

JS-20 MX100 Scan Head

JoeScan

Technical Specifications Data Sheet

3-D Vision Profiling

Product Overview

The JS-20 MX100 uses JoeScan's optimization scanning technology that allows it to operate accurately in full sunlight. This single-laser scanner delivers fast and accurate measurements operating in light levels at least as strong as 100,000 lux.

Easy to Use: The MX100 is based on JoeScan's proven and reliable JS-20 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.

Because the scanner uses an Ethernet interface, it is easy to communicate with the scanner without special hardware or proprietary software. This interface also allows users to view real-time profile data and camera images, and to configure and calibrate the scanner using a simple Web browser on their PC.

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.

The MX100 is fully compatible with all scanners in the JS-20 family. All scanners use JoeScan's reliable QuickPulse Laser technology, which keeps all scan heads synchronized and helps maximize the laser life.

Fast and Accurate: The MX100 is one of the fastest and most accurate scanners on the market today. It can make up to 250 profile measurements per second, with each profile containing up to 243 data points. Measurement accuracy ranges from +/- 0.025" (at 20" standoff) to +/- 0.040" (at 54" standoff).

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

The JS-20 MX100 is designed to operate in full sunlight. It is ideally suited for use in log yards during sorting and bucking operations.

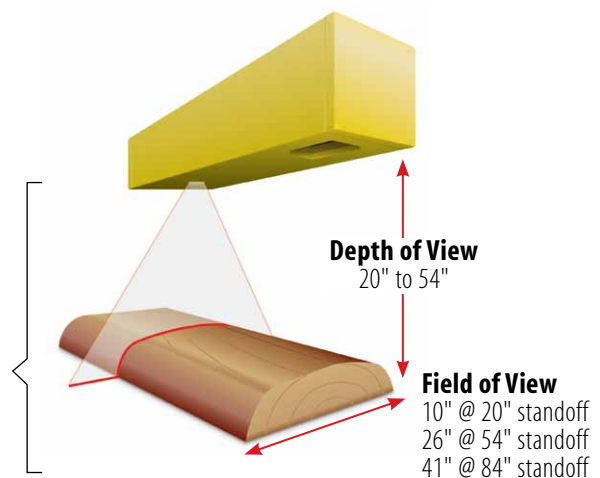


Key Features

- 100mW laser
- Extended depth-of-view range to 84"
- Scan rate up to 250 profiles per second
- Measurement accuracy up to +/- 0.025"
- Easy-to-use Ethernet interface
- One-click, automatic calibration
- Encoder-synchronized scanning
- Rugged, fully sealed aluminum housing
- Image View feature for easy troubleshooting
- 5-year defect warranty and 10-year product support policy

Typical Applications

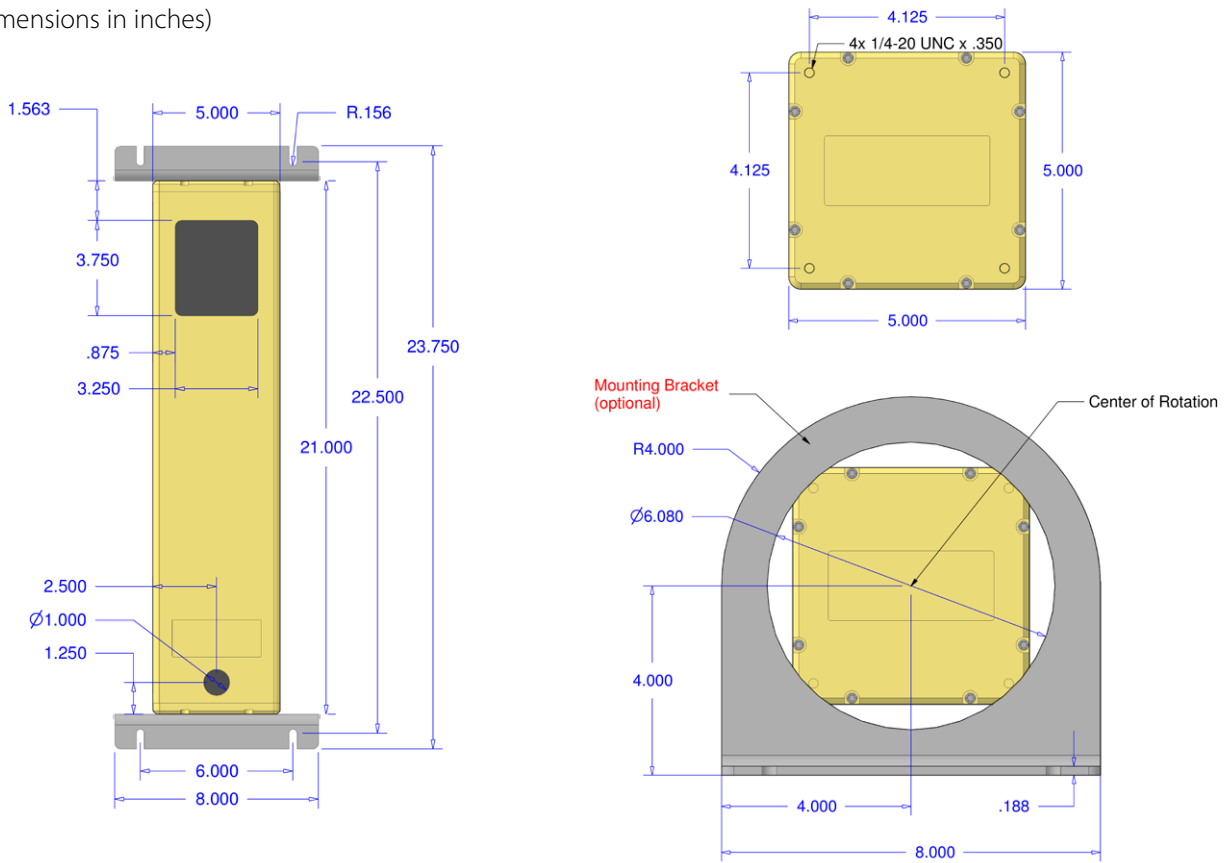
- Outdoor applications using lineally scanned bucking or merchandising optimizers.



