Quadrus™ is allowing companies to realize the benefits of using space efficient 2D Data Matrix code by offering a user friendly and cost effective reading solution.

When compared to related technologies, Quadrus™ wins over vision systems by being more cost effective and easier to use. Quadrus also wins over hand-held readers by offering better read quality and the ability to decode moving labels. Plus, since Quadrus is a fixed unit, no operator is required.

Quadrus™ is practically as simple as point-click-and-go, when using the combined features of Auto Calibration, fixed focal point and the Image Processing Database. This can be extremely helpful for those who laser etch codes directly onto parts, which can produce varying contrast levels.

Regardless of your print method, Quadrus™ is the universal reading solution for any application requiring data matrix.

QUADRUS™

2D CODE READER

Auto Calibration: Automates the process of obtaining the nominal illumination settings. If Quadrus™ is unable to read a code, auto calibrate automatically searches through the settings to find the best possible combination for the symbol. No user adjustment is required!

Image Processing Database: This allows the user to pre-set and store up to twenty illumination settings. This feature ensures readability for symbols within various print qualities and contrasts.

Fully-Integrated: Quadrus™ combines the optical components, lighting and decoder within a compact, sealed IP65 rated enclosure.

IP65 Enclosure Rating: Quadrus' internal circuitry and components are protected against harsh industrial environments by a die-cast aluminum housing which is sealed to IP65 standards (industrial rating for dust and moisture protection).

ESP™ Software: A standard feature of the Quadrus™ is Microscan's Easy Setup Program, a user-friendly configuration and installation software. The Windows-based ESP™ software provides simple setup control commands for configuring parameters such as match code routines, triggering, real-time input/output controls, and image evaluation tools.

Dynamic Reading: Quadrus™ decodes moving Data Matrix codes, regardless of orientation, at speeds in excess of 20" per second. Quadrus™ has built-in hardware trigger timing capabilities, and operates with both photo sensor and optical encoder external triggering devices.

Real Time Control Features: Quadrus™ has three programmable outputs and can accept two programmable inputs, offering the utmost in I/O versatility.

Calibrated Focal Points: Quadrus eliminates focusing by having pre-calibrated focal points. Technical operators will not need to reconfigure the unit if it is disturbed. This feature reduces the rate of failure associated with other technologies requiring specific micro-adjustments.

Downloadable Software: Quadrus uses flash memory that allows firmware updates to occur onsite.

Symbologies: The Quadrus™ reads Data Matrix ECC 0-200 symbology. This symbology is highly secure and readable even when codes are torn, damaged, or in poor condition.

Call Microscan for details about other symbologies.

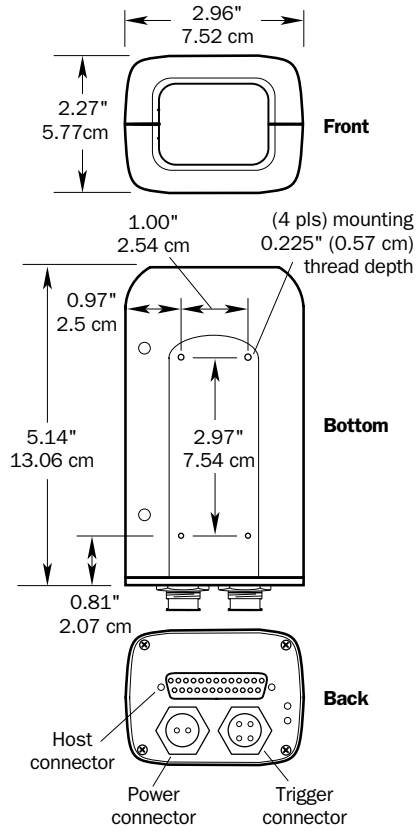
Service Options:
- Installation assistance program
- Training
- On-site service
- 24-hour exchange program

MICROSCAN®

QUADRUS™ DATA MATRIX CODE READER

Specifications and Options

MECHANICAL



ENVIRONMENTAL

Weight: 17.6 oz. (498 g)
Housing: IP65
Operating temperature: 32° to 104°F (0° to 40°C)
Humidity: 5% to 90% (non-condensing)

