

Quadrus Verifier™ is an ISO/IEC 15415 and AS9132A-compliant Data Matrix verifier for use in production environments. It is an ISO/IEC 15426-2 certified Data Matrix verifier, 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 production setting. Quadrus Verifier's fully-enclosed illumination chamber provides the controlled lighting environment necessary 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 Quadrus Verifier, trigger, and receive the symbol verification report.

QUADRUS™ VERIFIER

PRODUCTION-READY DATA MATRIX VERIFIER

Production-Ready

Quadrus Verifier is the first 2D verifier designed specifically for use in a production environment. Its compact, lightweight design makes the Quadrus Verifier easy to integrate into production processes. A self-contained, factory-calibrated system with flexible mounting allows the Quadrus Verifier to be adapted to any application quickly and easily.



ESP

Offers complete symbol verification reports.

ISO/IEC 15426-2 Certified

Quadrus Verifier is ISO/IEC 15426-2-certified. It is precisely engineered to meet rigorous verification standards, ensuring accurate and consistent verification.

ISO/IEC 15415 Compliant

Quadrus Verifier provides verification of 2D symbols for all parameters:

- Symbol contrast
- Modulation
- Print growth (ungraded)
- Axial non-uniformity
- Grid non-uniformity
- Fixed pattern damage
- Unused error correction
- Reference decode algorithms

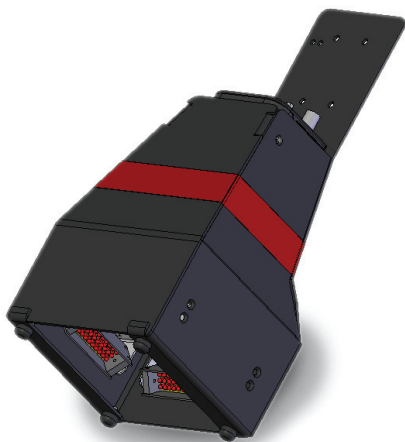
AS9132A

Verifies directly-marked Data Matrix symbols in accordance with the parameters called out in the AS9132A standard:

- Quiet Zone
- Cell fill
- Dot center offset
- Symbol type
- Dot ovality
- Contrast
- Angle of distortion

MIL-STD-130L

Requires verification of Data Matrix symbols to both ISO/IEC 15415 and AS9132A standards as required by the MIL-STD-130L specification.













Calibrated System

Quadrus Verifier provides the user with a ready-to-use, ISO/IEC 15426-2 compliant, calibrated system. Simply center a symbol in the field of view and trigger a read cycle, and Quadrus Verifier will output the results. The user is not required to focus the optics or set the light angles. Fixed optics and pre-set illumination angles make Quadrus Verifier consistent, reliable, and accurate.

Illumination Chamber

The chamber is specifically engineered to produce the illumination angles required by the ISO/IEC 15415 standard.

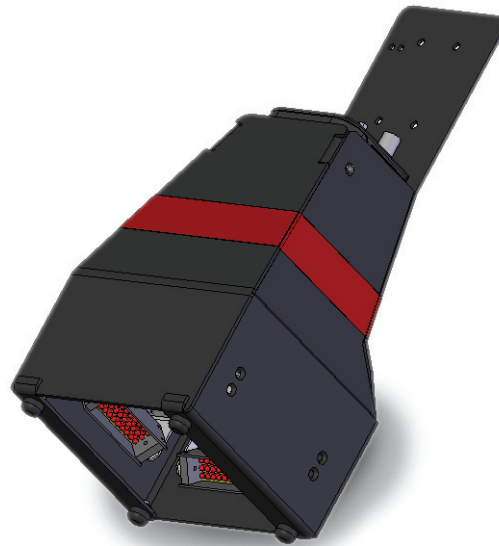
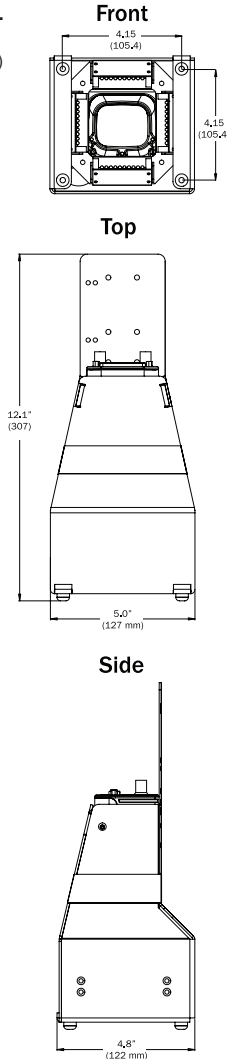
ISO/IEC 15415 Verification Test Parameters		Poor Quality		Poor Quality
Contrast			Modulation	
Axial Non-uniformity			Grid Non-uniformity	
Unused Error Correction			Print Growth	
Fixed Pattern Damage			Underprint	
			Overprint	

QUADRUS™ VERIFIER

SPECIFICATIONS AND OPTIONS

MECHANICAL

Height:
12.1" (307 mm)
Width:
5.0" (127 mm)
Depth:
4.8" (122 mm)



Dimensions subject to change

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

^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.

VIDEO INPUT (Option)

Signal System: Progressive scan

Number of Scanning Lines: 525 lines/non-interlaced

Input: Analog 1 Vp-p

VIDEO OUTPUT (Option)

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, 270 mA at 24 VDC (typ.- CMOS), 333 mA at 24 VDC (typ.-CCD).

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

Outputs 1/2: (Optoisolated) 1 to 28 VDC rated, ($I_{CC} < 100mA$ at 24 VDC, current limited by user).

Output 3: Light control

SAFETY CERTIFICATIONS

Designed for: FCC, CE, eUL

ISO CERTIFICATION

Issued by RWTÜV, USA Inc.

ISO 9001:2000 – Cert No. 03-1212

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Specification, Rev A
Specifications subject to change.

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.

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

SYMBOLGY

Data Matrix (ECC 0-200)

SYMBOL VERIFICATION PARAMETERS

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

VERIFICATION STANDARDS:

ISO/IEC 15415 (2D), ISO/IEC 15426-2, AS9132A

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