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TROUBLESHOOTING GUIDE

Zebra FS40 and FS70 troubleshooting guide: errors, faults and fixes

Updated 21 October 2026 · By TIMCOD maintenance technicians · Source: official Zebra documentation, FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN) and Zebra Aurora Focus User Guide (list at the end of the page)

TIMCOD PRODUCT PAGE (IN FRENCH)

See the Zebra FS40 product page →

In brief. The Zebra FS40 and FS70 are 2.3 MP industrial fixed-mount scanners that share the same Zebra guide: the FS40 has an autofocus liquid lens (Standard Range or Wide Angle) and internal illumination, while the FS70 takes a C-Mount lens and has two Ethernet ports. Both are powered by 24 V, PoE or USB-C, and are configured with Zebra Aurora Focus or with barcodes. Zebra stresses the power budget, which limits the illumination and some functions, the focus and heat. This guide brings together 27 entries, from the 360° light ring to factory reset. Click a question to open the entry.

- **The scanner beeps or a light comes on:** find the signal in the [lookup table](#) and open the matching entry.
- **The scanner does not scan:** see the [scanning](#) section (focus on the [FS40](#) or the [FS70](#), illumination, triggering).

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- **Functions disabled or weak illumination:** see the [power](#) section (USB-C, power budget).
- **The problem keeps coming back:** the [preventive maintenance](#) section explains how it reduces this type of fault.

What do the beeps and lights on my Zebra FS40 or FS70 mean? Find the cause by signal

The FS40 and FS70 show their status through three tones (low, medium, high), a 360° light ring and the Power, Device Status, Focus Status and Warning lights. The table links each signal to its cause and to the entry that resolves it.

Beeps or situation	Lights (Zebra guide)	Likely cause	Entry
Low, medium, high (start-up)	● ● 360° green (one blink), Power solid red	Start-up on low power	Power light
Low, medium, high (start-up)	● ● 360° green (one blink), Power solid amber	Limited power (USB or 15 W PoE)	Power light
Low, medium, high (start-up)	● 360° green (one blink), Power solid green	Full power (24 V or 30 W PoE)	Power light
Two low tones	● Device Status solid red, Warning solid red	Job error	Job error
Two medium tones	● ● 360° flashing red (5 Hz), Power solid green	Factory reset	Factory reset

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Beeps or situation	Lights (Zebra guide)	Likely cause	Entry
TRIG held at power-up	● Power yellow then green, Ethernet orange then amber	Factory reset in progress: release TRIG within 5 s	<u>Factory reset</u>
No beep	● 360° and Device Status flashing red (2 Hz)	Firmware update in progress	<u>Firmware update</u>
No beep	● Power solid green	Firmware update successful	<u>Firmware update</u>
One low tone	● 360° and Device Status flashing red (5 Hz)	Firmware update failed	<u>Update failed</u>
One medium tone	● Focus Status flashing green (2 Hz)	Start of AutoTune (TUNE button)	<u>FS40 focus</u>
One high tone	● Focus Status solid green	AutoTune successful	<u>FS40 focus</u>
One low tone	● Focus Status solid red	AutoTune failed	<u>FS40 focus</u>
Status light flashing every 500 ms	—	Autofocus barcode delay: present the test barcode	<u>FS40 focus</u>
No beep	● Device Status solid amber	Decoding in progress	<u>The scanner does not scan</u>

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Beeps or situation	Lights (Zebra guide)	Likely cause	Entry
One medium tone	● 360° green (one flash)	Barcode decoded	<u>360° light and beeper</u>
No beep	● 360° red (one flash)	Decode failed	<u>The scanner does not scan</u>
High, low, high, low	● 360° green (one blink), Device Status solid green	Parameter accepted	<u>Programming barcodes</u>
High, low	● 360° green (one blink), Device Status solid green	The scanner is waiting for more barcodes	<u>Programming barcodes</u>
Low, high	● ● 360° red (one blink), Device Status solid green	Parameter entry error	<u>Programming barcodes</u>
Insufficient power budget warning	—	Power available too low for the chosen settings	<u>Power budget</u>

The signals come from the “LED and Beeper Indicators” table in the xS40/70 Smart Camera Product Reference Guide, from its factory reset procedure, from the “Using Autofocus Barcodes” procedure and from the “Power and Thermal Management” chapter. The guide states that the audible feedback for successful or failed reads is set in Aurora Focus: the table shows the default behaviour. A dash indicates that the page consulted does not specify the light state.

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Zebra FS40 and FS70 error beeps and lights: causes and solutions

Job error, Power light, failed update and rejected programming barcodes, according to the Zebra table.

Why does my Zebra FS40 give two low beeps with the Warning light red?

Beeps: two low tones · Lights: Device Status solid red, Warning solid red, Power solid green.

Short answer: On the FS40 and FS70, two low tones with the Device Status and Warning lights solid red signal a job error, according to the Zebra table. Check the job in Zebra Aurora Focus, then the temperature and the power available: if it overheats, the scanner may stop its jobs.

LIKELY CAUSE

The xS40/xS70 guide does not detail the causes of a job error. Its “Power and Thermal Management” chapter states that beyond a safe temperature limit, the scanner may disable some functions, reduce processor performance or stop active jobs.

WHAT TO DO

1. Open the scanner in Aurora Focus (“View Devices”) and check the deployed job.
2. On the Web HMI dashboard, check the temperature, the processor load and the lights displayed (including “Warning”).
3. If there is excessive heat, apply the measures in the [overheating](#) entry.
4. Check that the power supply matches the job configuration (see [power budget](#)).
5. According to the Aurora Focus help, a scanner that becomes inactive during job configuration, after a firmware update, is fixed by a [factory reset](#).

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When to call a technician: if the job error persists despite correct power and temperature, note the serial number, part number and firmware version before contacting Zebra support, as the Aurora Focus help requests.

In the Zebra table, the Warning light only comes on in the event of a job error.

Sources: [LED and Beeper Indicators \(p. 25-28\)](#) [↗](#) – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [Power and Thermal Management \(p. 37-38\)](#) [↗](#) – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [Web HMI Dashboard](#) [↗](#) – Zebra Aurora Focus User Guide · [Troubleshooting](#) [↗](#) – Zebra Aurora Focus User Guide (official documentation).

Why is the Power light on my Zebra FS40 or FS70 red or orange at start-up?

Beeps: low, medium, high (start-up) · Lights: 360° green (one blink), Power solid red, amber or green.

Short answer: According to Zebra, at start-up the Power light indicates the power available: solid red for low power, solid amber for limited power (USB or 15 W PoE), solid green for full power (24 V or 30 W PoE). For full power, supply the scanner with 24 V through the M12 connector or with Class 4 PoE+.

LIKELY CAUSE

The xS40/xS70 guide accepts three sources: the 12-pin M12 connector (10 to 30 V DC), 802.3at Class 4 PoE (30 W, PoE+) or 802.3af Class 3 PoE (15.4 W), and USB Type-C. The power is allocated according to the sensor and the active functions: on models with internal illumination, the illumination may be reduced or switched off to stay within the budget.