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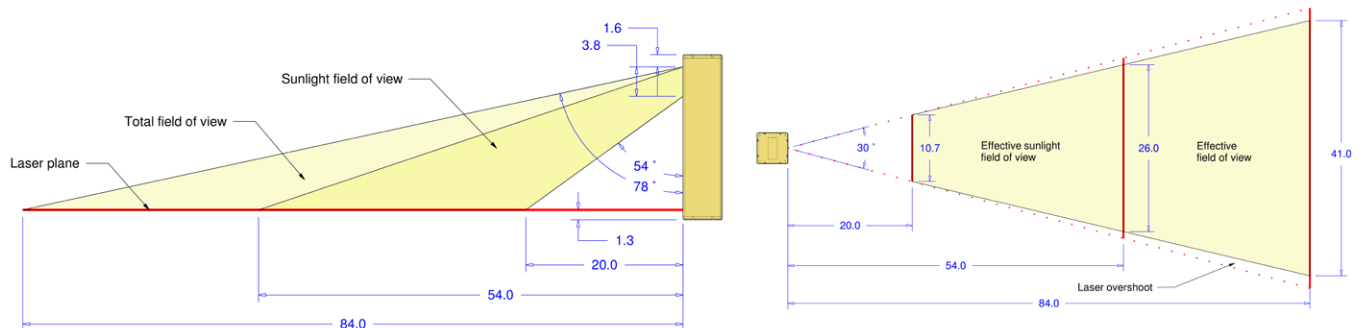
Product Dimensions

(All dimensions in inches)



Field-of-View Details

(All dimensions in inches)



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Mounting Guidelines

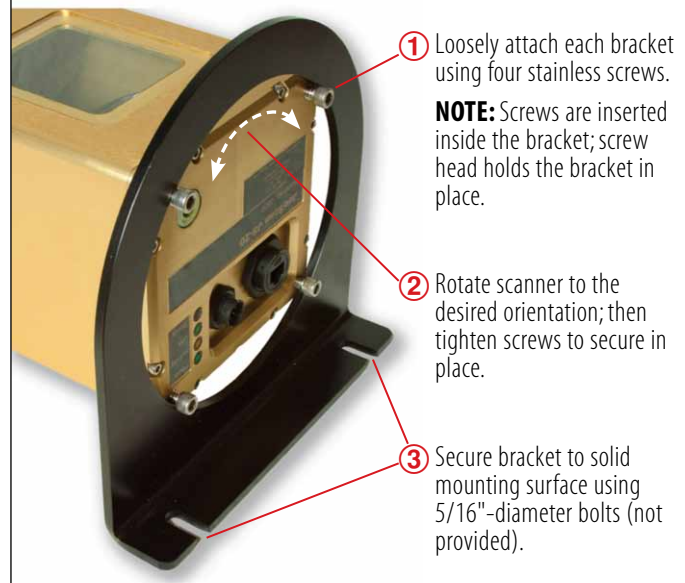
- An optional Mount Kit is available for this product.
- Attach brackets by inserting stainless ¼-20 x ½" screws into the four threaded holes on each end of the scanner.
- Maintain minimum clearances from the ends of the scanner (including brackets and screws) as shown below.



Using the Optional Mount Kit

KIT CONTENTS

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



Product Warranty and Support

JoeScan products are proven to be durable and reliable, which allows JoeScan 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 JoeScan 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 ensure that each scan head can provide years of unflinching service.

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Product Specifications

General

Dimensions	21" x 5" x 5"
Weight	12 lbs.
Laser Type	Pulsed, Class IIIb
Laser Color	Visible red
User Interface	PC
Data Interface	10/100BaseT Ethernet

System Performance

Depth of View	20" to 54" with extended range to 84"*
Field of View	10" @ 20" standoff 26" @ 54" standoff 41" @ 84" standoff
Accuracy	+/- 0.025" @ 20" standoff +/- 0.040" @ 54" standoff
Scan Rate	Up to 250 profiles/sec.
Data Density	20 points/inch at 20" standoff 9 points/inch at 54" standoff
Number of Data Points	Up to 243

* When using extended range, color of product being scanned may reduce scanner's performance and ambient light immunity.

Environmental

Operating Temp	-20° to 50°C (0° to 120°F)
Lighting	Fully operational in complete darkness, indoor lighting or with direct sunlight in the field of view; cannot be pointed directly into the sun.

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-20 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



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

JoeScan