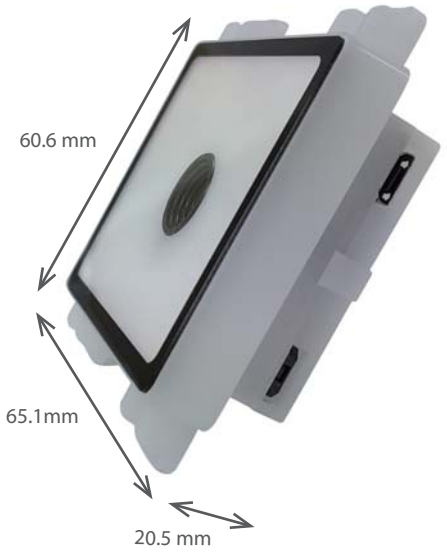
MT685 2D Barcode Scan Engine

MT685 is a 2D OEM Barcode Scan Engine optimized for effortless mobile barcode scanning. Designed with a low-profile form factor, it fits seamlessly in to space-constrained applications. Its extra-wide-angle optics enables contact scanning of all major 1D and 2D barcodes on mobile displays. The ready-to-use protective window simplifies integration, accelerating the development of mobile barcode scanning platforms. Ideal for retail, logistics, access control and public transport, MT685 delivers reliable performance in diverse environments.



- Wide Field of View (70° x 55°)
- Slim Design with Protective Window
- Versatile Interfaces Options
- Real-time Dynamic Configurations

Effortless Integration, Faster Development

The low-profile design of MT685 allows seamless integration into space-constrained devices, while the built-in protective window eliminates the need for additional shielding. This streamlined design reduces development time and simplifies assembly, making it ideal for compact scanning solutions in retail, logistics, and access control applications.

Wide Field of View, Close-Range Scanning

With an ultra-wide 70° horizontal and 55° vertical field of view, MT685 can scan mobile barcodes from near-contact up to 200mm away. Its expansive scan angle makes it ideal for integration into space-constrained devices requiring close-range barcode reading with maximum efficiency.

Easy and Flexible Operations

MT685 embedded scan engine enhances design flexibility by offering various output interfaces with USB HID, USB VCP, and UART, fulfilling diverse industrial needs of communication methods as well as enabling users to easily configure the reading modes and scanner settings according to preference.

Optimized for Mobile Barcodes

With an enhanced optical design and advanced decoding algorithm, MT685 seamlessly scans all 1D and 2D barcodes on paper labels (matte or glossy), mobile screens, and LCD displays. This capability enables businesses to expand into eCoupons, eTickets, digital IDs, and mobile payment applications with ease.

Bi-directional Communication

A set of commands is supported to enable the host device to configure all the functions of MT685 thereby fulfilling dynamic configurations demand. With multiple interfaces (USB HID, USB VCP, UART) available, MT685 fulfills diverse industrial needs of communication methods as well as enabling users to easily configure the reading modes and scanner settings according to preference.

MARSON TECHNOLOGY CO., LTD.
TEL: +886-2-2218-1633
FAX: +886-2-2218-6638
Web: www.marsonscan.com

Specifications

Optical & Performance	Light Source	6500K White LED
	Sensor	640 x 480
	Resolution	5mil / 0.125mm (1D) 9mil / 0.225mm (2D)
	Scan Angle	Horizontal 70°, Vertical 55°
	Pitch Angle	±60°
	Skew Angle	±60°
	Roll Angle	360°
	Print Contrast	25%
	Typical D.O.F* (@ 800 Lux)	13Mil EAN13: 15 ~ 130 mm 15Mil Code128: 15 ~ 210 mm 15Mil QR Code: 5 ~ 200 mm
Physical Characteristics	Dimension	W60.6 x L65.1 x H20.5 mm
	Weight	30g
	Color	White
	Material	ABS
	Connector	Micro USB Port 12 pin ZIF (pitch=0.5mm) 4pin SH-2.0mm Connector x 2
	Indicator	LED, Buzzer
Power	Operation Voltage	3.3 ~ 5VDC ± 5% (5 ~ 30VDC ± 5% customizable)
	Working Current	Typ. 160mA
Connectivity	Interface/Profile	UART TTL, USB HID, USB VCP
User Environment	Operating Temperature	-20 ~ 60˚C
	Storage Temperature	-40 ~ 70˚C
	Humidity	5% ~ 95%RH (Non-condensing)
	Ambient Light	15,000 Lux (Fluorescent Light)
Decode Capability	1D Symbologies	EAN-13, EAN-8, UPC-A, UPC-E, Code 39,Code 128, Code 93, Codabar, Interleaved 2 of 5, Industrial 2 of 5, Matrix 2 of 5, Code 11, MSI-Plessey, Standard 2 of 5, Plessey, ChinaPost, GS1 Databar
	2D Symbologies	QR Code, Micro QR Code, PDF417, MicroPDF417, Aztec, Data Matrix (ECC200), HanXin, MaxiCode, Code16K
Regulatory	ESD	Functional after 4KV contact, 8KV air discharge
	EMC	TBA
	Safety Approval	TBA
	Environmental	WEEE, RoHS 2.0

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