OEM AUTOMATIC

OEM Automatic Ltd
Address: Whiteacres, Whetstone Leicester, LE8 6ZG
0116 284 9900 | Orders@oem.co.uk | www.oem.co.uk

ZEBRA FS80 CODE READER

ᎧᏂᎢ. ZEBRA

FS80-CM0507C00W
FS80, C-Mount, 5 MP, DPM W/ Fast, 2D, W/ DL OCR,
USB and Industrial Protocols, Lens Not Included -
Worldwide

- Decoding of both 1D and 2D barcodes
- Can read barcodes in many conditions including damaged codes and codes on device screens
- Adjustable optics and illumination

PRODUCT DESCRIPTION

The Zebra FS80 Fixed Industrial Scanner is a high-performance code reader designed for demanding industrial environments that require fast, accurate barcode reading. Equipped with a powerful 2.3 MP image sensor and Zebra's advanced PRZM Intelligent Imaging technology, the FS80 delivers rapid, reliable decoding of both 1D and 2D barcodes, even those that are poorly printed, damaged, or displayed on electronic screens. Its customisable illumination, adjustable optics, and comprehensive decoding algorithms make it suitable for complex use cases involving high-speed production lines or intricate label designs. The FS80 also offers connectivity via USB, Ethernet, and Serial interfaces, and supports Power-over-Ethernet (PoE) for simplified installation. It can be configured using Zebra's Aurora™ software platform, allowing for intuitive setup, remote management, and real-time diagnostics.

The Zebra FS80 is ideal for automated manufacturing, warehouse logistics, and quality assurance systems. Its rugged IP65-rated enclosure protects it from dust and water, making it suitable for harsh industrial environments. With optional features like liquid lens technology for dynamic focus adjustment, the FS80 can handle variable working distances, making it especially useful in assembly lines where products differ in size and placement. Additionally, its fast decode speeds and ability to read multiple codes in a single image enable increased throughput and reduced error rates in automated workflows. The FS80's compact design and flexible mounting options ensure seamless integration into both new and existing automation systems.

TECHNICAL DATA

12415_Certification - Environment	EN IEC 63000:2018
12416_Certification - Electricity	UL, CSA, IEC 61010
12417_Certification - EMC	EN 55011, EN 61326, FCC Part 15
12418_Dimensions (with lens cap)	75 x 120 x 75 mm
12419_Dimensions (without lens cap)	75 x 57 x 75 mm
12420_Weight (with lens cap)	504 g
12421_Weight (without lens cap)	407 g
Current consumption	15 W (625 mA @ 24 VDC)
Focus	Manual iris
Frame Rate Max	42

Interface out	One M12 X-Coded 1GbE, One M12-A 12-pin (female) Power & GPIO, One M12-A 12-pin (male) VGA
Javascript Support	Yes
Lens Barrel	C-Mount
Material	Aluminium
Pixel Size	3.2 x 3.2 µm
Resolution	5 MP
Size	75 x 120 x 75 mm
Software performance	DPM W/ Fast 2D Barcode Decoder W/ DL OCR
Storage	32 GB
Temperature range	0 °C till 45 °C
Type of lens	Fixed
Type of scanner	Fixed Scanner

Digital IO and Power Connector

The digital IO and power connector is an M12 12-pin female connector (M12-CBL-PWRIO-3) that transmits and receives digital I/O signals and provides power in your device.
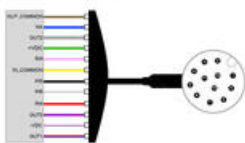

Table: M12-CBL-PWRIO-3 Digital IO and Power Pin-Out Diagram

Pin Number	Wire Color	Hardware Signal Name	Description
1	Brown	OUT_COMMON	Opto-isolated industrial auxiliary signal (output) common.
2	Blue	N/A	Not Supported
3	White	OUT2	Opto-isolated industrial auxiliary signal 2 (output).
4	Green	+VDC	Positive pin of the power provided to your device.
5	Pink	IN3	Opto-isolated industrial auxiliary signal 3 (input).
6	Yellow	IN_COMMON	Opto-isolated industrial auxiliary signal (input) common.
7	Black	IN5	Opto-isolated industrial auxiliary signal 5 (input).
8	Grey	IN6	W_AUX IO6
9	Red	IN4	Opto-isolated industrial auxiliary signal 4 (input).
10	Violet	OUT0	Opto-isolated industrial auxiliary signal 0 (output).
11	Grey/Pink	-VDC	Negative pin of the power provided to your Zebra FS80.
12	Red/Blue	OUT1	Opto-isolated industrial auxiliary signal 1 (output).

Ethernet Connector

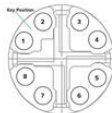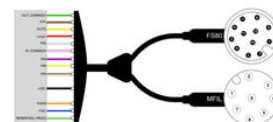The Ethernet connector is an M12 (female) 8-pin X-coded connector that provides TCP/IP communication.

