

QUADRUS™ MINI

The Quadrus™ MINI is the world's smallest high resolution imager and the first to offer true autofocus for ultimate flexibility in factory automation and electronics product identification.

It is the ideal imager for automation engineers who need flexibility to read any code, at any distance, at any speed. Quadrus MINI reads both linear bar codes and 2D codes in any orientation, while in motion. EZ button setup, symbol locator, and visible performance indicators provide ease of use while large area reading and small form factor allow for positioning flexibility.

ULTRA-COMPACT, AUTOFOCUS MEGA PIXEL IMAGER

Autofocus

Position your symbol at the center of the field of view and push the EZ button for a true auto focus experience. Quadrus MINI automatically adjusts for distance to focus on the symbol and sets internal parameters to optimize reading of symbol.

Mega Pixel Processing

Mega Pixel processing allows for reading multiple small, high density codes or long 1D codes. Quadrus MINI can read down to 3.3 mil high density codes and can decode up to 100 symbols within the field of view in a single read capture. Three optical versions are available.



Compact Shape and Size

Quadrus Mini is the world's smallest high performance imager, measuring 1" (25.2 mm) height x 1.8" (45.7 mm) width x 2.10" (53.3 mm) length and weighs less than 2 ounces (57 g). The short height is especially useful for fitting in small spaces under conveyors and the light weight for mounting on robotic machinery.

Wide Field of View

High resolution zero-distortion optics, diffractive full field illumination, and a wide scan window allow linear and 2D codes as large as 2" (50.8 mm) square to be read as close as one inch (25.4 mm) with optional right angle mirror.

Dynamic, Omni-Directional Reading

The Quadrus MINI decodes linear bar codes or 2D codes omni-directionally in moving applications at speeds up to 100 feet per minute (0.5 meters/second).

High Data Level Output

2D codes can have a high level of data capacity. Quadrus MINI maintains high decode rates to process and output large amounts of data in milliseconds allowing for quick 'back to back' reading of products.



Push-Button Setup

The EZ button is a powerful setup feature. Three programmable positions can be used to perform tasks including:

- Read Rate
- Autofocus/Calibration
- Save for Power-on
- Load New Master
- Sleep Mode

Visible Performance Indicators

- Symbol Locator
- Good Read Indicator
- Read Performance

Symbologies:

2D Symbologies

- Data Matrix (ECC 0-200)



- QR Code



Stacked Symbology

- PDF417



- RSS (Stacked, Composite)



- Micro PDF



Linear Bar Codes

- Code 39



- Code 128



- Code 93



- I-2 of 5



- UPC/EAN



- Pharmacode



- Codabar



- BC 412



Codes depicted above are for display purposes only. For a sample packet, contact Microscan, info@microscan.com.



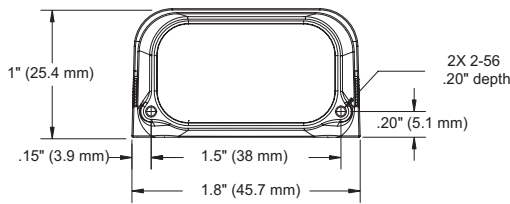
ESP™ Easy Setup Program

ESP™ is Microscan's software to operate Microscan readers. ESP™ is compatible with Windows 98, NT, 2000, and XP.

