Mark Verification

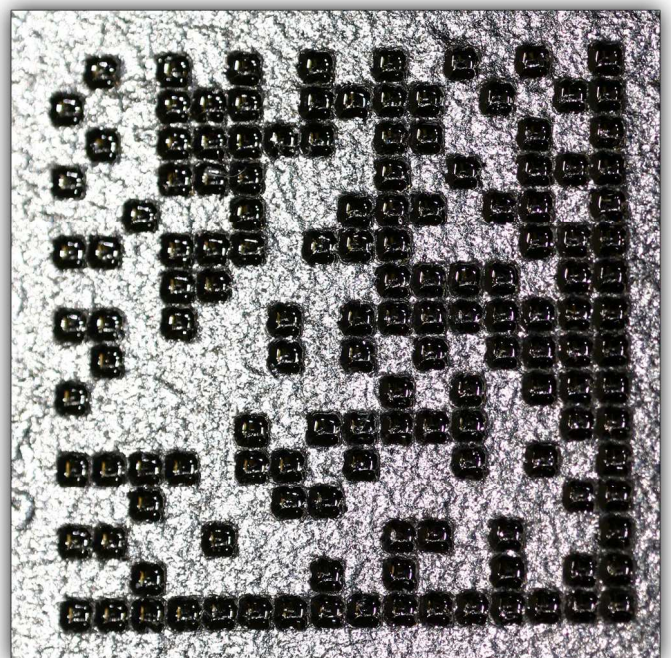## Technical Brochure

I-Mark

2D Mark Verification

Confirm the mark at the marking station.

A machine-readable mark is the standard for advanced part tracking and traceability. The 2D mark is comprised of dark and light squares. The date encrypted in the code can be "read" by a camera.

Compatible Systems

- I-Mark M and MS Series
- I-Mark C Series
- CMT Eclipse LE16
- CMT Eclipse LE24 Round
- CMT Eclipse LE48 Large Bed
- CMT Eclipse LER Rotary Turn Table
- CMT Eclipse Tunnel Automated Conveyor

Details about the 2D Code

- Finder Pattern: 90° "L" shape pattern that makes up (2) sides of the code. This is used by the camera to locate the code and can be marked as a solid or dotted line.
- Encrypted Code: This is the body of the UID/Matrix2d and contains all the information. The number of letters, numbers, or a combination of both determines the number of rows and columns. That make up the code.
- The resulting cells are filled, or left blank determined by the required encryption.
- The grade or verification of the matrix is determined by the ability to fill the cell.

Columbia Marking Tools suggests integrating a camera in the marking station to immediately read the mark. This assures that the part has been properly marked and can be tracked via camera verifications devices anywhere along the downstream manufacturing process.

Columbia Marking Tools can integrate a customer's preferred camera into the marking equipment. The following are two of the most popular camera solutions.
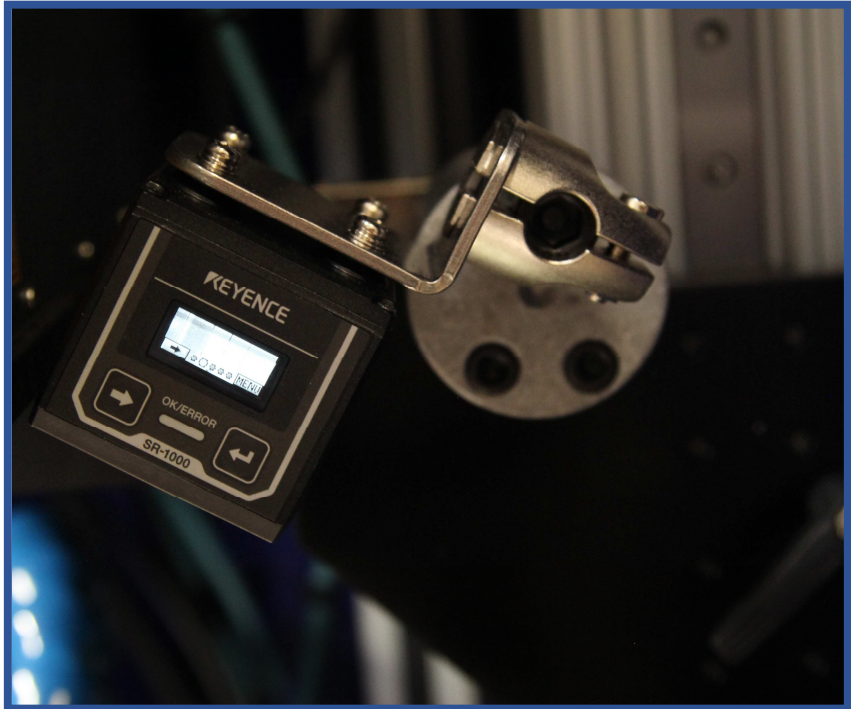
Mini-Internal Laser Enclosure Camera*

Verification solution for CMT Eclipse laser marking machines.

2D reader including mounting, parts, and installation.

- Camera
- Cables
- Mounting bracket and installation
- Software and installation
- Adding camera to design of machine.
- Test and function of system

Key Benefits of the 2D mounted reader:

- Able to read small codes that would not read with built-in reader (minimum .063mm)
- Advanced detection
- 1280 X 1024 pixels
- Autofocus
- Able to grade the 2D code
- IEEE 802.3 compliant
- RS-232C compliant
- High intensity red LED, illumination light source

*PC option must be purchased with this solution.

I-Mark

Handheld Camera*

Verification solution for I-Mark dot-peen and scribe

2D reader including mounting, parts, and installation.

- Camera
- Cables
- Cradle and charging station.
- Software and installation
- Loading software
- Test and function of system

Key benefits of the 2D handheld camera:

- Wire or wireless
- Autofocus
- Able to grade the 2D code
- Selection of lighting options

*PC option must be purchased with this solution.