your Zebra printers• Centrally configure and maintain your Zebra printers through remote updates• Remotely monitor printer updates – via the “Feedback” feature• There are several Set/Get/Do (SGD) commands that can initiate Mirror. For details see the ZPL Manual. <p>Benefits</p> <ul style="list-style-type: none">• When using Mirror, updating the configuration and firmware on the printer is remotely managed from a centralized FTP server. Configurations can be uniformly deployed to individual printers or to groups of printers. Unique Configurations can also be targeted to printers as needed. Through the “Feedback” feature, Administrators can easily log and monitor configuration updates on a printer-by-printer basis. Typical uses of Mirror include:• Configuring printers as they are first received.• Performing scheduled maintenance updates, sending firmware, fonts, graphics and other objects to the printer as needed.• Changing printer Configurations in order to move printers from one role to another.• Supported printers and print servers: <table border="1"><thead><tr><th>Printer</th><th>Print Servers</th></tr></thead><tbody><tr><td>ZM400</td><td>Internal, Integrated 10/100 IPV4 wired Internal Wireless Plus</td></tr><tr><td>ZM600</td><td>Internal, Integrated 10/100 IPV4 wired Internal Wireless Plus</td></tr><tr><td>S4M</td><td>Internal Wireless Plus</td></tr></tbody></table> <p>Print Servers connected to the parallel port, either externally or internally, are not supported for Mirror use.</p> <p>See the ZPL Manual for full details on the Mirror feature.</p>	Printer	Print Servers	ZM400	Internal, Integrated 10/100 IPV4 wired Internal Wireless Plus	ZM600	Internal, Integrated 10/100 IPV4 wired Internal Wireless Plus	S4M	Internal Wireless Plus
Printer	Print Servers								
ZM400	Internal, Integrated 10/100 IPV4 wired Internal Wireless Plus								
ZM600	Internal, Integrated 10/100 IPV4 wired Internal Wireless Plus								
S4M	Internal Wireless Plus								

Wireless Markup Language (WML)	WML offers a text-based method of designing customized menus on the LCD front panel of selected printers. By leveraging Set-Get-Do (SGD) and Zebra Programming Language (ZPL) commands, menus that feature both display and command features can be created. The WML “card” structure makes it possible to link from one menu screen to another, creating menus that are as many levels “deep” as desired or reduced to only those options needed by the printer operator.
ZBI 2.1	ZBI 2.1 programs can now leverage comma separated variable (CSV) files and text files for the purpose of storing data on the printer. See the ZPL manual for examples and details on the CSVLOAD, CSVSTORE, TXTLOAD and TXTSTORE commands.
Wireless Plus	The Wireless Plus option board firmware has been updated to version 2.10.1761.

Issues Corrected

- Changing REPRINT MODE during print job no longer impacts the “Printing X of X” counter on the control panel.
- The / and \ characters are now allowed in EAN128 barcodes.
- The hexadecimal indicator value of B0 can now be used in the ^FH command.
- USB port buffer management has been improved.
- Internal 10/100 Print server on ZM series accurately tracks Receive errors in spanning tree environment.
- Variable data printed via XML-Enabled printing can now include commas.
- The ZBI READ command will now read up to the maximum amount of bytes specified.
- The printer now requires the user to enter a password when changing the "IP PROTOCOL", "IP ADDRESS", "SUBNET MASK," OR "DEFAULT GATEWAY".
- The sequence of the Full Media and Ribbon Calibration procedure has been corrected.
- The Ribbon Low Mode will now remain disabled after a power cycle when it is configured for Disabled.
- End Print Signal, when enabled, is now correctly sent for each label.
- The Poor Signal and No Signal warning are now functioning correctly.
- The integrated internal wired and wireless print servers will now close the connection when the Host resets a connection that does not contain any data.

V53.16.x

Firmware	Release Date	Page
V53.16.7Z	12 May 2009	23
V53.16.6Z	16 February 2009	24
V53.16.5Z	17 October 2008	25
V53.16.4ZA	08 August 2008	26

Firmware	Release Date	Page
V53.16.4Z	13 June 2008	27
V53.16.3ZA	28 May 2008	28
V53.16.3Z	11 April 2008	28
V53.16.2Z	03 March 2008	29

V53.16.7Z

Release Date: 12 May 2009

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, V53.15.x, and V53.16.x releases.

Changes

None.

Issues Corrected

- Corrected a condition in which an unprinted line can occur at the leading quarter-inch of a label when in Rewind/Liner Take-Up mode on ZM400/ZM600 units.

V53.16.6Z

Release Date: 16 February 2009

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 and V53.15.x releases.

