



Mentor Visual iQ™ VideoProbe™

Put the power
of productivity in
your hands



For industries that depend on critical visual inspections, the experts now have a better choice

**Introducing the portable, connected VideoProbe
from GE with 3D Phase Measurement**

Powerful, portable, fast, connected.

Mentor Visual IQ, the world's most advanced video borescope, is packed with features to help you make better decisions about critical assets and improve inspection productivity.

- Easy to operate using either optically bonded multipoint touchscreen and on-screen keyboard, or ergonomic joystick and hard keys
- Color SUPER HAD™ CCD video camera with 5x digital zoom and a new ground-up image processing system
- View crisp images and increase probability of detection on a 6.5" (16.5 cm) active matrix XGA color LCD, daylight readable display
- Capture crystal clear live video and still images with Adaptive Noise Reduction (ANR) and High Dynamic Range (HDR) still image capture
- Advanced analysis using improved 3D Phase Measurement (6.1mm diameter probe) or stereo (6.1mm or 4mm diameter probes)
- Portable, lightweight, ergonomic design (6.75 pounds (3.0 KG) out of case)
- Rugged durability – designed to IP55, MIL STD 461F and MIL STD 810G standards
- Dual-Band Wi-Fi and Bluetooth 4.0 enabled
- Menu Directed Inspection (MDI) software in 14 languages digitally guides inspectors through the inspection process, intelligently names files and creates MS Word® and PDF compatible inspection reports
- Master advanced features faster and eliminate cumbersome paper manuals with on-device user manuals and context based help links
- 16 GB Internal SSD for user data storage
- Two USB 3.0 host 'A' ports, one USB 3.0 client micro 'B' port
- Powered by high-capacity interchangeable, rechargeable lithium ion batteries which are compliant with air travel regulations. With the charging circuit built into the batteries, no charging cradle is required
- Interchangeable high resolution 4.0mm and 6.1mm diameter probes available in multiple lengths to suit a variety of industries and applications
- Full tip optic interchangeability with secure double threads
- High intensity LED light source and advanced processing for improved image brightness
- Insertion tube markings for easy setup and reference
- Choose from a variety of customizable "Magic-arm" handset mounts in several sizes
- Your choice of ultraportable rolling carry-on case or roomier work station model configured to hold multiple probes and accessories



Appendices

Technical Specifications - Handset

Operating Temperature

Tip	-25°C to 100°C (-13°F to 212°F). Reduced articulation below 0°C (32°F)
System	-20° to 46°C (-4°F to 115°F). LCD may require warm-up period below 0°C (32°F)
Storage Temperature	-25° to 60°C (-13°F to 140°F)
Relative Humidity	95% max, non-condensing
Waterproof	Insertion tube and tip to 14.7 psi (1 bar, 10.2 m of H2O, 33.5 ft of H2O)
Hazardous Environments	Not rated for use in hazardous environments

Camera

Diameter Probe	4.0 mm (0.16"), 6.1 mm (0.24")
Image Sensor	1/6" Color SUPER HAD™ CCD camera (6.1 1/10" (4.0 mm)
Pixel Count	440,000 pixels
Housing	Titanium

System

System Dimensions	17.1 x 33.8 x 87.1 cm (6.75 x 8 x 15")
Case Dimensions (Standard)	48.8 x 38.6 x 18.5 cm (19.2 x 15.2 x 7.3")
System Weight	In small case with contents: 10.2 kg (22.4 lbs). In large case with contents: 19.6 kg (43.2 lbs) Out of Case: 6120 system - 3.0 kg (6.7 lbs). 6110 system - 4.0 kg (8.7 lbs)
Construction	Magnesium and Polycarbonate housing with integrated elastomeric bumpers
LCD Monitor	Integrated (6.5") active matrix XGA color LCD, daylight readable display, with opticallybonded, multipoint capacitive Dragontrail™ touchscreen
Joystick Control	360° All-Way® tip articulation, menu access, and navigation
Button Set	Access user functions, measurement, and digital functions
Audio	Integrated 3.5mm headset / microphone jack or bluetooth headset
Internal Memory	16 GB SSD for user storage
Data I/O Ports	Two USB 3.0 host 'A' ports, one USB 3.0 client micro 'B' port
Video Out	DisplayPort
Brightness Control	Auto and Variable
Illumination Type	White LED
Long Exposure	Auto - up to 16 seconds
White Balance	Factory default or user defined

Power

Lithium Ion Battery	10.8V (nominal), 73Wh, 6.8Ah
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Power Supply