LIGHT SOURCE

Type: High output LEDs
Software-adjustable strobe time

LIGHT COLLECTION

Type: CCD array, 659 x 494 pixels
progressive scan, square pixel

COMMUNICATION PROTOCOLS

RS-232, RS-422, RS-485
Point-to-point, Point-to-point w/RTS/CTS, Point-to-point w/XON/XOFF, Point-to-point w/RTS/CTS & XON/XOFF, Polling Mode D, Multidrop, User Defined, User Defined Multidrop, RS-232 Daisy Chain

SYMBOLOGIES READ

Data Matrix ECC 0–200
Contact Microscan for details about other symbologies.

READ PARAMETERS

Pitch: ±30°
Skew: ±30°
Tilt: 360°
Read Rate: 300 reads per minute

ELECTRICAL

Power requirement: 10 to 28 VDC

QUADRUS™ READER CHART

Data Matrix symbol sizes range from 10 x 10 to 144 x 144 (rows x columns) for square symbols and from 8 x 18 to 16 x 48 for rectangular symbols. Contact Microscan for full read specifications.

Reader Options

Millimeter size denotes the minimum size the unit can read.

FIS-6500-0001: The 20 Mil Reader (minimum element size)
1.67" x 1.25" at 4"
(42.4 mm x 31.7 mm at 101 mm)

FIS-6500-0004: The 5 Mil Reader (minimum element size)
0.4" x .3" at 3.0"
(10.1 mm x 7.6 mm at 76.2 mm)

FIS-6500-0005: The 7.5 Mil Reader (minimum element size)
.55" x .4" at 4"
(13 mm x 10.1 mm at 101 mm)

FIS-6500-0006: The 10 Mil Reader (minimum element size)
.7" x .53" at 4"
(17.7 mm x 13.4mm at 101 mm)

FIS-6500-0007: The 15 Mil Reader (minimum element size)
.975" x .75" at 4"
(24.7 mm x 19.0 mm at 101 mm)

Data Matrix Codes*

N = num, A = alpha

10 x 10, 5 mil
Capacity: N:6, A:3


16 x 16, 7.5 mil
Capacity: N:24, A:16


24 x 24, 10 mil
Capacity: N:72, A:52


36 x 36, 15 mil
Capacity: N:172, A:127

** Scale is 1:1. Codes are for illustrative purposes only.*

PIN ASSIGNMENTS

	Host Connector 25-pin D-Subminiature	Trigger Connector Switchcraft EN3	Power Connector Switchcraft EN3
Pin No.	Function	Function	Function
1	Signal ground	Trigger (in)	Power 10 to 28 VDC (in)
2	Transmit data RS-232 (out)	+12 VDC (out)	Power ground
3	Receive data RS-232 (in)	Ground	
4	Request-to-send (out)	Strobe (out)	
5	Clear-to-send (in)		
6	Out-1 (out)		
7	Signal ground		
8	Out-2 (out)		
9	Strobe (out)		
10	Trigger (in)		
11	Default (in)		
12	In-1 (in)		
13	RXD 485 + (in)		
14	TXD 485 – (out)		
15	Noread/Out-3 (out)		
16	RXD 485 – (in)		
17	Power ground		
18	Power 10 to 28 VDC (in)		
19	TXD 485 + (out)		
20	Aux transmit data RS-232 (out)		
21	In-2 (in)		
22	Ground		
23	Aux receive data RS-232 (in)		
24	+12 VDC (out)		
25	New master (in)		

STATUS LIGHTS

Yellow Power LED: On power-on
Green Status LED: Normal operations: illuminates whenever a bar code label is decoded and remains on until a new trigger occurs. Continuous Read or Continuous Read 1 Output: flashes for each good read

SAFETY CERTIFICATIONS

Designed for: FCC, TüV, CE, cUL, UL

ISO 9001/Cert. No. US96/0465

Product specifications are given for typical performance at 25° Celsius (77° Fahrenheit) 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.

MICROSCAN®

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