

# QUADRUS<sup>®</sup> VERIFIER



ISO/IEC 15426-2  
CERTIFIED

## Factory Floor Ready Data Matrix Verifier

The Quadrus Verifier is a fully integrated Data Matrix Verifier ready for factory floor use. Using quality criteria in established standards, the Quadrus Verifier provides precise analysis, measurement and reports of symbol quality.

The compact, lightweight Quadrus Verifier is designed specifically for use in a factory environment, and provides easy integration into manufacturing processes. The self-contained, factory-calibrated system offers flexible mounting and allows the Quadrus Verifier to be adapted to any application quickly and easily.

### Quadrus Verifier: At a Glance

- Standards: ISO/IEC 15415, AS9132, AIM DPM
- Patented Quadrus Technology
- Optional Ethernet Connectivity



ESP<sup>®</sup> : Easy Setup Program software provides a single verification screen for all Quadrus Verifier features.



EZ Trax<sup>™</sup>: Image capture and storage software provides tracking of symbol images.



EZ Button: This performs reader setup and configuration with no computer required.

For more information on this product, visit [www.quadrus-ez.com](http://www.quadrus-ez.com).

#### Fully Calibrated System

The Quadrus Verifier provides a ready-to-use system. Simply center a symbol in the field of view, trigger, and receive a symbol verification report. There is no need to focus the optics or set the light angles, which are calibrated and set at the factory.

#### Verification Test Parameters

Symbol quality verification test parameters have been established by organizations and industries to ensure reliability and consistency of symbols. These parameters specify uniform quality and technical requirements, as well as methods for measuring and grading symbol characteristics.

#### Illumination Chamber

The fully enclosed illumination chamber is specifically engineered to block out ambient light and provide the controlled environment required for accurate, repeatable verification.

#### Verification Reports

ESP software generates comprehensive symbol verification reports. The report shows the graded results for all individual parameters, as well as the image, decoded data, and time stamp. Reports can be saved in these digital formats: .pdf, .html, .cvs, and .rtf.

#### Application Examples

- Automotive
- Aerospace
- Other direct part mark applications

ISO/IEC 15415 Verification Test Parameters	Poor Quality	Poor Quality
Contrast		Modulation
High Quality Symbol	Axial Non-uniformity	Grid Non-uniformity
Unused Error Correction		Print Growth Underprint
Fixed Pattern Damage		Overprint

# QUADRUS<sup>®</sup> VERIFIER

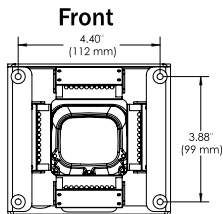
## SPECIFICATIONS AND OPTIONS

### MECHANICAL

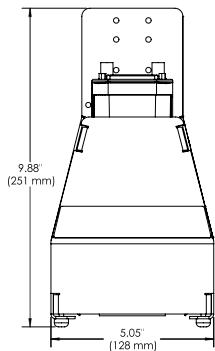
**Height:** 9.88" (251 mm)

**Width:** 5.05" (128 mm)

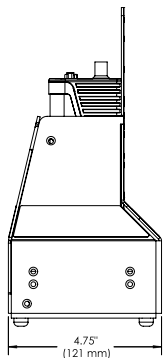
**Depth:** 4.74" (120 mm)



### Top



### Side



### ENVIRONMENTAL

**Operating Temperature:** 0° to 43°C (32° to 109°F). If mounted on nonmetal surface, maximum operating temperature is 40°C (104°F).