AC	100-240VAC, 50-60Hz, <1.5A RMS
DC	18V, 3.34A

Standards Compliance and Classifications

MIL-STD-810G	United States Department of Defense Environment Tests Sections 506.5, 507.5, 510.5, 511.5, 514.6, 516.6, 521.3
MIL-STD-461F	U.S. Department of Defense -- Electromagnetic Interference RS103 - ABOVE DECK
Standards Compliance	Group 1, Class A: EN61326-1, UL, IEC, EN CSA-C22.2:61010-1, UN/DOT T1-T8
IP Rating	IP55 (Disassembled)

Software

Operating System	Embedded multi-tasking operating system
User Interface	Menu-driven and soft button operation; menu navigation using either touchscreen or joystick
File Manager	Embedded file manager supports the following operation on files and folders: copy, cut, create, rename, delete, filter and sort. USB and internal flash storage
Audio Data	PC Compatible ACC (.M4A file) format
Image Control	Invert, Inverse+, Adaptive Noise Reduction, Distortion Correction, Illumination, Brightness, Long Exposure, Single View, Zoom (5x digital), Image Capture and Recall
Digital Zoom	Continuous (5x)
Image Formats	Bitmap (.BMP), JPEG (.JPG)
Video Format	MPEG4 AVC/H.264 (.MP4 file)
Text Annotation	Built-in full-screen text overlay generator
Graphic Annotation	User placement of arrows
Articulation Control	User-selectable steer vs. steer & stay articulation; tip "Home" return to neutral forward-tip orientation
Software Updates	Field upgradeable via USB ThumbDrive®
Languages	English, Spanish, French, German, Italian, Russian, Japanese, Korean, Portuguese, Chinese, Polish, Hungarian, Finnish and Swedish
Application Software	Menu Directed Inspection (MDI) software digitally guides inspectors through the inspection process, intelligently names files and creates MS Word® and PDF compatible inspection reports

Appendices

Technical Specifications - Probes and Tips

Probe Measurements

Diameter	Length
4.0 mm (0.15")	2.0, 3.0 m (6.6, 9.8 ft.)
6.1 mm (0.24")	2.0, 3.0, 4.5, 6.0, 10.0 m (6.6, 9.8, 14.8, 19.7, 32.8 ft.)

Longer lengths up to 30 m are available. Contact your sales representative for details.

Tip Articulation

Insertion Tube Length	Articulation
2 m - 4.5 m	Up/Down 160° min, Left/Right 160° min
6 m - 10 m	Up/Down 140° min, Left/Right 140° min

Note: Typical articulation exceeds minimum specifications.

Mentor Visual IQ 4.0mm tips

Part No.	Color	FOV (deg)	DOF mm	(in)
Forward View				
T4080FF*	None	80	35-inf	(1.38-inf)
T40115FN	Black	115	4-inf	(.16-inf)

Side View

T40115SN	Red	115	1-30	(.04-1.18)
T40120SF	Blue	120	6-inf	(.24-inf)

Stereo Measurement

TM405555FG	Black	55/55-FWD	5-inf	(.20-inf)
TM405555SG	Blue	55/55-SIDE	4/inf	(.16-inf)

*Indicates tip with maximum brightness

Mentor Visual IQ 6.1mm tips

Part No.	Color	FOV (deg)	DOF mm	(in)
Forward View				
T6150FF	None	50	50-inf	(2.36-inf)
XLG3T6150FG	White	50	12-200	(.47-7.87)
XLG3T61120FG	Black	120	5-120	(.20-4.72)
XLG3T6180FN	Orange	80	3-10	(.12-.79)
XLG3T6190FF	Yellow	90	20-inf	(.79-inf)
XLG3T6150FB	Purple	50 (45 DOV)	12-80	(.47-3.15)
T6165FF*	Orange & Blue	65	65-inf	(2.56-inf)

Side View

XLG3T6150SF	Brown	50	45-inf	(1.77-inf)
XLG3T6150SG	Green	50	9-160	(.35-6.30)
XLG3T61120SG	Blue	120	4-100	(.16-3.94)
XLG3T6180SN	Red	80	1-20	(.04-.79)

3D Phase Measurement

XL4TM61105FG (forward version)	Black	105	8-250	(.31-9.84)
XL4TM61105SG (side version)	Blue	105	7-250	(.27-9.84)
XL4TM61105FN-8651	Orange	105	3-120	(.12-4.72)

Stereo Measurement

XLG3TM616060FG	Black	60/60-FWD	4-80	(.16-3.15)
XLG3TM615050SG	Blue	50/50-SIDE	2-50	(0.8-1.97)