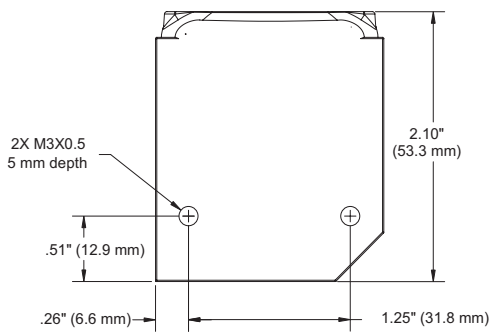
MICROSCAN®

QUADRUS™ MINI SPECIFICATIONS AND OPTIONS

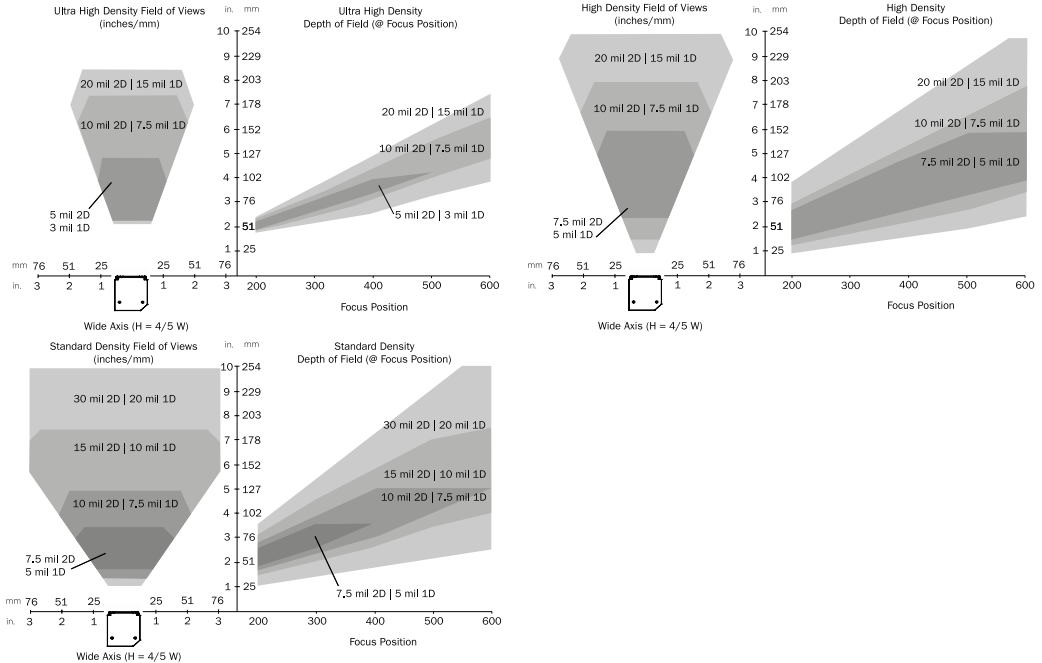
Front



Base



READ RANGES (GRAPHS AND TABLES)



MECHANICAL

Height: 1" (25.4 mm) **Width:** 1.8" (45.7 mm)
Depth: 2.10" (53.3 mm) **Weight:** 2-oz (57 g)

ENVIRONMENTAL

Enclosure: IP54
Operating Temperature: 0° to 40°C (32° to 104°F)
Storage Temperature: -50° to 75° C (-58 to 167°F)
Humidity: up to 90% (non-condensing)

CE MARK

General Immunity for Light Industry:
 EN 55024: 1998 ITE Immunity Standard
Radiated and Conducted Emissions of ITE Equipment: EN 55022:98 ITE Disturbances

LIGHT SOURCE

Type: High output LEDs

LIGHT COLLECTION OPTIONS

Progressive scan, square pixel. Software adjustable shutter speed, electronic shutter
SXGA: 1280 by 1024 pixels

SYMBOLGY TYPES

2D Symbolgies:
 Data Matrix (ECC 0-200), QR Code
Stacked Symbolgies: PDF417, Micro PDF417, RSS (Composite & Stacked)
Linear Bar Codes: Code 39, Code 128, BC 412, I2 of 5, Pharmacode, UPC/EAN, Codabar, Code 93

READ PARAMETERS

Pitch: ±30° **Skew:** ±30° **Tilt:** 360°
Decode Rate: Up to 10 decodes per second
Focal Range: 2 to 6" (50.8 to 152.4 mm) (autofocus)