Table: Digital IO and Power Pin-Out Diagram

Pin Number	Signal Name	Description
1	MDI_1+	Bidirectional data A+
2	MDI_1-	Bidirectional data A-
3	MDI_2+	Bidirectional data B+
4	MDI_2-	Bidirectional data B-
5	MDI_4+	Bidirectional data D+
6	MDI_4-	Bidirectional data D-
7	MDI_3-	Bidirectional data C-
8	MDI_3+	Bidirectional data C+

Power and IO Y Cable

The Power and IO Y cable (CBL-PWR00500-M1210) transmits and receives digital IO signals and provides power to the FS80 (M12-A 12-pin Male) and the Multi-Feature Integrated Light (M12-A 8-Pin Female).

Flying Leads Color (24 AWG)	Function	12-Pin A-Coded Male M12 to FS80		8-Pin A-Coded Female M12 to MFIL	
Green	OUT_COMMON	1	Green	6	Green
Note: Green must be connected to -VDC to operate the Multi-Feature Integrated Light.					
Brown	N/A	2	Brown	-	
Yellow	OUT2	3	Yellow	-	
Red	+VDC	4	Red	1	Red
Grey	IN3	5	Grey	-	
White/Violet	IN_COMMON	6	White/Violet	-	
Violet	IN5	7	Violet	-	
White/Yellow	IN6	8	White/Yellow	-	
White/Brown	IN4	9	White/Brown	-	
Black	-VDC	11	Black	8	Black
Orange	PASS	-	-	7	White/Orange
Blue	FAIL	-	-	2	White/Blue
White/Green	RESERVED_PROG	-	-	3	White/Green

Digital IO and Power Connector

The digital IO and power connector is an M12 12-pin female connector (M12-CBL-PWRIO/3) that transmits and receives digital I/O signals and provides power in your device.
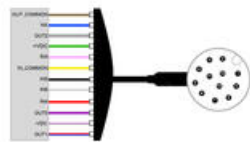

Table: M12-CBL-PWRIO/3 Digital IO and Power Pin-Out Diagram

Pin Number	Wire Color	Hardware Signal Name	Description
1	Brown	OUT_COMMON	Opto-isolated industrial auxiliary signal (output) common.
			NOTE: Ensure that OUT_COMMON is connected to the return path when using the FS80 with the Multi-Feature Integrated Light.
2	Blue	NA	Not Supported
3	White	OUT2	Opto-isolated industrial auxiliary signal 2 (output). Supported function: user bit 2 (output 3 of 3).
4	Green	+VDC	Positive pin of the power provided to your device.
			NOTE: This pin must be connected to a + 24 V +/- 10% power supply.
5	Pink	IN3	Opto-isolated industrial auxiliary signal 3 (input).
6	Yellow	IN_COMMON	Opto-isolated industrial auxiliary signal (input) common. Supported function: Whether you should connect this pin to an electrical return path or a voltage source depends on whether the third-party device is sourcing or sinking the current.
7	Black	IN5	Opto-isolated industrial auxiliary signal 5 (input).
8	Grey	IN6	M_AUX IO6
9	Red	IN4	Opto-isolated industrial auxiliary signal 4 (input).
10	Violet	OUT0	Opto-isolated industrial auxiliary signal 6 (output).
11	Grey/Pink	-VDC	Negative pin of the power provided to your Zebra FS80.
			NOTE: This pin must be connected to the electrical return path.
12	Red/Blue	OUT1	Opto-isolated industrial auxiliary signal 1 (output). Supported function: user bit 1 (output 2 of 3).

Ethernet Connector

The Ethernet connector is an M12 (female) 8-pin X-coded connector that provides TCP/IP communication.
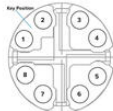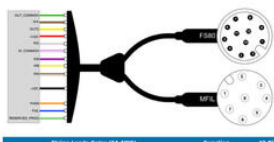

Table: Digital IO and Power Pin-Out Diagram

Pin Number	Signal Name	Description
1	MDI_1+	Bidirectional data A+
2	MDI_1-	Bidirectional data A-
3	MDI_2+	Bidirectional data B+
4	MDI_2-	Bidirectional data B-
5	MDI_4+	Bidirectional data D+
6	MDI_4-	Bidirectional data D-
7	MDI_3-	Bidirectional data C-
8	MDI_3+	Bidirectional data C+

Power and IO Y Cable

The Power and IO Y cable (CBL-PWR00500-M1210) transmits and receives digital IO signals and provides power to the FS80 (M12-A 12-pin Male) and the Multi-Feature Integrated Light (M12-A 8-Pin Female).

Flying Leads Color (24 AWG)	Function	12-Pin A-Coded Male M12 to FS80		8-Pin A-Coded Female M12 to MFIL
Green	OUT_COMMON	1	Green	6	Green
NOTE: Green must be connected to -VDC to operate the Multi-Feature Integrated Light.				
Brown	N/A	2	Brown	-
Yellow	OUT2	3	Yellow	-
Red	+VDC	4	Red	1	Red
Grey	IN3	5	Grey	-
White/Violet	IN_COMMON	6	White/Violet	-
Violet	IN5	7	Violet	-
White/Yellow	IN6	8	White/Yellow	-
White/Brown	IN4	9	White/Brown	-
Black	-VDC	11	Black	8	Black
Orange	PASS	-	-	7	White/Orange
Blue	FAIL	-	-	2	White/Blue
White/Green	RESERVED_PROG	-		3	White/Green