Changes

- HTTP POST has been enhanced to include a HTTP OK response. Jobs can be posted to the URL <http://xxx.xxx.xxx.xxx/printer/pstprnt> (where xxx.xxx.xxx.xxx is the IP address of the printer). Upon a successful HTTP Post event, the printer will respond with a HTTP OK response. The HTTP OK response will be sent to the IP address that transmitted the HTTP POST. Printers with this capability can be identified by the XML Schema version number 1.3 on the printers configuration label.

Issues Corrected

- The ^FV command now works correctly in TLC39 bar codes.
- The front panel now displays full Clean Head message sequence.
- FTP is now supported in ZBI on the ZM400/ZM600 when the internal 10/100 print server is used.
- The Internal 10/100 Print Server now responds to TCP packets when sent at a high rate.
- The printer retains the default gateway after a power cycle.
- The USB port will now perform a disconnect and reconnect after the ~JR command is used.
- On the ZM400/ZM600, the printer will now correctly use the printers network settings when a parallel port connected print server is used and the "Load From External" setting is set to "No".
- The ZM400/ZM600 internal 10/100 print server now correctly reports the "Receive Packet Errors" count.
- Multiple Set/Get/Do commands can now be used in the same script.
- Unsolicited alerts now contain the day and month.
- If an incorrect password is used to enter the printers Settings web pages, the web page will not continually return to the password page once the correct password is used.
- The total number of bytes in the ~DY command will no longer act as a required parameter.
- The ZBI command SERVERSOCKET can now be used with or without the port number being defined if the port type is TCP (the default of 9100 will be used if the port type is TCP).
- When the Communications Mode DIAGNOSTIC is selected in the menu, and settings are saved from the front panel, the printer will now remain in DIAGNOSTIC mode.
- The Datamatrix barcode is now more tolerant of data that uses spaces in the ^FD data.
- Use of the ^JB command can no longer delete files that are marked as persistent.
- "On-printer" ZBI program debugging commands are now more reliably transmitted via the wired and wireless settings.
- The ^GFA command, when used within a stored format now prints correctly.

V53.16.5Z

Release Date: 17 October 2008

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 and V53.15.x releases.

Changes

- Support added for the “SEH” brand PS105-Z and PS102-Z IPv6 print server.
- Rectangular Datamatrix bar codes are now supported. A new “aspect ratio” parameter has been added to the ^BX command to support this new functionality. Refer to the **ZPL II Programming Guide** for complete details.

Issues Corrected

- Printer web pages now load when using advanced wireless security settings.
- Intermittent image distortion issue when printing graphics no longer occurs.
- Formats using graphics and binary 02, 03, 0f characters now print correctly.

Wired Note

It is recommended to use firmware version 1.01.6 or later on the external 10/100 PrintServer.

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.
- The Wireless Plus option board firmware has been updated to version 2.9.1761.

Table 1 Wireless Plus PrintServer and Internal Wireless Plus PrintServer Security Support

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

V53.16.4ZA

Release Date: 08 August 2008

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 and V53.15.x releases.

Changes

None.

Issues Corrected

- ZebraNet 10/100 Internal Print Server now remains active after a NetBIOS broadcast storm.

V53.16.4Z

Release Date: 13 June 2008

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 and V53.15.x releases.

Changes

- New SetGetDo Commands. Refer to the **ZPL II Programming Guide** for complete details.
- The Wireless Plus option board firmware has been updated to version 2.7.1761.
- Support for the USPS Intelligent Mail Barcode (IMB) was added. This barcode is also known as OneCode. Elements in USPS IMB have 4 states - Full, Ascender, Tracker and Descender.



Example: This is an example of a USPS Intelligent Mail bar code:

ZPL II CODE	USPS INTELLIGENT MAIL BAR
<pre>^XA ^FO100,040^BZ,40,,,3 ^FD00123123456123456789^FS ^XZ</pre>	

Issues Corrected

- Front panel operation on ZM400/ZM600 now supports ESSID data longer than 24 characters.
- Polling POP3 server for messages on ZM400/ZM600 using internal 10/100 print server now functions correctly.
- Updated wireless print server to work with latest revision of CISCO AP firmware.

V53.16.3ZA

Release Date: 28 May 2008

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 and V53.15.x releases.

Issues Corrected

- Timing of writes to memory cards has been enhanced to allow for variation in cards
- Internal wired print servers on the ZM400/ZM600 and wireless print servers on all printers now respond correctly to LPQ Stat inquiry.
- Internal wired print servers on the ZM400/ZM600 now respond correctly to LPD job control messages.

V53.16.3Z

Release Date: 11 April 2008

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 and V53.15.x releases.

Changes

- ZebraNet® Internal Wireless Plus print server is now supported for the S4M and ZM400/ZM600 series printers.

