Microscan's Quadrus® Verifier is an ISO/IEC 15415 and AS9132-compliant Data Matrix verifier ready for factory floor use. The Quadrus Verifier is a precision instrument certified to ISO/IEC 15426-2 Data Matrix conformance standards ensuring that your marks will be verified accurately every time.

Unlike most verifiers that are mounted on scientific stands designed for the lab, the Quadrus Verifier is a fully-contained, compact device that is easy to integrate into a factory setting. Quadrus Verifier's fully enclosed illumination chamber provides the controlled lighting environment required for accurate, repeatable verification. No on-site calibration of optics or lighting is needed to verify marks with Quadrus Verifier. Simply present the part to the Verifier, trigger, and receive a symbol verification report.

QUADRUS®
VERIFIER

FACTORY FLOOR READY DATA MATRIX VERIFIER

Factory Floor Ready
Quadrus Verifier is the first 2D verifier designed specifically for use in a factory environment. Its compact, lightweight design makes the Quadrus Verifier easy to integrate into manufacturing processes. This self-contained, factory-calibrated system offers flexible mounting allowing the Quadrus Verifier to be adapted to any application quickly and easily.

ISO/IEC 15426-2
CERTIFIED

Fully Calibrated System
Quadrus Verifier provides the user with a ready-to-use, ISO/IEC 15426-2 certified system. To use, simply center a symbol in the field of view and trigger the Quadrus Verifier. There is no need to focus the optics or set the light angles, as these are calibrated and set at the factory. These fixed optics and pre-set illumination angles ensure the Quadrus Verifier provides consistent, reliable, and accurate results every time.

Illumination Chamber
The illumination chamber is specifically engineered to block out ambient light to provide a controlled environment needed for consistent and repeatable results.
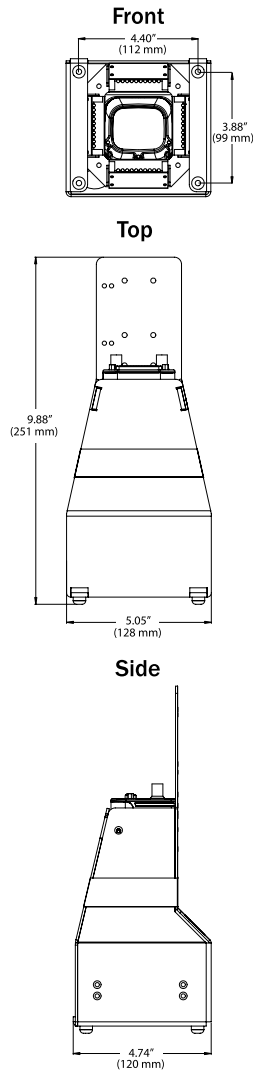
ESP® Easy Setup Program
Offers complete symbol verification reports. The report shows the image, decoded data, time stamp and allows the user to input operator name and company name. Formats include .pdf, .html, .cvs, and .rtf.

ISO/IEC 15426-2 Certified
ISO/IEC 15426-2 is a standard that certifies verification hardware to ensure results are consistent and repeatable. Quadrus Verifier is a precision verifier that conforms to ISO/IEC 15426-2, which is required to perform ISO/IEC 15415 verification.

ISO/IEC 15415 Compliant
Quadrus Verifier provides verification of 2D symbols for ISO/IEC 15415 parameters:
- Fixed Pattern damage
- Symbol Contrast
- Unused Error Correction
- Grid non-uniformity
- Reference decode algorithms
- Modulation
- Axial non-uniformity
- Print growth (ungraded)

AS9132
Verifies directly-marked Data Matrix symbols in accordance with the parameters called out in the AS9132 standard:
- Quiet Zone
- Cell fill
- Dot center offset
- Symbol type
- Dot ovality
- Contrast
- Angle of distortion

MIL-STD-130 - UID Ready
Requires verification of Data Matrix symbols to both ISO/IEC 15415 and AS9132 standards as required by the MIL-STD-130 specification.

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	

MICROSCAN®

QUADRUS® VERIFIER
SPECIFICATIONS AND OPTIONS

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

Front
4.40″ (112 mm)
3.88″ (99 mm)

Top
9.88″ (251 mm)
5.05″ (128 mm)

Side
4.74″ (120 mm)

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

WARNING
LED LIGHT
DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS
CLASS 1M LED PRODUCT
Light Output: 648cd Wavelength: 464, 518, 635 nm
IEC 60825-1:1993+A1:1997+A2:2001

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[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

[a]Chassis ground: Used to connect chassis body to earth ground only. Not to be used as power or signal return.
[b]Signal ground: Used for communication and signal line grounds only. Not to be used as power or chassis return.
[c] The default is activated by connecting pin 11 to ground pin 7.
[d] 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.

SYMBOLOGY
Data Matrix (ECC 0-200)

SYMBOL VERIFICATION PARAMETERS
Max Characters: 78 Characters plus overhead characters at a 45° angle.

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

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

SAFETY CERTIFICATIONS
Designed for: FCC, CE
ISO CERTIFICATION
Issued by RWTüV, USA Inc.
Cert. No. 03–1212

ANSI•RAB QMS ACCREDITED
ISO 9001:2000
Certified QMS

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