CONNECTOR

Type: 3 ft. cable terminated with High Density 15-pin D-sub socket connector

INDICATORS

LEDs: Read Performance, Power, Read Status
Green Flash: Good read
Blue V: Symbol locator
Beeper: Good read, match/mismatch, noread, serial command confirmation, on/off

COMMUNICATION PROTOCOLS

Standard Interface: RS-232, RS-422

ELECTRICAL

Power: 5 VDC +/- 5%, 200 mV p-p max. ripple, 440 mA @ 5 VDC (typ.)
Optional Int.: 10-28 V Accy

Narrow-bar-width		Field of View (maximum)	Read Range (using autofocus)
1D	2D		
Ultra High Density			
.0033" (0.08 mm)	.005" (.13 mm)	2.2" (56 mm)	2.0 to 4.4" (51 mm to 112 mm)
.0075" (0.19 mm)	.010" (.25 mm)	3.6" (91 mm)	1.9 to 6.7" (48 mm to 170 mm)
.015" (0.38 mm)	.020" (.51 mm)	4.0" (102 mm)	1.9 to 7.7" (48 mm to 196 mm)
High Density			
.005" (0.13 mm)	.0075" (.19 mm)	3.1" (79 mm)	1.5 to 6.0" (38 mm to 152 mm)
.0075" (0.19 mm)	.010" (.25 mm)	4.2" (107 mm)	1.2 to 8.0" (30 mm to 203 mm)
.015" (0.38 mm)	.020" (.51 mm)	5.6" (142 mm)	0.9 to 10.5" (23 mm to 267 mm)
Standard Density			
.005" (0.13 mm)	.0075" (.19 mm)	3.2" (81 mm)	1.8 to .5" (46 mm to 89 mm)
.0075" (0.19 mm)	.010" (.25 mm)	4.2" (107 mm)	1.6 to 5.0" (41 mm to 127 mm)
.010" (0.25 mm)	.015" (.38 mm)	6.8" (173 mm)	1.4 to 7.5" (36 mm to 191 mm)
.020" (0.51 mm)	.030" (.76 mm)	9.5" (241 mm)	1.0 to 11.0" (25 mm to 279 mm)

Subject to change. Contact Microscan for updated graphs.

HOST CONNECTOR/PIN ASSIGNMENTS

High Density 15 Pin D-sub Socket Connector

Pin No.	Host RS232	Host/Aux RS232	Host RS422/485	In/Out
1	Power +5 VDC			In
2	TxD	TxD	TxD(-)	Out
3	RxD	RxD	RxD(-)	In
4	Power/Signal Ground			
5	NC			
6	RTS	Aux TxD	TxD(+)	Out
7	Output 1 TTL ^a			Out
8	Default configuration ^b			In
9	Trigger			In
10	CTS	Aux RxD	RxD (+)	In
11	Output 3 TTL ^a			Out
12	New Master (NPN)			In
13	Chassis ground ^c			
14	Output 2 TTL ^a			Out
15	NC			

a. Can sink 10 mA and source 10 mA.
 b. The default is activated by connecting pin 8 to ground pin 4.
 c. Chassis ground: Used to connect chassis body to earth ground only. Not to be used as power or signal return.

DISCRETE I/O

Trigger Input: 5 to 29.9V rated (160 mA)
New Master: 5 to 29.9V rated (160 mA)
Outputs (1, 2, 3): 5V TTL compatible, can sink 10 mA and source 10mA
Optional Int.: Optoisolated (with IC-332 accessory) 10-28 V

SAFETY CERTIFICATIONS DESIGNED FOR

FCC, UL/cUL, CE, CB



ISO CERTIFICATION

Issued by RWTÜV, USA Inc.
 ISO 9001:2000 - Cert No. 03-1212

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Product specifications are given for typical performance at 25°C (77°F) using grade A labels. Some performance characteristics may vary at high temperatures or other environmental extremes. Warranty—One year limited warranty on parts and labor. Extended warranty available.

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