Caution: According to Zebra, changing the power source causes the scanner to restart.

WHAT TO DO

1. Identify the source in use: Zebra gives priority to the M12 connector, then PoE, then USB-C.

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2. With PoE, use an 802.3at Class 4 (PoE+) port for full power.
3. On the M12 connector, power the scanner above 21.5 V: below that, the power budget drops and the internal illumination may be limited. Zebra recommends a 24 V industrial power supply capable of delivering high current peaks.
4. With USB-C alone, expect reduced functions (see [USB-C power](#)).

Sources: [LED and Beeper Indicators \(p. 25-28\)](#) · [Power Sources: 12 Pin M12 Power Input, Power Over Ethernet, USB Type C \(p. 14-16\)](#) · [Specifications \(p. 88-90\)](#) – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) (official documentation).

Why is the light ring on my Zebra FS40 flashing red with a low beep?

Beeps: one low tone · Lights: 360° and Device Status flashing red at 5 Hz.

Short answer: In the Zebra table, a low tone with the 360° light and the Device Status light flashing red at 5 Hz indicates that a firmware update has failed. Restart the scanner, then run the update again.

LIKELY CAUSE

The xS40/xS70 guide signals the start of an update with the 360° and Device Status lights flashing red at 2 Hz, with no beep, and failure with flashing at 5 Hz and a low tone. The Aurora Focus help cites high memory usage on the scanner as a cause of failure.

WHAT TO DO

1. Tell the signals apart: 2 Hz with no beep, update in progress. 5 Hz with a low tone, failure. 5 Hz on the 360° light only with two medium tones, factory reset.
2. After a failure, restart the scanner (“Reboot” in Aurora Focus, “Reboot the Device” barcode or cutting the power).
3. Then run the update again (see [firmware update](#)).

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When to call a technician: if the update still fails after a restart, contact Zebra support with the scanner's serial number, part number and firmware version.

Sources: [LED and Beeper Indicators \(p. 25-28\)](#) [↗](#) – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [Troubleshooting](#) [↗](#) – Zebra Aurora Focus User Guide · [Viewing Devices](#) [↗](#) – Zebra Aurora Focus User Guide · [Reboot Device, Restart Core Services \(p. 83\)](#) [↗](#) – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) (official documentation).

Why does my Zebra FS70 give a low beep then a high beep with a red blink when I scan a programming barcode?

Beeps: low then high · Lights: 360° red (one blink), Device Status solid green.

Short answer: According to the Zebra table for the FS40 and FS70, the low-then-high sequence with a red blink of the 360° ring signals a parameter entry error. An accepted parameter gives the high, low, high, low sequence with a green blink.

LIKELY CAUSE

The xS40/xS70 guide distinguishes three responses: parameter accepted (high, low, high, low, green blink), entry waiting for more barcodes (high, low, green blink) and error (low, high, red blink). The settings are kept in non-volatile memory.

WHAT TO DO

1. Go through the barcode sequence in the xS40/xS70 reference guide again in order.
2. After the high-then-low sequence, scan the next barcode: the scanner is waiting for it.
3. The guide provides the “Enter Parameter Barcode Configuration Mode” and “Exit Parameter Barcode Configuration Mode” barcodes (parameter no. 69035).
4. On a screen, enlarge the barcodes so that the bars and spaces remain sharp.
5. Without a USB cable, at the first start-up on a new host, choose the host type after the power-up beeps, as the guide indicates.

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Sources: [LED and Beeper Indicators \(p. 25-28\)](#)  – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [Using Parameter Barcodes](#)  – xS40/70 Smart Camera Product Reference Guide · [Barcode Configuration Mode \(p. 78\)](#)  – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) (official documentation).

My Zebra FS40 or FS70 does not scan barcodes: causes and solutions

Focus (TUNE button or C-Mount lens), internal and external illumination, aimer and triggering.

Why does my Zebra FS40 or FS70 scanner not read the barcode?

Beeps: none · Light: 360° red (one blink) at each decode failure.

Short answer: According to Zebra, each decode failure results in a red blink of the 360° ring, with no beep. Check the focus, the distance, the illumination and the cleanliness of the window, then the licence and the symbologies of the job in Aurora Focus.

LIKELY CAUSE

The xS40/xS70 guide states that a dirty window impairs scanning accuracy and that the scanning distance depends on the lens, the focus and the aperture. The scanning functions depend on the licence: Standard 2D, Fast 2D (60 frames per second), DPM with Fast 2D, and OCR as an option.

WHAT TO DO

1. Redo the focus: [FS40](#) (TUNE button or autofocus barcodes) or [FS70](#) (C-Mount lens).
2. On the FS70, respect the minimum focus distance of the lens (6.35 cm for an 8 mm lens, 19.05 cm for a 35 mm lens, for example).

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3. Check the illumination (see [internal illumination](#) and [external illumination](#)).
4. Clean the scanner's exit window (see [cleaning](#)).
5. Check that the symbology is one of those supported: Codabar, Code 39, Code 93, Code 128, Interleaved 2 of 5, MSI, UPC/EAN, Discrete 2 of 5, GS1 DataBar, Aztec, Data Matrix, DotCode, MaxiCode, PDF417 and QR Code.
6. For direct part marking (DPM), check that the DPM licence is installed.

When to call a technician: if the scanner still does not decode after focusing, cleaning and resetting, have the serial number, part number and firmware version ready before contacting Zebra support.

In Aurora Focus, the beeper feedback for a successful or failed read can be set (see [360° light and beeper](#)).

Sources: [LED and Beeper Indicators \(p. 25-28\)](#) · [Decode LEDs, User Interface Label \(p. 24-25\)](#) · [Symbologies, Fixed Industrial Scanning Toolset \(p. 38-39\)](#) · [Aiming Patterns, Minimum Focus Distances \(p. 29\)](#) · [Maintenance: Known Harmful Ingredients, Approved Cleaning Agents, Cleaning the Device \(p. 84-85\)](#) · [FS/VS 40/70 Smart Camera Product Reference Guide \(MN-003810-03EN Rev A, 2025\)](#) (official documentation).

Why does the autofocus on my Zebra FS40 fail?

Beeps: medium tone (start), high tone (success), low tone (failure) · Light: Focus Status flashing green at 2 Hz, then solid green or red.

Short answer: On the FS40, the TUNE button starts the focus adjustment and the Focus Status light shows the result: solid green with a high tone on success, solid red with a low tone on failure. Try again with a test barcode correctly placed in the field of view, or use the autofocus barcodes in the Zebra guide.

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LIKELY CAUSE

According to the xS40/xS70 guide, the TUNE button adjusts and optimises the focus. The FS40 uses a liquid lens: 10.8 mm (about 30° x 19°) in the Standard Range version, 6.8 mm (about 46° x 29°) in the Wide Angle version. The autofocus barcodes only adjust the focus, not the exposure or the gain.

