

QUADRUS[®] MINI SERIES

Versatile Mini Imagers for Auto ID

The diverse range of Quadrus MINI imagers easily solves a wide variety of track, trace, and control needs across all industries. The autofocus megapixel imagers read all standard barcodes and 2D symbols, plus multiple codes per capture. ESD-safe and high resolution configurations are available to provide maximum application flexibility.

With easy setup and powerful image processing, the Quadrus MINI series is an ideal solution for virtually all barcode applications.



Compact Shape/Size

ACTUAL SIZE SHOWN

Height: 1" (25.4 mm)
Width: 1.80" (45.7 mm)
Length: 2.10" (53.3 mm)

Quadrus MINI Series: At a Glance

- Decodes/second: up to 10 (SXGA)
- Patented Quadrus Technology
- Autofocus
- Available in three versions for flexible implementation



Quadrus MINI: 1.3 megapixel configuration with flexibility to solve many applications



Quadrus MINI 3: High resolution 3 megapixel imaging provides widest field of view and decodes highest density codes



Quadrus MINI ESD Safe: 1.3 megapixel imager is ISO Class 3 and Class M1.5 compliant for use in ESD sensitive applications

For more information on these products, visit www.microscan.com.

Autofocus

For real time dynamic autofocus, position the symbol at the center of the field of view, and push the EZ button. The Quadrus MINI automatically adjusts focal distance and sets internal parameters to optimize the symbol.

Megapixel Processing

Each imager features megapixel processing for reading multiple small, high density codes, long 1D codes, and decoding up to 100 symbols in a single read capture.

Wide Field of View

Read symbols as large as 2" (50.8 mm) square as close as 1" (25.4 mm) with diffractive field illumination and optional right angle mirror.

Ease of Use

The imager series includes such user-friendly features as visible performance indicators, ESP[®] software, and one touch setup and configuration.

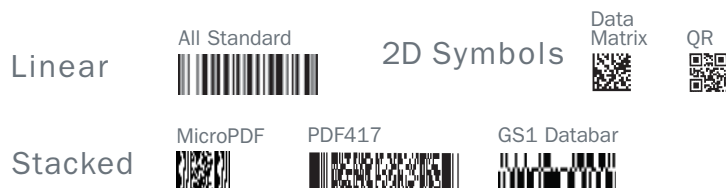
Compact Shape/Size

The Quadrus MINI's small form factor allows for flexible positioning in tight spaces or mounting into robotic applications.

Application Examples

- Printed circuit boards
- Electronics assembly
- Assembly line manufacturing
- Component tracking
- Robotics

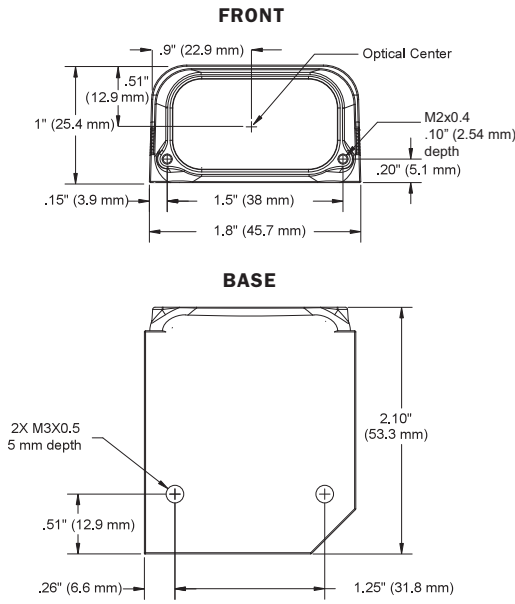
Quadrus MINI Series: Available Codes



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QUADRUS[®] MINI SERIES SPECIFICATIONS AND OPTIONS

READ RANGES (GRAPHS AND TABLES)



MECHANICAL

Height: 1" (25.4 mm) **Width:** 1.80" (45.7 mm)
Depth: 2.10" (53.3 mm) **Weight:** 2 oz. (57 g)

ENVIRONMENTAL

Enclosure: IP54 (category 2)
Humidity: up to 90% (non-condensing)
Operating Temperature: 0° to 40° C (32° to 104° F)
Storage Temperature: -50° to 75° C (-58° to 167° F)

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 MINI: 1280 by 1024 pixels
QXGA MINI: 2048 by 1536 pixels



SYMBOLGY TYPES

2D Symbolgies: Data Matrix (ECC 0-200), QR Code
Stacked Symbolgies: PDF417, Micro PDF417, GS1 Databar (Composite & Stacked)
Linear Bar Codes: Code 39, Code 128, BC 412, I2 of 5, UPC/EAN, Codabar, Code 93