Issues Corrected

- Internal print server on the ZM400/ZM600 units now ACKS back to the host more frequently in order to manage the TCP window size dynamically.

V53.16.2Z

Release Date: 03 March 2008

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 and V53.15.x releases.

Changes

- V53.16.x and later firmware is ZBI 2.0-Ready
- ZBI 2.0 can be enabled by placing a ZBI 2.0 key on the printer via the ZBI Key Manager & Downloader utility. Printers can be ordered from the factory with the ZBI 2.0 option enabled. Printers can be ZBI-Enabled in the field by purchasing and using a ZBI Key Kit. Printers can be ZBI-Enabled in the field by purchasing a key at zebrasoftware.com.
- Printers which have been ZBI-Enabled will not display a “Z” at the end of the firmware version string. For example, a printer which has been ZBI-Enabled will display the firmware version as “V53.16.1”, while a printer which has not been ZBI-Enabled will display the firmware version as “V53.16.1Z”
- The printer configuration label will display the ZBI status for the printer:
 - ZBI-Enabled

```

||  ENABLED..... ZBI          ||
||  2.0.....      ZBI VERSION  ||
||  READY.....    ZBI STATUS   ||

```

- Not ZBI-Enabled

```

||  DISABLED..... ZBI          ||
||  2.0.....      ZBI VERSION  ||

```

- The printer configuration label will list which ZBI program is running.

```

||  ENABLED..... ZBI          ||
||  2.0.....      ZBI VERSION  ||
||  CHOICES.BAS..... ZBI STATUS ||

```

- ZBI 2.0 is backwards compatible with previous versions of ZBI. Any code which was specifically written to handle a maximum string length of 255 characters will need to be reviewed to ensure it works with unlimited string lengths.
- Other ZBI 2.0 Features:
 - List ZBI programs from the front panel
 - Start/Stop ZBI programs from the front panel
 - Button presses on front panel can be registered as events in ZBI programs.
 - Support for longer strings, the length of the string dependent on available memory.
 - Support for NULL values in Strings and String operations
 - SNMP & Set/Get/Do (SGD) Control of ZBI
 - On-printer Debugging (via ZBI-Developer)
 - ZBI 2.0 Program Encryption
 - ZBI 2.0 programs can be made hidden and/or persistent

- New ZBI 2.0 Commands:

New ZBI 2.0 Commands	
ACCEPT	INTTOHEX\$
ADDBREAK	READ
AUXPORT_GETPIN	REGISTEREVENTS
AUXPORT_RELEASEPIN	SERVERSOCKET
AUXPORT_SETPIN	SPLIT
AUXPORT_STEALPIN	SPLITCOUNT
CLIENTSOCKET	SUB
CLOSE ALL	TCPX
DELBREAK	TRIGGEREVENT
HANDLEEVENT	UNREGISTEREVENTS
HEXTOINT	WRITE

* See the latest ZPL manual (available at zebra.com/support) for details on new commands.

Issues Corrected and Items Changed

- Issues found when printing via LPD on ZM400/ZM600 have been resolved.
- The ^HW command now offers a new parameter to control the response format.
- Closing the console from within a running ZBI program now closes the console.
- Datamatrix now correctly serializes long alpha-numeric strings.
- Characters in the Msung font are no longer replaced with the ~ character when the format is sent multiple times.

* See the latest ZPL manual (available at zebra.com/support) for details on new commands.

Table 2 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

Table 2 Wireless Plus PrintServer Security Support *(Continued)*

Securities Supported	Cisco CB21 (CardBus)	Cisco 350 (PCMCIA)	LA-4121 (PCMCIA)	LA-4137CF (Compact Flash)
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
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.
- The Wireless Plus option board firmware has been updated to version 1.51.1761.

Wired Note

It is recommended to use firmware version 1.01.5 or later on the external 10/100 PrintServer.

V53.15.x, V50.15.x, V50.14.x

Firmware	Release Date	Page
V53.15.8ZB	14 February 2008	32
V53.15.8Z	19 November 2007	32
V53.15.5Z	13 August 2007	35

Firmware	Release Date	Page
V50.15.2Z	12 February 2007	36
V50.14.0	23 May 2005	38

V53.15.8ZB

Release Date: 14 February 2008

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 and V53.15.x releases.

Issues Corrected and Items Changed

- The right brace character is no longer intermittently encoded in DataMatrix Barcodes.

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 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 zebra.com/support) 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 3 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
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 ~R0 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 zebra.com/support) 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 zebra.com/support) 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 4](#) select a wireless radio card that supports the security type being used on your WLAN.

Table 4 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.

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

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

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 zebra.com/support) for complete details on new commands.