WHAT TO DO

1. Place a barcode in the field of view, at the working distance.
2. Press TUNE: the Focus Status light flashes green (2 Hz) with a medium tone.
3. Wait for the result: high tone and solid green light (success), or low tone and solid red light (failure).
4. Alternative method: scan a barcode from the “Using Autofocus Barcodes” chapter (5, 8 or 13-second delay). During the delay, the status light flashes every 500 ms: present a test barcode different from the calibration barcode and keep it still for 5 to 15 seconds.
5. If TUNE does not respond, check in Aurora Focus that “Tune Button Enable” is ticked (“General Settings”).
6. To adjust the exposure and gain as well, use “Barcode Autotune” in Aurora Focus.

The guide lists 5, 8 and 13-second autofocus barcodes but also mentions delays of 8, 13 or 18 seconds in the text of the procedure.

Sources: [Decode LEDs, User Interface Label \(p. 24-25\)](#)  – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [LED and Beeper Indicators \(p. 25-28\)](#)  – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [Using Autofocus Barcodes](#)  – xS40/70 Smart Camera Product Reference Guide · [Specifications \(p. 88-90\)](#)  – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [General Settings \(Hardware Buttons, Beeper\), ZIML 360 LED Settings](#)  – Zebra Aurora Focus 10.2 User Guide (MN-004665-12EN Rev A, 2026) · [Trigger Settings, Acquisition Settings](#)  – Zebra Aurora Focus 10.2 User Guide (MN-004665-12EN Rev A, 2026) (official documentation).

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How do I focus a Zebra FS70 with a C-Mount lens?

Short answer: On the FS70, the focus and aperture are set by hand on the C-Mount lens, after loosening its locking screws. Adjust the gain and exposure with the live view (“Live View”) of the Web HMI in Aurora Focus, then retighten the screws once you have the best setting.

LIKELY CAUSE

According to the xS40/xS70 guide, the scanning range of a C-Mount lens depends on its effective focal length, the focus setting and the aperture. The guide gives the minimum focus distance for each Zebra C-Mount lens.

WHAT TO DO

1. Place the scanner at the required working distance.
2. Loosen the lens locking screws.
3. Open the live view (“Live View”) of the Web HMI and adjust the gain and exposure.
4. Turn the focus and aperture rings on the lens until the image is sharp.
5. Retighten the locking screws.
6. Respect the minimum focus distance: 6.35 cm (8 mm), 11.43 cm (12 mm), 10.16 cm (16 mm), 11.43 cm (25 mm), 19.05 cm (35 mm).

Sources: [Setting Focus \(p. 22\)](#)  – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [Aiming Patterns, Minimum Focus Distances \(p. 29\)](#)  – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [Minimum Focus Distances](#)  – xS40/70 Smart Camera Product Reference Guide (official documentation).

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How do I fit a C-Mount lens on a Zebra FS70?

Short answer: Remove the lens cover, fit the filter if needed, screw in the lens, place the scanner at the working distance and adjust the lens. Then refit the front cover and tighten its screws to 6.0 in-lbs (Torx T8 screws).

LIKELY CAUSE

According to Zebra, C-Mount lenses can only be used with xS70 scanners (including the FS70). The FS70 is supplied with an IP67 lens cover. An optional threaded cover can replace it, only with a C-Mount lens.

WHAT TO DO

1. Remove the lens cover.
2. Fit the filter if your application requires one.
3. Screw the C-Mount lens into the scanner.
4. Place the scanner at the required working distance, then adjust the lens (see [FS70 focus](#)).
5. Refit the front cover and tighten its screws to 6.0 in-lbs (Torx T8).
6. With the threaded cover: attach the threaded adapter (HN-001466-01) at 6.0 in-lbs, fit the filter, screw in the lens, adjust it, then screw on a cover of a length suited to the lens.

Zebra offers the LENS-XTC70-0000 threaded cover adapter and an LENS-XRC70-0000 spare IP67 lens cover. C-Mount lenses cited by Zebra: 8, 12, 16, 25 and 35 mm.

Sources: [Threaded Lens Cover Assembly Installation, C-Mount Lens Installation \(p. 20-22\)](#) [↗](#) · [Accessories: External Lighting, Internal Ring Lighting, Filters, Lens Covers, Cables \(p. 91-98\)](#) [↗](#) – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) (official documentation).

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Why is the internal illumination on my Zebra FS40 weak or off?

Short answer: According to Zebra, the scanner shares its power between its functions: on models with internal illumination, the intensity or duration of the illumination may be reduced, or the illumination even switched off, to stay within the power budget. Supply the scanner with 24 V or Class 4 PoE+, and disable unused outputs.

LIKELY CAUSE

The xS40/xS70 guide cites several causes of reduced available power: an M12 supply below 21.5 V, power via USB-C (limited illumination) and the consumption of the digital outputs. The internal illumination modules are available in red (660 nm), infrared (850 nm), white (2700 K) or multicolour.

Caution: The seal of the illumination plate can stay in place if it is intact. If it is damaged, replace it to maintain the IP67 rating, Zebra states.

WHAT TO DO

1. Check the power source and the Power light (see [Power light](#)).
2. With PoE, disable unused digital outputs, which reduce the budget available for the illumination.
3. Check that the illumination module suits the application: for example, Zebra advises against cross-polariser covers when infrared capture is required.
4. In Aurora Focus, the type of illumination installed appears in the “Status” tab of the scanner settings.
5. To replace a module: remove the four screws and the top cover, the illumination plate, the filter if fitted, then the two screws of the illumination board, which you lift out gently.

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6. When reassembling: seal, illumination board (two screws at 6.0 lbf-in, Torx T8), filter aligned with the chamfer, illumination plate, then top cover (four screws at 6.0 in-lbs).

Sources: [Power Sources: 12 Pin M12 Power Input, Power Over Ethernet, USB Type C \(p. 14-16\)](#) [↗](#) – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [General Purpose Input and Outputs: GPIO Summary, Digital Industrial GPIO, Analog Output \(p. 31-35\)](#) [↗](#) – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [Installing an Illumination System, Disassembling the Illumination System \(p. 19-20\)](#) [↗](#) – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [Accessories: External Lighting, Internal Ring Lighting, Filters, Lens Covers, Cables \(p. 91-98\)](#) [↗](#) – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [Specifications \(p. 88-90\)](#) [↗](#) – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [Viewing Devices](#) [↗](#) – Zebra Aurora Focus User Guide (official documentation).

Why does the external illumination on my Zebra FS70 not switch on or not switch off?

Short answer: According to Zebra, the external illumination connector is disabled when the scanner is powered via USB-C, and the internal illumination and external illumination cannot operate together on PoE. The Aurora Focus help adds two cases: enabling the external illumination in a job created with older firmware, and switching back to PNP mode before switching off the scanner if the illumination does not switch off in NPN mode.

LIKELY CAUSE

The xS40/xS70 guide states that on PoE the scanner itself produces the 24 V for the external illumination. Automatic strobe lights with a high peak current are not supported: they trigger the overcurrent protection, which disables the connector.

