

Quadrus® Verifier is a fully integrated Data Matrix verifier ready for factory floor use. The Quadrus Verifier is a precision instrument that analyzes, measures and reports the quality of a symbol against the quality criteria in established standards.

Implementing a verification procedure into the production process is critical for real-time results of symbol marking. A faulty marking system will be detected early and reduce the number of rejected parts. In addition, by eliminating inferior Data Matrix symbols and ensuring consistent readability, manufacturers will increase productivity, improve operator satisfaction, and avoid unnecessary costs due to returned products and remarking.

QUADRUS® VERIFIER

FACTORY FLOOR READY DATA MATRIX VERIFIER

Factory Floor Ready

Quadrus Verifier is the first Data Matrix verifier designed specifically for use in a factory environment. Unlike most verifiers that are mounted on stands designed for the lab, the compact, lightweight design of the Quadrus Verifier 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.

ESP® Easy Setup Program

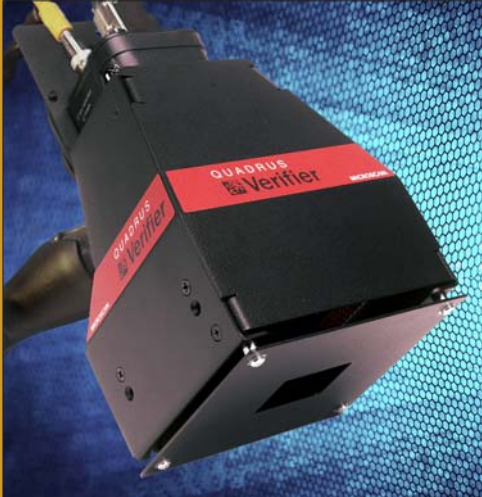
ESP offers complete symbol verification reports. The report shows the graded results for all individual parameters, as well as the image, decoded data, and time stamp. ESP also allows the user to input operator name and company name. Reports can be saved in these digital formats: .pdf, .html, .cvs, and .rtf.

Verification Test Parameters

Quadrus Verifier is designed to evaluate and measure the quality of symbols based several individual test parameters. The test parameters have been established by organizations and industries to ensure reliability and consistency of symbols. Standards, such as ISO/IEC 15415, AS9132, and AIM DPM specify uniform symbol quality and technical requirements, as well as methods for measuring and grading symbol characteristics in order to indicate the overall quality.

ISO/IEC 15426-2 Certified

ISO/IEC 15426-2 is a standard that certifies verification products to ensure results are consistent and repeatable from verifier to verifier. With the achievement of this conformance certification, Quadrus Verifier can be relied upon to provide accurate measurements and grades.






Fully Calibrated System

Quadrus Verifier provides the user with 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, as these are calibrated and set at the factory. The fixed optics and pre-set illumination angles ensure the Quadrus Verifier provides consistent, reliable, and accurate results every time.

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.



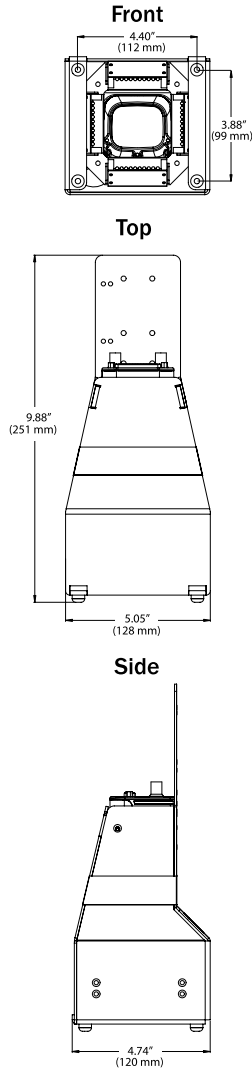
ISO/IEC 15415 Verification Test Parameters		Poor Quality	Poor Quality
High Quality Symbol 	Contrast		Modulation 
	Axial Non-uniformity		Grid Non-uniformity 
	Unused Error Correction		Print Growth 
	Fixed Pattern Damage		Underprint 
			Overprint 

QUADRUS[®] VERIFIER

SPECIFICATIONS AND OPTIONS

MECHANICAL

Height: 9.88" (251 mm)
Width: 5.05" (128 mm)
Depth: 4.74" (120 mm)



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 (0.50 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 ^a			
2		TxD		Out
3		RxD		In
4	RTS	TxD		Out
5	CTS	RxD		In
6	Output 1 (+)			Out
7	Signal Ground ^b			
8	Output 2 (+)			Out
9	Trigger (-)			In
10	Trigger (+)			In
11	Default configuration ^c			In
12	Input 1 (+)			In
13		RxD (+)		In
14		RxD (-)		In
15	Light Control (+)			Out
16	TxD (-)			Out
17	Power Ground ^d			
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

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_{CE} < 100mA at 24 VDC, current limited by user).
Output 3: Light control, (Optoisolated) 1 to 28 VDC rated, (I_{CE} < 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

©2006 Microscan Systems, Inc.
 Specification, General - Rev - A
 Specifications subject to change.

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

^aChassis ground: Used to connect chassis body to earth ground only. Not to be used as power or signal return.

^bSignal ground: Used for communication and signal line grounds only. Not to be used as power or chassis return.

^cThe default is activated by connecting pin 11 to ground pin 7.

^dPower 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:
 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

MICROSCAN[®]

Microscan Systems, Inc.

Tel 425 226 5700/ 800 251 7711
 Fax 425 226 8250

Microscan Europe

Tel 31 172 423360/ Fax 31 172 423366

Microscan Asia Pacific R.O.

Tel 65 6846 1214 / Fax 65 6846 4641

www.microscan.com

Tech Support: helpdesk@microscan.com

Product Information: info@microscan.com