**Storage Temperature:** -50° to 75° C (-58 to 167°F)

**Humidity:** up to 90% (non-condensing)

### EMISSIONS/IMMUNITY

**ITE Disturbances:** EN55022: 1998 (radiated and conducted). Class A

**General Immunity:** EN55024:1998 (residential)

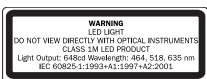
**Heavy Industrial Immunity:** EN61000-6-2:1999

**Lead Radiation CCS:** EN60825-1

### LIGHT SOURCE

**Type:** High output LEDs

**External (45°, 30°):** 660 nM



### LIGHT COLLECTION

**CCD Array:** 656 x 496 pixels

### FOV/ELEMENT SIZE CHART

Symbol*	Min. Element Size	FOV
	≥.0075 (0.19 mm)	.49 X .37" (12.5 X 9.4 mm)
	≥.010 (0.25 mm)	.66 X .5" (16.8 X 12.7 mm)
	≥.0125 (0.32 mm)	.82 X .62" (20.8 X 15.7 mm)
	≥.015 (0.38 mm)	.98 X .72" (24.9 X 18.8 mm)
	≥.020 (0.30 mm)	1.31 X .99" (33.3 X 25.2 mm)

\*Symbol samples are 26 X 26 size at element size, 88 numeric/64 alphanumeric characters



### CONNECTORS/PIN ASSIGNMENTS

**Host Connector:** 25-pin D-subminiature plug

Pin No.	Host RS232	Host & Aux RS232	Ethernet	In/Out
1	Chassis ground <sup>a</sup>			
2		TxD		Out
3		RxD		In
4	RTS		TxD	Out
5	CTS		RxD	In
6	Output 1 (+)			Out
7	Signal Ground <sup>b</sup>			
8	Output 2 (+)			Out
9	Trigger (-)			In
10	Trigger (+)			In
11	Default configuration <sup>c</sup>			In
12	Input 1 (+)			In
13			RxD (+)	In
14			RxD (-)	In
15	Light Control (+)			Out
16			TxD (-)	Out
17	Power Ground <sup>d</sup>			
18	Power +10 to 28 VDC			In
19			TXD +	Out
20	Output 1 (-)			Out
21	Output 2 (-)			Out
22	Light Control (-)			Out
23	Input 1 (-)			In
24	New master (-)			In
25	New master (+)			In

<sup>a</sup>Chassis ground: Used to connect chassis body to earth ground only. Not to be used as power or signal return.

<sup>b</sup>Signal ground: Used for communication and signal line grounds only. Not to be used as power or chassis return.

<sup>c</sup>The default is activated by connecting pin 11 to ground pin 7.

<sup>d</sup>Power ground: Used for power return only.

Caution: If using your own power supply, verify correct connection of power and ground lines. Incorrect connections or use of "Chassis ground," "Power ground," and "Signal ground" lines could cause equipment or software failure.

### SYMBOLS VERIFIED

Data Matrix (ECC 0-200)

### STANDARDS:

**Data Matrix Verification:**

AIM DPM, AS9132, ISO/IEC 15415 (2D)

**Verifier Conformance:** ISO/IEC 15426-2

### VIDEO OUTPUT

**Signal System:** EIA

**Number of Scanning Lines:** 525 lines/ 2:1 interlaced

**Output:** Analog 1 Vp-p/75 ohm

### INDICATORS

**LEDs:** Read Performance, Power, Read Status, and Network Status Beeper

### COMMUNICATION PROTOCOLS

**Interface:** RS-232, Ethernet

### ELECTRICAL

**Power Requirements:** Input, 10 to 28 VDC, 200 mV p-p max ripple, 333 mA at 24 VDC

**Trigger, New Master, Input 1:** (Optoisolated) 5 to 28 VDC rated, (12mA at 24 VDC).

**Outputs 1/2:** (Optoisolated) 1 to 28 VDC rated, (I<sub>CE</sub> < 100mA at 24 VDC, current limited by user).

**Output 3:** Light control, (Optoisolated) 1 to 28 VDC rated, (I<sub>CE</sub> < 100mA at 24 VDC, current limited by user).

### SAFETY CERTIFICATIONS

Designed for: FCC, CE

### ISO CERTIFICATION

Issued by RWTÜV, USA Inc.

Cert. No. 03-1212



ISO 9001:2000  
Certified QMS

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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.

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