WHAT TO DO

1. Power the scanner through the M12 connector or via PoE: on USB-C, the external illumination connector is disabled.



2. On PoE, do not use the internal illumination at the same time as the external illumination.
3. With adjustable-intensity illumination, start at the lowest intensity or use auto-adjustment, to stay below the current limit.
4. If the illumination stays off with a job created under older firmware, enable the external illumination in the job.
5. If the illumination does not switch off in NPN mode, switch back to PNP mode before switching off the scanner.
6. Check the 5-pin M12 cable (CBL-LGT00000-M1200, 0.3 m, or CBL-LGT00200-M1200, 2 m) and the pinout: 1 DC_OUT/GPIO8, 2 GPIO7, 3 ground, 4 GPIO6, 5 analogue output.

With a 24 V DC power supply in external illumination mode, the GPIO8 output can power a strobe light directly, provided the average current stays below 1,500 mA.

Sources: [Power Sources: 12 Pin M12 Power Input, Power Over Ethernet, USB Type C \(p. 14-16\)](#)  – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [General Purpose Input and Outputs: GPIO Summary, Digital Industrial GPIO, Analog Output \(p. 31-35\)](#)  – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [Cable Pin Outs: External Light Connector \(p. 112\)](#)  – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [Accessories: External Lighting, Internal Ring Lighting, Filters, Lens Covers, Cables \(p. 91-98\)](#)  – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [Troubleshooting](#)  – Zebra Aurora Focus User Guide (official documentation).

What is the aimer on my Zebra FS40 for, and why do some models not have one?

Short answer: The aimer projects an eight-dot pattern that marks the centre and size of the field of view, including the corners, at 24 inches (about 61 cm). According to Zebra, the 5 MP FS40 Wide Angle configurations do not have a laser aimer.

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LIKELY CAUSE

The data sheet in the xS40/xS70 guide describes a Class II red laser aimer with an eight-dot star pattern (“8-point sunburst”). The “Aiming Patterns” section states that it marks out the field of view.

Caution: According to the Zebra data sheet, the aimer is a Class II red laser.

WHAT TO DO

1. Centre the aimer pattern on the barcode to be scanned.
2. Check that the barcode fits inside the corner dots, which mark out the field of view.

Sources: [Aiming Patterns](#), [Minimum Focus Distances](#) (p. 29) [↗](#) · [Specifications](#) (p. 88-90) [↗](#) – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) (official documentation).

Why does my Zebra FS40 or FS70 not trigger on the sensor signal?

Short answer: Check the trigger source of the job in Aurora Focus (GPIO, scanner button, serial, PLC, TCP/IP or automatic) and the wiring of the input. The digital inputs of the FS40 and FS70 only accept PNP (or push-pull) sensors and do not work when powered via USB-C.

LIKELY CAUSE

According to the xS40/xS70 guide, the digital GPIO (GPIO4 to GPIO8) switch faster than the optocoupled GPIO, but their inputs do not accept an NPN output and they are not available when powered via USB-C. The optocoupled GPIO can still be used on USB-C if COMMON_IN and COMMON_OUT are correctly wired.

WHAT TO DO

1. In the capture step of the job, check the trigger source (“Source”) and mode chosen.
2. On a digital input, use a PNP or push-pull sensor.
3. On an optocoupled input, check the wiring of COMMON_IN.

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4. When powered via USB-C, use an optocoupled input or power the scanner with 24 V or PoE.
5. To test with the TRIG button, check that “Trigger Button Enable” is ticked in “General Settings”.
6. For network triggering, tick “Enable TCP/IP Control” and define the trigger string (“Trigger String”) in the TCP/IP settings.

Sources: [General Purpose Input and Outputs: GPIO Summary, Digital Industrial GPIO, Analog Output \(p. 31-35\)](#) [↗](#) – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [Power Sources: 12 Pin M12 Power Input, Power Over Ethernet, USB Type C \(p. 14-16\)](#) [↗](#) – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [Trigger Settings, Acquisition Settings](#) [↗](#) – Zebra Aurora Focus 10.2 User Guide (MN-004665-12EN Rev A, 2026) · [General Settings \(Hardware Buttons, Beeper\), ZIML 360 LED Settings](#) [↗](#) – Zebra Aurora Focus 10.2 User Guide (MN-004665-12EN Rev A, 2026) · [TCP/IP Settings](#) [↗](#) – Zebra Aurora Focus 10.2 User Guide (MN-004665-12EN Rev A, 2026) (official documentation).

My Zebra FS40 or FS70 sends incorrect data or nothing at all: causes and solutions

USB keyboard language and enabling the TCP/IP, RS-232 or USB serial outputs.

Why does my USB-C-connected Zebra FS40 type the wrong characters in my application?

Symptoms: characters replaced or unexpected symbols in USB keyboard mode.

Short answer: In USB keyboard mode (HID), the scanner's language must match that of the host computer. Choose “French” with the barcode for parameter no. 65843 in the Zebra guide, or set the country in the USB settings of Aurora Focus, then restart the scanner.

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LIKELY CAUSE

According to the xS40/xS70 guide, the USB-C port can operate as Ethernet over USB (RNDIS) and as a CDC serial port or HID keyboard. The “HID Keyboard Language” parameter (no. 65843) offers options including US English, French, German, Spanish and Italian, as well as Linux variants.

WHAT TO DO

1. Enable the HID keyboard if necessary (parameter no. 65704, which disables CDC serial mode).
2. Scan the “French” barcode in the “HID Keyboard Language” chapter.
3. In Aurora Focus: “Device Settings > Communication Settings > USB Settings”, “USB HID Keyboard” option, country “French (France) Windows” or “French (France) Linux” depending on the host computer.
4. Restart the scanner, as Aurora Focus requires after a change to the USB settings.

Sources: [HID Keyboard Configuration](#), [HID Keyboard Language](#), [HID CDC Serial](#) (p. 74-76) [↗](#) – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [USB Type C Operation](#), [Supported Display Resolutions](#) (p. 23-24) [↗](#) – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [USB Settings](#), [HID Keyboard Localization](#) [↗](#) – Zebra Aurora Focus 10.2 User Guide (MN-004665-12EN Rev A, 2026) (official documentation).

Why does my Zebra FS70 not transmit its results to the PLC or server?

Symptoms: successful read (green blink of the 360° light) but no data received.

Short answer: Enable result output on the interface used: “TCP Result Output” (no. 66930) or “RS232 Result Output” (no. 66931) barcodes in the Zebra guide, the “Enable TCP/IP Results” option in Aurora Focus, or “Enable CDC Serial Results” (no. 66933) over USB. Then check the “Result Overflow” counter in the Web HMI.

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LIKELY CAUSE

The xS40/xS70 guide provides barcodes for result output and control over TCP and RS-232, and for sending results over CDC serial on USB. The Aurora Focus guide states that a “Result Overflow” value greater than 0 means that some results have not been sent, due to insufficient rate on the output interface.

WHAT TO DO

1. Over TCP/IP: tick “Enable TCP/IP Results”, check the connection type (server by default or client) and the ports, then click “Test Connection”.
2. Over RS-232: scan “RS232 Result Output”.
3. Over USB serial: scan “Enable CDC Serial” (no. 66934) then “Enable CDC Serial Results” (no. 66933).
4. With a PLC, check the protocol chosen (see [industrial protocols](#)).
5. If “Result Overflow” is above 0, choose a faster interface, reduce the data sent or lower the inspection rate.

