JS-25 MX Scan Head

JoeScan

3-D Vision Profiling

3-D LASER SCANNING MADE FOR SAWMILLS

Product Overview

The JS-25 MX is JoeScan's medium-range scanner, ideally suited for a broad range of applications. This single-laser scanner can deliver fast and accurate measurements at an operating distance up to 7' (2,1m), with a field of view up to 41" (1041mm) wide. It provides a winning combination of reliability, performance and ease of use.

Easy to Use: The JS-25 MX is part of JoeScan's proven and reliable JS-25 scanner platform, developed to make scanning systems easier to install and maintain. It requires only 24VDC and an Ethernet connection for operation, and it can be installed in any orientation in minutes using the optional Mount Kit.

The scanner uses an Ethernet interface, allowing the optimizer to communicate directly with the scanner without special hardware. The interface enables users to configure and calibrate the scanner on their PCs and to view real-time profile data and camera images.

Power input to the scanner is via the iCONN Systems waterproof (8-pin) connector. This connector can also be used to connect and synchronize the scan head with other production-line components and optimizer programs. All scanners use JoeScan's reliable QuickPulse laser technology, which helps maximize the laser life.

The JS-25 MX is fully backward compatible with scanners in the JS-20 product family. It can serve as a drop-in replacement in systems that use JS-20 scan heads.

Fast and Accurate: The MX is one of the fastest and most accurate scanners on the market today. It can make up to 650 profile measurements per second, with each profile containing up to 242 data points. Measurement accuracy ranges from +/- 0.025" at 20" standoff (+/- 0,6mm @ 508mm) to +/- 0.100" at 84" standoff (+/- 2,54mm @ 2,1m).

Rugged and Reliable: Like all JoeScan products, the JS-25 MX is designed for the most challenging environments. It withstands extreme vibration, and the aluminum housing is sealed to keep out dust and moisture.

*The **JS-25 MX** is JoeScan's most versatile, medium-range scanner. It is ideally suited for a broad range of applications that require accurate profile measurements.*

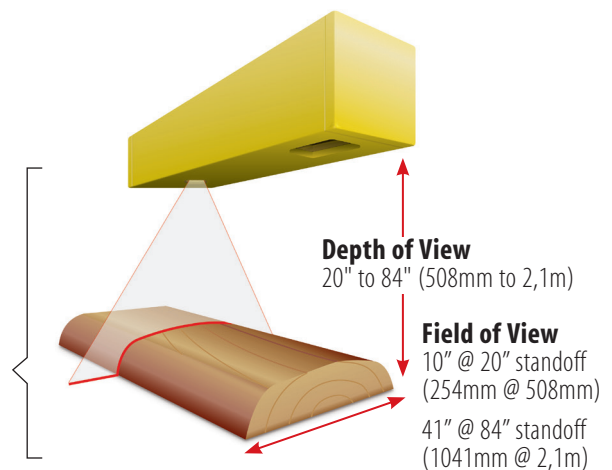Camera · Ethernet · Power/Control · Laser

Key Features

- Single laser with field of view up to 41" (1041mm)
- Scan rate up to 850 profiles per second
- Measurement accuracy up to +/- 0.025" (0,6mm)
- Industry standard Ethernet interface
- Rugged, sealed aluminum housing
- Image View feature for easy troubleshooting
- Backward compatible with JS-20 scan heads
- 5-year defect warranty and 10-year product support policy

