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# Manta HM

High Magnification

## Automated microscope for inspection of single and multi-fiber patch cords, bulkhead and QSFP modules

Up to 96 fibers  
in one screen  
(FOV: 4.2 × 2.8 mm)

360× magnification

Autofocus

Pass/Fail  
verdict per IEC  
standards



20 MP sensor inside

## Compact in size, big on capability

### Unsurpassed optical performance\*

High-contrast precision optics, optimal axial illumination and 20MP sensor provide for accurate measurements of small anomalies.

\*among handheld microscopes for multi-fiber inspection with a similar FOV.

### Large field of view

Pass/Fail analysis of an MPO connector is done in a single scan taking just 3 seconds (for MPO12/16).

Guide holes and ferrule surface are inspected at the same magnification as fibers.

### Versatility from bench to patch panel

Manta HM can be used as a handheld probe for testing transceivers and bulkhead connectors in patch panels, as well as a benchtop solution for production lines and labs.



**Application:** production lines, laboratories, incoming inspection, maintenance in data-centers.

**Recommended for:** high-power laser applications, single mode connector inspection, final verification, and other cases where small details matter.

# Specification

**Connectors inspected:**

Male and female MPO connectors (SM and MM), MT ferrules, LC, FC, SC, E2000™, QSFP, ARINC, MIL-38999, High-power SMA, Avim, mini-Avim, 3M™ Expanded Beam Optical Connector, ODC®, Q-ODC®, MXC®, HMFOC, CS®, SN® and more

**Measurement time\*:**

\* doesn't include autofocusing time

2.6 sec for MT12, 3.5 sec for MT16, 4.5 sec for MT24, 10 sec for MT72

**Field of view:**

4.2 × 2.8 mm

**Defect size detection:**

0.5 μm

**Effective resolution:**

1.5 μm (based on MTF calculations)

**Magnification:**

0.75 μm/px or 360× (for a 24" display 1920x1080)

**Focus:**

Autofocus

**Camera type:**

CMOS, 20MP, monochrome

**Power source:**

USB 3.0 port of PC

**Dimensions (H × W × L):**

77 × 36 × 246 mm (3 × 1.4 × 9.8 inches)

**Weight:**

491 g (1.08 lbs)

**Material:**

aluminum housing, stainless steel barrel

**Compatible with:**

desktop PC, laptop, tablet, Android phone

**Operating system:**

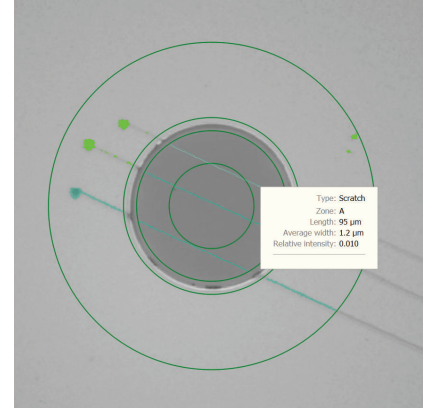
Windows 10, Windows 11

**Software integration tools:**

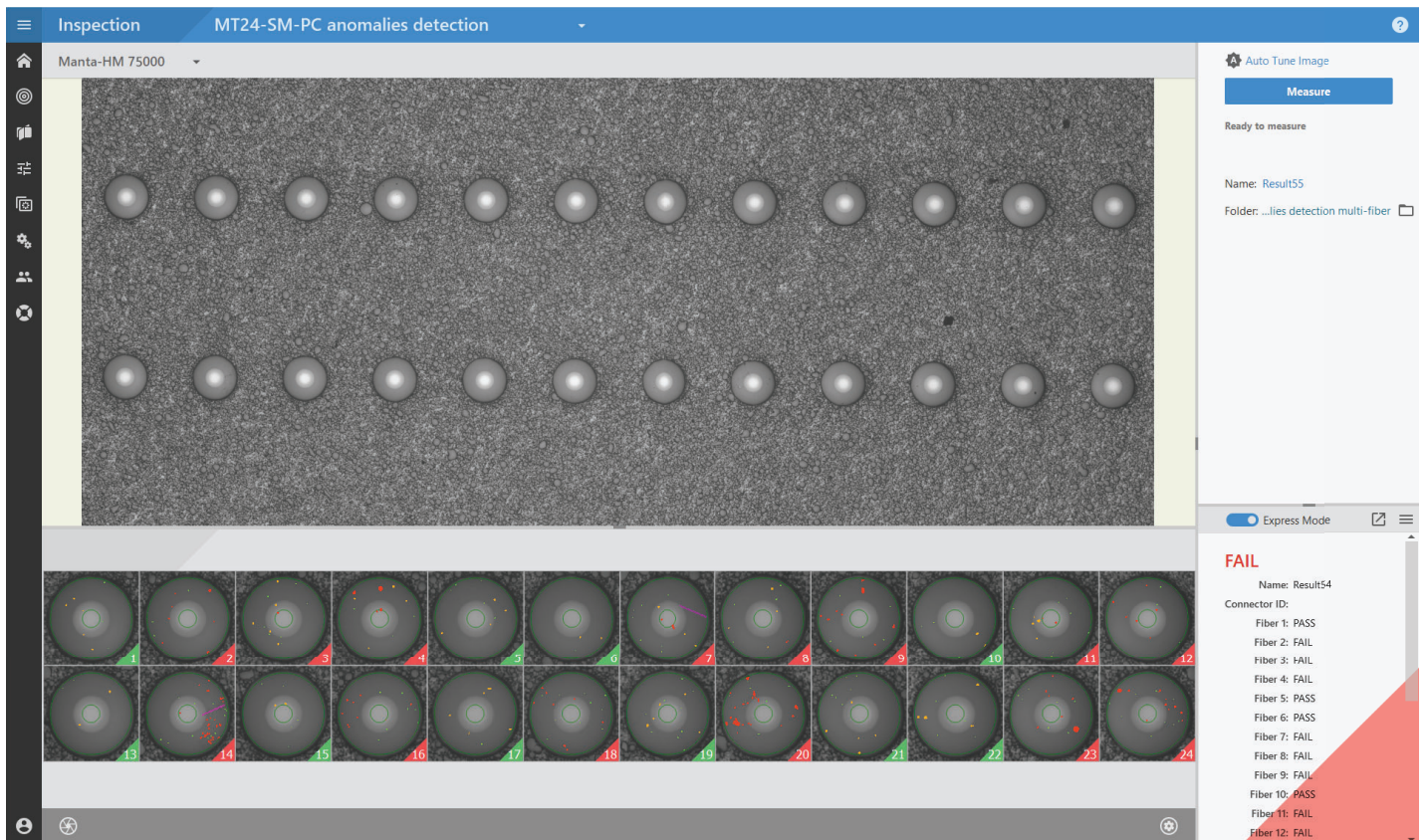
Excel/CSV, SQL, WebSocket API

**Centralized data-base connectivity:** Yes

**Compliance with IEC requirements:** Yes



Scratches detected on SF end face



Measurement result for a 24-fiber MPO connector