Sources: [USB Power Configuration, Input/Output \(IO\) Interface Configuration \(p. 77\)](#) [↗](#) – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [HID Keyboard Configuration, HID Keyboard Language, HID CDC Serial \(p. 74-76\)](#) [↗](#) – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [TCP/IP Settings](#) [↗](#) – Zebra Aurora Focus 10.2 User Guide (MN-004665-12EN Rev A, 2026) · [Web HMI Dashboard](#) [↗](#) – Zebra Aurora Focus User Guide (official documentation).

My Zebra FS40 or FS70 is not detected or does not communicate: causes and solutions

Detection in Aurora Focus, display over USB-C, industrial protocols and inputs/outputs.

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Why does my Zebra FS40 or FS70 not appear in Aurora Focus?

Symptoms: the scanner is missing from [View Devices](#).

Short answer: According to Zebra, the Windows Defender firewall can block the application's ports: allow Zebra Aurora Focus on domain, public and private networks. Over USB, check the scanner's network driver in Device Manager, and retighten the screws on the USB-C cable if the link drops out.

LIKELY CAUSE

The troubleshooting table in the xS40/xS70 guide cites the firewall, a missing RNDIS driver over USB and a loosely secured or intermittent USB cable, which makes the scanner restart or cuts its link. The FS70 has two Ethernet ports: the Aurora Focus guide states that the network settings are made separately for Ethernet port 1, Ethernet port 2 and USB.

WHAT TO DO

1. In the Windows Defender firewall, allow Zebra Aurora Focus on “Domain”, “Public” and “Private” networks.
2. In File Explorer, Network section, check that the scanner appears under “Network” or “Other Devices”.
3. Over USB, open Device Manager and check the driver under “Network Adapters”.
4. If the scanner restarts or loses the USB link, reconnect the cable and tighten its locking screws firmly.
5. On an FS70, check which Ethernet port the PC is connected to and the IP settings of that port.
6. Switch the power off, restore it, wait about a minute, then restart Aurora Focus and “View Devices”. Repeat with direct Ethernet and through a switch.
7. If the scanner still cannot be found, run a [factory reset](#).

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When to call a technician: if the scanner still cannot be found on any connection after cutting the power and a reset, contact Zebra support with the serial number, part number and firmware version.

The Zebra table mentions an RNDIS driver in the problem and an NDIS driver in the solution.

Sources: [Troubleshooting](#) – xS40/70 Smart Camera Product Reference Guide · [Troubleshooting, Factory Reset the Device, Power Cycling the Device \(p. 86-87\)](#) – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [Device Discovery, USB and Ethernet connections, per-port IP settings](#) – Zebra Aurora Focus 10.2 User Guide (MN-004665-12EN Rev A, 2026) (official documentation).

Why does the monitor connected to the USB-C port of my Zebra FS40 show nothing?

Short answer: According to Zebra, the DisplayPort video output of the FS40 and FS70 only works with a SuperSpeed-compatible USB Type-C to Type-C cable. The resolution is negotiated automatically, preferably 1920 x 1080 or higher.

LIKELY CAUSE

The USB-C port in the xS40/xS70 guide is a USB 3.0 port (5 Gbit/s) with DisplayPort mode. In host mode, it accepts monitors, adapters, HID keyboards and touchpads, storage sticks and docking stations or hubs.

WHAT TO DO

1. Use a SuperSpeed USB-C to USB-C cable, for example the Zebra IP67 locking cable CBL-USB00200-USC00 (2 m) or CBL-USB00400-USC00 (4 m).
2. Check that the monitor accepts one of the supported resolutions: 1024 x 768, 1280 x 800, 1280 x 1024, 1366 x 768, 1600 x 900, 1600 x 1050, 1920 x 1080 or 1920 x 1200.
3. A monitor with a USB-C input can receive the image and power through the same cable. Zebra also cites battery-powered USB-C monitors as compatible.

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4. Tighten the locking screws on the cable.

Sources: [USB Type C Operation, Supported Display Resolutions \(p. 23-24\)](#) [Accessories: External Lighting, Internal Ring Lighting, Filters, Lens Covers, Cables \(p. 91-98\)](#) – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) (official documentation).

How does my Zebra FS70 communicate with a PLC over PROFINET, EtherNet/IP or Modbus TCP?

Short answer: Choose the protocol in Aurora Focus: “Communication Settings”, “PLC Protocol” section, “Industrial Ethernet/PLC Options” list (None, EtherNet/IP, Profinet, Modbus TCP), then configure it in the “Connect” tab. If the PLC controls the scans, select “PLC” as the trigger source of the job.

LIKELY CAUSE

According to the data sheet in the xS40/xS70 guide, the FS40 and FS70 support EtherNet/IP, PROFINET, CC-Link, Modbus TCP and TCP/IP, on an X-coded M12 Ethernet port (1000/100/10 Mbit/s). For details of each protocol, the Aurora Focus guide refers to the Zebra “Industrial Ethernet User Guide”.

WHAT TO DO

1. Connect the scanner to the PLC network with an X-coded M12 to RJ45 cable (CBL-ENT00500-M1200, 5 m, or CBL-ENT01500-M1200, 15 m).
2. In Aurora Focus, select the protocol in “Industrial Ethernet/PLC Options”.
3. Then set the protocol parameters in the “Connect” tab.
4. In the job, select the “PLC” trigger source if needed.
5. On the FS70, check the IP settings of the Ethernet port used.

CC-Link appears in the data sheet but not in the list of protocols in the Aurora Focus guide consulted.

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Sources: [Specifications \(p. 88-90\)](#)  – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [Accessories: External Lighting, Internal Ring Lighting, Filters, Lens Covers, Cables \(p. 91-98\)](#)  – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [PLC Protocol \(Industrial Ethernet/PLC Options\)](#)  – Zebra Aurora Focus 10.2 User Guide (MN-004665-12EN Rev A, 2026) · [Trigger Settings, Acquisition Settings](#)  – Zebra Aurora Focus 10.2 User Guide (MN-004665-12EN Rev A, 2026) (official documentation).

Why do the outputs on my Zebra FS40 or FS70 not work?

Short answer: Check the type of output: the digital outputs (100 mA each) are not available when powered via USB-C, and GPIO6 to GPIO8 can only be used if the external illumination connector is in GPIO mode. On PoE, disable unused outputs, which consume part of the power.

LIKELY CAUSE

The xS40/xS70 guide distinguishes the optocoupled GPIO, which are isolated, from the digital GPIO (GPIO4 to GPIO8), which are faster, not isolated and powered by the scanner. In external illumination mode, GPIO8 becomes a high-current output and GPIO6 and GPIO7 control the illumination. The 0-10 V analogue output of the illumination connector is disabled when powered via USB-C.

WHAT TO DO

1. Power the scanner with 24 V or PoE to use the digital GPIO and the analogue output.
2. To use GPIO6 to GPIO8, switch the external illumination connector to GPIO mode.
3. Do not exceed 100 mA per digital output.
4. The push-pull outputs work with NPN inputs referenced to ground or PNP inputs referenced to DC IN.
5. On PoE, a digital GPIO can be configured as a 24 V output and connected to COMMON_IN or COMMON_OUT to power the optocoupled GPIO, within the 100 mA limit.