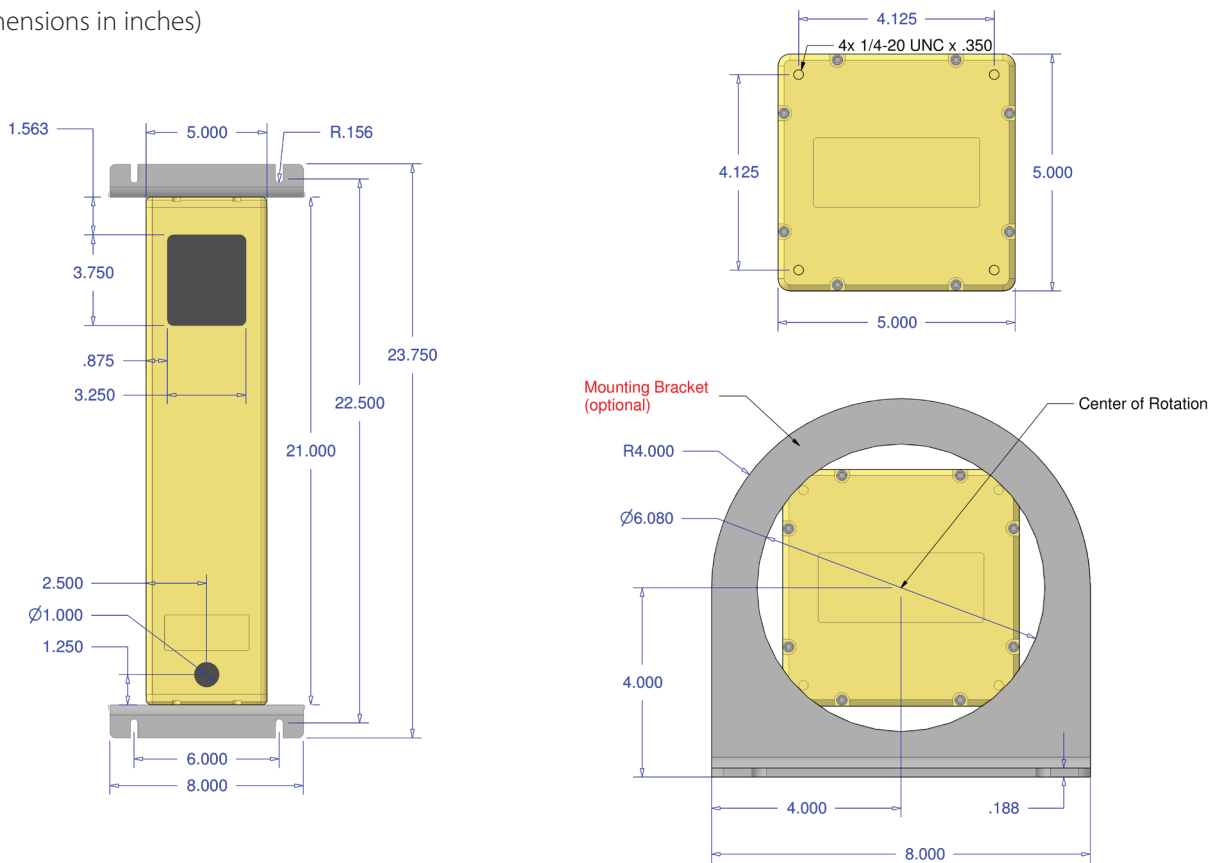### Typical Applications

- Versatile scanning envelope can handle anything from boards to medium-to-large logs

Depth of View
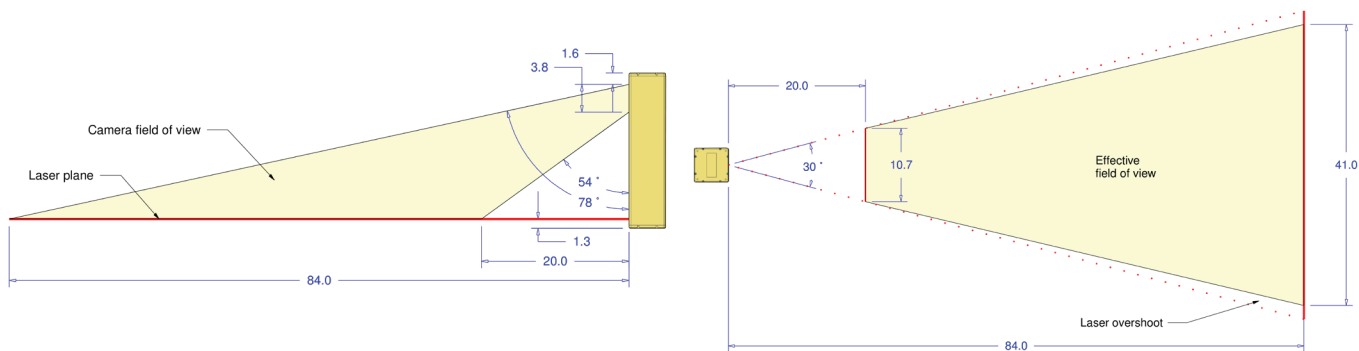20" to 84" (508mm to 2,1m)

Field of View
10" @ 20" standoff (254mm @ 508mm)

41" @ 84" standoff (1041mm @ 2,1m)

Product Dimensions
(All dimensions in inches)

4.125

4x 1/4-20 UNC x .350

4.125

5.000

5.000

1.563
5.000
R.156

3.750

.875

3.250

23.750

22.500

21.000

2.500

Ø1.000

1.250

6.000

8.000

Mounting Bracket (optional)

Center of Rotation

R4.000

Ø6.080

4.000

4.000

.188

8.000

Field-of-View Details
(All dimensions in inches)