READ PARAMETERS

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

CONNECTOR

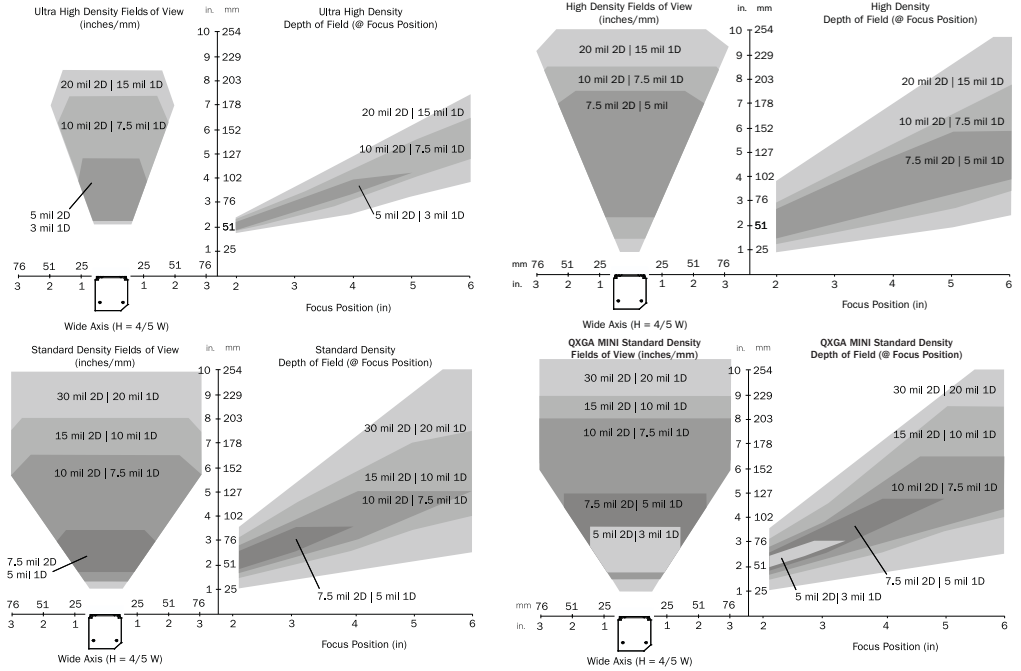
Type: 3 ft. cable terminated with High Density 15-pin D-Sub socket connector or USB Type A connector

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

ELECTRICAL

SXGA MINI Power: 5 VDC +/- 5%, 200 mV p-p max. ripple, 554 mA @ 5 VDC (typ.)
QXGA MINI Power: 5 VDC +/- 5%, 200 mV p-p max. ripple, 494 mA @ 5 VDC (typ.)
Optional Int.: 10-28 V Accy



Narrow-bar-width		Field of View (width)* (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)	1.8 to 6.7" (46 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 7.0" (30 mm to 178 mm)
.015" (0.38 mm)	.020" (.51 mm)	5.6" (142 mm)	0.9 to 9" (23 mm to 229 mm)
Standard Density			
.005" (0.13 mm)	.0075" (.19 mm)	3.2" (81 mm)	1.8 to 3.5" (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 10" (25 mm to 254 mm)

Subject to change. Contact Microscan for updated graphs.

HOST CONNECTOR/PIN ASSIGNMENTS

High Density 15 Pin D-sub Socket Connector

Pin No.	Host RS-232	Host/Aux RS-232	Host RS-422/485	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.

COMMUNICATION PROTOCOLS

Standard Interface: RS-232, RS-422, RS-485, or USB

DISCRETE I/O

Trigger Input: 5 to 28 vdc rated (.16 mA)
New Master: 5 to 28 vdc rated (.16 mA)
Outputs (1, 2, 3): 5V TTL compatible, can sink 10 mA and source 10mA
Optional I/O: Optoisolated (with IC-332 accessory)

SAFETY CERTIFICATIONS DESIGNED FOR

FCC, UL/cUL, CE, CB

ROHS/WEEE COMPLIANT

ISO CERTIFICATION

Issued by TÜV USA Inc, Member of TÜV NORD Group, Cert No. 06-1080

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 Read Range and other performance data is determined using high quality Grade A symbols per ISO/IEC 15415 and ISO/IEC 15416 in a 25° C environment. For application-specific Read Range results, testing should be performed with symbols used in the actual application. Microscan Applications Engineering is available to assist with evaluations. Results may vary depending on symbol quality.
Warranty—One year limited warranty on parts and labor. Extended warranty available.

MICROSCAN[®]

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