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6. On the analogue output, the impedance of about 400 ohms creates an offset proportional to the current: use loads with a low input current where possible.

Sources: [General Purpose Input and Outputs: GPIO Summary, Digital Industrial GPIO, Analog Output \(p. 31-35\)](#) [↗](#) · [Power Sources: 12 Pin M12 Power Input, Power Over Ethernet, USB Type C \(p. 14-16\)](#) [↗](#) · [Cable Pin Outs: External Light Connector \(p. 112\)](#) [↗](#) – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) (official documentation).

Powering the Zebra FS40 and FS70: USB-C, PoE and power budget

The power source determines the power available for the illumination, the outputs and the accessories.

Why does my USB-C-powered Zebra FS40 lose functions?

Symptoms: limited illumination, external illumination, digital GPIO or analogue output inactive.

Short answer: According to Zebra, when powered via USB-C, the digital GPIO, the external illumination connector and the 0-10 V analogue output are disabled, and the illumination is limited. For full use, power the scanner with 24 V through the M12 connector or via PoE.

LIKELY CAUSE

The xS40/xS70 guide states that the scanner starts up on older USB ports, with no guarantee of staying below 500 mA, sometimes with reduced performance. An override mode can be enabled for ports known to supply 1.5 A, often marked BC1.2 or charging port.

WHAT TO DO

1. For production, power the scanner through the M12 connector (24 V) or via PoE.



2. On USB-C, connect the scanner to a port capable of supplying 1.5 A (BC1.2 or charging port).
3. The guide provides the “Enable Unrestricted USB A-Power” and “Disable Unrestricted USB A-Power” barcodes (parameter no. 65079, “USB Power Configuration” chapter).
4. The data sheet gives 7.5 W (5 V, 1.5 A) or 15 W (5 V, 3 A) for USB-C.
5. Always tighten the locking screws on the USB-C cable.

The guide does not specify the exact link between the override mode for 1.5 A ports and the “Unrestricted USB A-Power” parameter.

Sources: [Power Sources: 12 Pin M12 Power Input, Power Over Ethernet, USB Type C \(p. 14-16\)](#) · [USB Type C Operation, Supported Display Resolutions \(p. 23-24\)](#) · [USB Power Configuration, Input/Output \(IO\) Interface Configuration \(p. 77\)](#) · [Specifications \(p. 88-90\)](#) · FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) (official documentation).

Why does my Zebra FS40 or FS70 report insufficient power for its configuration?

Short answer: According to Zebra, the scanner gives a warning when the available power budget is too low for the chosen settings. The warning can sometimes be ignored, but the integrator must then check that the system will remain stable: it is better to power the scanner with 24 V or PoE+ and reduce unnecessary consumption.

LIKELY CAUSE

The xS40/xS70 guide explains that power is allocated according to the sensor and the active functions: Ethernet ports, digital outputs, current advertised on USB-C, illumination. It recommends developing jobs with the power sources and equipment of the final installation.

Caution: Zebra asks the integrator to assess the stability of the system before ignoring a

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power budget warning.

WHAT TO DO

1. Check the source: 24 V through the M12 connector (above 21.5 V), Class 4 PoE+ or Class 3 PoE.
2. Disable unused digital outputs.
3. Reduce the average consumption, for example with external illumination.
4. Develop your jobs with the power supply and accessories of the final installation.

Sources: [Power and Thermal Management \(p. 37-38\)](#) · [Power Sources: 12 Pin M12 Power Input, Power Over Ethernet, USB Type C \(p. 14-16\)](#) · [General Purpose Input and Outputs: GPIO Summary, Digital Industrial GPIO, Analog Output \(p. 31-35\)](#) – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) (official documentation).

How do I reset and configure a Zebra FS40 or FS70?

Factory reset, 360° ring and beeper, restart.

How do I factory reset a Zebra FS40 or FS70?

Beeps: two medium tones · Lights: 360° flashing red at 5 Hz, Power yellow then green, Ethernet orange then amber.

Short answer: Disconnect all power, hold down the TRIG button and reconnect a power source without releasing it. After about 20 seconds, the Power light changes from yellow to green and the Ethernet light from orange to amber: release TRIG within 5 seconds.

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LIKELY CAUSE

The xS40/xS70 guide presents the factory reset as one of the two methods, along with cutting the power, for Aurora Focus to find the scanner again. The signal table associates it with two medium tones and rapid red flashing (5 Hz) of the 360° ring.

Caution: The reset restores the scanner's factory settings. First back up the configuration with “Backup Device” in Aurora Focus. According to Zebra, restoring a backup from another model type can cause problems.

WHAT TO DO

1. Disconnect all power sources (M12, PoE and USB-C).
2. Press and hold TRIG.
3. Reconnect a power source, with TRIG still held down.
4. After about 20 seconds, the Power light changes from yellow to green and the Ethernet light from orange to amber.
5. As soon as the Ethernet light turns amber, release TRIG within 5 seconds.
6. Remotely: “Factory Reset” command for the scanner in “View Devices”.

Sources: [Troubleshooting, Factory Reset the Device, Power Cycling the Device \(p. 86-87\)](#) ↗ – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [LED and Beeper Indicators \(p. 25-28\)](#) ↗ – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [Viewing Devices](#) ↗ – Zebra Aurora Focus User Guide (official documentation).

How can I adjust the 360° light ring and the scan beep on a Zebra FS40 or FS70?

Short answer: In Aurora Focus, the 360° ring settings are in “ZIML Settings”: number of flashes per read, duration of each flash (50 ms by default) and status indicators. The beeper is set in “General Settings”: enabling, volume, tone, duration and beep on every successful job.

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LIKELY CAUSE

According to the xS40/xS70 guide, the 360° ring flashes green on every successful read and red on every failure, and the audible feedback for successful or failed reads is set in Aurora Focus. The signal table describes the default behaviour.

WHAT TO DO

1. In Aurora Focus, open the “Zebra Integrated Multifunction Light (ZIML) Settings”.
2. Set “Number of Flashes” and “Time per Flash”.
3. Tick “ZIML 360 LED Status Indicators” to enable the indicators, and the option to hold until the next trigger if you want to keep the status displayed.
4. In “Device Settings > General Settings”, set “Beeper Enable”, “Beeper Volume”, “Beeper Tone”, “Beeper Duration” and “Beep on Job Success”.
5. To mute the start-up sequence, tick “Suppress Power-Up Beeps”.

Sources: [Decode LEDs, User Interface Label \(p. 24-25\)](#)  – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [LED and Beeper Indicators \(p. 25-28\)](#)  – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [General Settings \(Hardware Buttons, Beeper\)](#), [ZIML 360 LED Settings](#)  – Zebra Aurora Focus 10.2 User Guide (MN-004665-12EN Rev A, 2026) (official documentation).

Why has my Zebra FS70 stopped responding, and how do I restart it properly?