1.6

3.8

Camera field of view

Laser plane

54°

78°

1.3

20.0

84.0

20.0

30°

10.7

Effective field of view

41.0

Laser overshoot
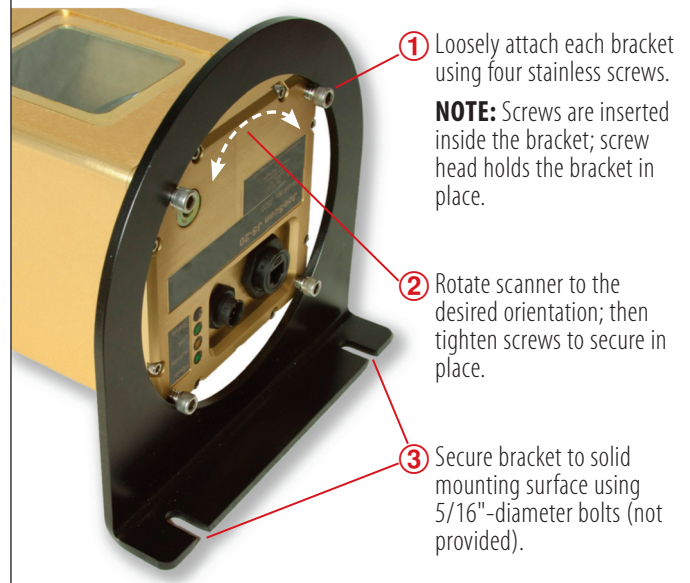
84.0

Mounting Guidelines

- An optional Mount Kit is available for this product.
- Attach brackets by inserting stainless ¼-20 x ½" screws into the four threaded holes on each end of the scanner.
- Maintain minimum clearances from the ends of the scanner (including brackets and screws) as shown below.

Laser End
Minimum clearance = 0.5"

Camera End
Minimum clearance = 1.5"

Using the Optional Mount Kit

KIT CONTENTS
(2) scanner brackets
(8) stainless screws ¼-20 x ½"

① Loosely attach each bracket using four stainless screws.

NOTE: Screws are inserted inside the bracket; screw head holds the bracket in place.

② Rotate scanner to the desired orientation; then tighten screws to secure in place.

③ Secure bracket to solid mounting surface using 5/16"-diameter bolts (not provided).

Product Warranty and Support

JoeScan products are proven to be durable and reliable, which allows it to offer an industry-leading warranty and a long-term product support policy.

All products are covered by a **5-year limited warranty*** that begins when the product ships from JoeScan. If a scan head is found to be faulty, JoeScan will either repair or replace the product at no charge. It's that simple.

What's more, JoeScan offers a **10-year product support policy**. After the warranty period, JoeScan will provide support – including technical assistance and product repair services – at the customer's expense for 10 years after the product's original shipping date. If JoeScan is unable to provide product support, then it will supply a replacement scanner that has equivalent or enhanced capabilities.

Additional details about the warranty and product support policy are available upon request.

* *Warranty is limited to product defects and damage caused by normal wear and tear. It does not cover damage caused by accidents or improper use.*

JoeScan offers an industry-leading warranty and a long-term product support policy. The 5-year warranty helps eliminate unexpected maintenance costs. JoeScan adds to that a 10-year product support policy to protect against obsolescence.

JS-25 MX Scan Head

Product Specifications

General

Dimensions	21" x 5" x 5" (533mm x 127mm x 127mm)
Weight	12 lbs. (5,4 kg)
Laser Type	Pulsed, Class IIIa
Laser Color	Visible red
User Interface	PC
Data Interface	10/100BaseT Ethernet

System Performance

Depth of View	20" to 84"	(508mm to 2,1m)
Field of View	10" @ 20" standoff 41" @ 84" standoff	(254mm @ 508mm) (1041mm @ 2,1m)
Accuracy	+/- 0.025" @ 20" standoff +/- 0.040" @ 54" standoff +/- 0.100" @ 84" standoff	(+/- 0,6mm @ 508mm) (+/- 1mm @ 1,4mm) (+/- 2,54mm @ 2,1m)
Scan Rate	Up to 850 profiles/sec.	
Data Density	20 points/inch at 20" standoff 6 points/inch at 84" standoff	(20pts/25mm @ 508mm) (6pts/25mm @ 2,1m)
Data Points	Up to 242	

Environmental

Operating Temp	-20° to 50°C (0° to 120°F)
Lighting	Fully operational between indoor lighting (no sunlight) and complete darkness

Power Supply

Voltage Range	20 - 28VDC
Max Current	0.35A @ 24VDC
Voltage Ripple	< 5Vpp

Quadrature Encoder/Start Scan Inputs

Primary Signaling Standard	RS-422 differential
Alternate Signaling	Open collector on "+" channel (+ channels have built-in 2k pull-up to 5V)
Input Voltage Range	0 - 5VDC
Max Encoder Rate	100,000 pulses/sec. differential

PC Requirements

The diagnostic and calibration software (JSDiag) will run on any operating system with Java® 1.5 installed, including Microsoft® Windows®, Mac OS® X, Linux®, Oracle® Solaris and others.

Optional Accessories

JS-25 Control Cable (iCONN Systems waterproof 8-pin connector)
LTW Sealed Ethernet Cable
Mount Kit

iCONN Systems Waterproof Connector

Wire Color	Pin	Function
White	1	Encoder B -
Green	2	Encoder B +
White/Black	3	Start Scan -
White/Red	4	Start Scan +
White/Yellow	5	Encoder A -
White/Green	6	Encoder A +
Black	7	Ground
Red	8	+24VDC

Warranty/Support

5-year product warranty (free repair or replacement of defective products)
10-year product support policy

LASER RADIATION
AVOID DIRECT EYE EXPOSURE
CLASS 3R LASER PRODUCT
Maximum Output: 5mW
Emitted Wavelengths: 400-710 nm
IEC-60825.1-2001-08

Illustrations, descriptions and technical specifications are not binding and are subject to change without notice.

DESIGNED & ASSEMBLED IN THE USA

JoeScan