Short answer: Zebra advises unplugging all the cables, reconnecting the power and waiting about a minute. Without cutting the power, the “Reboot the Device” barcode (parameter no. 69030) or the “Reboot” command in Aurora Focus restarts the scanner.

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LIKELY CAUSE

The xS40/xS70 guide describes cutting the power in its chapters on thermal management and troubleshooting. It also provides the “Restart Core Services” barcode (no. 69031) to restart only the core services.

WHAT TO DO

1. Unplug all the cables to cut the power.
2. Reconnect a power source and wait about a minute.
3. Check the scanner in Aurora Focus (“View Devices”), in Windows Network and in the Web HMI.
4. If the problem persists, repeat the operation for each type of connection: direct Ethernet, then through a switch.
5. Without unplugging anything: “Restart Core Services” barcode, “Reboot the Device” barcode or “Reboot” command in Aurora Focus.

Sources: [Troubleshooting](#), [Factory Reset the Device](#), [Power Cycling the Device](#) (p. 86-87) [↗](#) – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [Reboot Device, Restart Core Services](#) (p. 83) [↗](#) – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [Viewing Devices](#) [↗](#) – Zebra Aurora Focus User Guide (official documentation).

Updating the firmware on the Zebra FS40 and FS70: procedure

Updating from Zebra Aurora Focus and the associated signals.

How do I update the firmware on a Zebra FS40 or FS70?

Short answer: In Zebra Aurora Focus, select the scanner in “View Devices” and click “Update Firmware”, or use the Web HMI. During the update, the 360° ring and

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the Device Status light flash red at 2 Hz.

LIKELY CAUSE

The Aurora Focus guide states that the software cannot connect to a scanner whose firmware is too old, and that an update can fail when memory usage is high. The xS40/xS70 guide also lists mass storage for firmware updates among the host functions of the USB-C port.

WHAT TO DO

1. Check that the scanner appears as connected in “View Devices” and note the installed version.
2. Start “Update Firmware” from a file (default) or an FTP/FTPS server.
3. For several scanners, “Dual Update” updates both partitions with a restart after each one, and “Force Update” applies the same version to all of them.
4. If it fails (low tone, red lights at 5 Hz), restart the scanner and try again (see [update failed](#)).

Sources: [Viewing Devices](#)  – Zebra Aurora Focus User Guide · [Updating Firmware on Multiple Devices](#)  – Zebra Aurora Focus 10.2 User Guide (MN-004665-12EN Rev A, 2026) · [Troubleshooting](#)  – Zebra Aurora Focus User Guide · [LED and Beeper Indicators \(p. 25-28\)](#)  – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [USB Type C Operation, Supported Display Resolutions \(p. 23-24\)](#)  – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) (official documentation).

Zebra FS40 and FS70: heat, sealing and cleaning

Temperature ranges, tightening torques and cleaning products approved by Zebra.

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Why does my Zebra FS40 or FS70 slow down or stop its jobs when it gets hot?

Symptoms: functions disabled, slower processing or jobs stopped.

Short answer: According to Zebra, beyond a safe temperature limit, the scanner may disable functions, reduce processor performance or stop active jobs. On PoE, the operating range drops to 0-40 °C, compared with 0-45 °C with a 10-30 V DC power supply.

LIKELY CAUSE

The xS40/xS70 guide explains that PoE power adds a regulation stage that produces heat and reduces the operating temperature range. Both ranges depend on the duty cycle.

WHAT TO DO

1. Note the temperature shown on the Web HMI dashboard.
2. Reduce the scanner's average consumption and use external illumination.
3. If possible, power the scanner with 24 V rather than PoE.
4. Install the scanner in a cooler place or ventilate it.
5. Mount the housing on a large heat-conducting surface, for example with the Zebra BRKT-LMNT-U000 universal bracket.

Sources: [Power and Thermal Management \(p. 37-38\)](#)  – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [Power Sources: 12 Pin M12 Power Input, Power Over Ethernet, USB Type C \(p. 14-16\)](#)  – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) · [Web HMI Dashboard](#)  – Zebra Aurora Focus User Guide (official documentation).

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How does my Zebra FS40 or FS70 keep its IP65/IP67 sealing?

Short answer: According to Zebra, the IP65 or IP67 rating requires M12 cables tightened to 24.0 in-lbs and, on unused connectors, caps tightened to 10.0 in-lbs. The caps are hand-tightened at the factory: tighten them to the correct torque at installation.

LIKELY CAUSE

The xS40/xS70 guide also states that Zebra IP67 screw-locking USB-C cables maintain the sealing, provided their screws are tightened, and that the seal of the illumination plate must be replaced if it is damaged.

WHAT TO DO

1. Screw Zebra M12 cables in to a torque of 24.0 in-lbs.
2. Tighten the caps on unused connectors to 10.0 in-lbs.
3. Always tighten the locking screws on USB-C cables, even if IP67 is not needed.
4. On the FS70, keep the IP67 lens cover (spare LENS-XRC70-0000) or a threaded cover suited to the lens.
5. Replace the seal of the illumination plate if it is damaged.

Sources: [Torque Specification \(p. 18\)](#)  · [USB Type C Operation, Supported Display Resolutions \(p. 23-24\)](#)  · [Installing an Illumination System, Disassembling the Illumination System \(p. 19-20\)](#)  · [Accessories: External Lighting, Internal Ring Lighting, Filters, Lens Covers, Cables \(p. 91-98\)](#)  – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) (official documentation).

Which products can I use to clean the window of a Zebra FS40 or FS70?

Short answer: Zebra approves pre-moistened wipes and 70% isopropyl alcohol, applied to a cloth and never directly to the scanner. The exit window must be

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cleaned regularly: a dirty window impairs scanning accuracy.

LIKELY CAUSE

The “Maintenance” chapter of the xS40/xS70 guide lists the approved products, the products harmful to plastics and the tolerated industrial fluids (engine oil, ATF and CVT fluids, tested industrial degreaser).

Caution: According to Zebra, acetone, ammonia, bleach, benzene, toluene, trichloroethylene, ketones, ethers and alkaline solutions damage plastics. No abrasive material must touch the window.

WHAT TO DO

1. Moisten a soft cloth with an approved product, or use a pre-moistened wipe.
2. Wipe all surfaces without letting liquid pool near the window, the button or the connectors.
3. Do not spray any liquid into the exit window.
4. Wipe the window with lens tissue, then dry it immediately with a soft non-abrasive cloth.
5. Clean the connectors with a cotton bud soaked in isopropyl alcohol, rubbing at least three times and leaving no residue.
6. Leave the scanner to air-dry before using it again.

Source: [Maintenance: Known Harmful Ingredients, Approved Cleaning Agents, Cleaning the Device \(p. 84-85\)](#)  – FS/VS 40/70 Smart Camera Product Reference Guide (MN-003810-03EN Rev A, 2025) (official documentation).

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When should you call a technician for a Zebra FS40 or FS70 scanner?

The entries above first suggest a setting, cleaning or a reset. In the following cases, the documentation refers you to support or a technician:

- **Persistent job error:** If the job error persists despite correct power and temperature, note the serial number, part number and firmware version before contacting Zebra support, as the Aurora Focus help requests (see [the entry](#)).
- **Firmware update still failing:** If the update still fails after a restart, contact Zebra support with the scanner's serial number, part number and firmware version (see [the entry](#)).
- **No decoding despite the adjustments:** If the scanner still does not decode after focusing, cleaning and resetting, have the serial number, part number and firmware version ready before contacting Zebra support (see [the entry](#)).
- **Scanner cannot be found on any connection:** If the scanner still cannot be found on any connection after cutting the power and a reset, contact Zebra support with the serial number, part number and firmware version (see [the entry](#)).

Avoiding recurring faults on the Zebra FS40 and FS70 scanner: preventive maintenance

Worn battery, degraded reading, lost settings: several entries in this guide cover points that a preventive maintenance visit checks before they cause a breakdown.

TIMCOD preventive maintenance is part of the [through-life maintenance \(MCO\)](#) TIMCOD provides for your fleet (page in French). In particular, it includes:

Preventive battery replacement

Recommended every 18 to 24 months, for removable batteries.

General check of the devices

Each device checked and cleaned, minor faults fixed and a report provided.

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Inventory of the fleet under contract

Type, configuration and IP address of each device.

Training and skills transfer

Transfer of technical skills on using the equipment.

Detailed report

Inventory, condition of the fleet and optimisation advice.

In addition, TIMCOD corrective maintenance includes phone support (hotline), repair to working order, express exchange with a replacement device and, as an option, SWAP. Maintenance contracts come in three levels (Essentiel, Confort, Premium).

Zebra FS40 or FS70 scanner troubleshooting: frequently asked questions

How do I reset a Zebra FS40 or FS70?

Disconnect all power, hold down the TRIG button and reconnect a power source without releasing it. After about 20 seconds, the Power light changes from yellow to green and the Ethernet light from orange to amber: release TRIG within 5 seconds. [See the detailed entry.](#)

What does the red flashing of the 360° ring on the Zebra FS40 mean?

According to Zebra, each decode failure results in a red blink of the 360° ring, with no beep. Continuous red flashing at 5 Hz with a low tone signals that a firmware update has failed, and with two medium tones a factory reset. [See the detailed entry.](#)

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How do I focus a Zebra FS40?

On the FS40, the TUNE button starts the focus adjustment and the Focus Status light shows the result: solid green with a high tone on success, solid red with a low tone on failure. The autofocus barcodes in the Zebra guide are another method. [See the detailed entry.](#)

How do I adjust the focus on a Zebra FS70?

On the FS70, the focus and aperture are set by hand on the C-Mount lens, after loosening its locking screws. Adjust the gain and exposure with the live view of the Web HMI in Aurora Focus, then retighten the screws. [See the detailed entry.](#)

Why does the Zebra FS40 on USB-C give hardly any illumination?

According to Zebra, when powered via USB-C, the digital GPIO, the external illumination connector and the 0-10 V analogue output are disabled, and the illumination is limited. For full use, power the scanner with 24 V through the M12 connector or via PoE. [See the detailed entry.](#)

What do two low beeps mean on a Zebra FS70?

On the FS40 and FS70, two low tones with the Device Status and Warning lights solid red signal a job error, according to the Zebra table. Check the job in Zebra Aurora Focus, then the temperature and the power available. [See the detailed entry.](#)

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Which industrial protocols does the Zebra FS70 support?

According to the Zebra data sheet, the FS40 and FS70 support EtherNet/IP, PROFINET, CC-Link, Modbus TCP and TCP/IP. The protocol is chosen in Aurora Focus, in the PLC Protocol section, then configured in the Connect tab. [See the detailed entry.](#)

What temperature can a Zebra FS40 withstand?

According to Zebra, the operating range is 0 to 45 °C with a 10-30 V DC power supply and 0 to 40 °C on PoE, depending on the duty cycle. Beyond a safe limit, the scanner may disable functions, slow down or stop its jobs. [See the detailed entry.](#)

Sources consulted

All the causes, procedures and signals in this guide come from the pages of the official Zebra documentation listed below, consulted on 20 October 2026.

- [FS/VS 40/70 Smart Camera Product Reference Guide \(PDF, MN-003810-03EN Rev A, 2025\)](#) [↗](#) – xS40/70 Smart Camera Product Reference Guide **official**
- [xS40/70 Smart Camera Product Reference Guide \(online table of contents\)](#) [↗](#) – xS40/70 Smart Camera Product Reference Guide **official**
- [LED and Beeper Indicators](#) [↗](#) – xS40/70 Smart Camera Product Reference Guide **official**
- [Troubleshooting](#) [↗](#) – xS40/70 Smart Camera Product Reference Guide **official**
- [Using Autofocus Barcodes](#) [↗](#) – xS40/70 Smart Camera Product Reference Guide **official**
- [Using Parameter Barcodes](#) [↗](#) – xS40/70 Smart Camera Product Reference Guide **official**
- [Minimum Focus Distances](#) [↗](#) – xS40/70 Smart Camera Product Reference Guide **official**
- [Zebra Aurora Focus 10.2 User Guide \(PDF, MN-004665-12EN Rev A\)](#) [↗](#) – Zebra Aurora Focus User Guide **official**
- [Viewing Devices](#) [↗](#) – Zebra Aurora Focus User Guide **official**

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- [Troubleshooting](#)  – Zebra Aurora Focus User Guide **official**
- [Web HMI Dashboard](#)  – Zebra Aurora Focus User Guide **official**

The following official pages were not consulted for this guide: “Barcode Configuration Mode” and “HID CDC Serial” in the xS40/xS70 guide on docs.zebra.com (content read in the PDF of the same guide), “Updating Firmware on Multiple Devices” in the online Aurora Focus guide (content read in the PDF), the chapters on updating via the Web HMI and “Performing a Factory Reset” in the Aurora Focus PDF, and articles 000022007 and 000022148 on support.zebra.com. They are not cited. If the fault falls under these documents, refer to the manufacturer’s documentation or ask the TIMCOD technicians.

See also

- Product pages on timcod.fr (in French): [Zebra FS40](#), [Zebra FS70](#)
- [All troubleshooting guides for Zebra scanners and mobile computers](#) ([DS3600](#), [FS10](#), [FS20](#), [MC3200](#), [MC3300](#), [MC3300ax](#), [MC3300x](#), [MC3400](#), [MC9190-G](#), [MC9200](#), [MC9300](#), [MC9400](#), [TC22R](#), [TC8000](#), [TC8300](#))
- [Maintenance and repair of Zebra scanners](#)
- [All barcode scanner and mobile computer troubleshooting guides, all brands](#)
- [TIMCOD repair and maintenance](#)
- [Through-life maintenance \(MCO\): preventive and corrective maintenance](#) (in French)
- [TIMCOD, Zebra reseller](#) (in French)
- [Industrial scanners and mobile computers](#) (in French)

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PDF version of the page <https://www.timcod.fr/reparation/en/barcode-scanner-troubleshooting/zebra/fs40-fs70>, updated on 21 October 2026.

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