



Digital Microscopes & Measurement Systems

Our philosophy is simple; we are curious, we work hard, we are passionate about what we do and we deliver value to our partners through successful delivery and support of our unique solutions. We believe in working closely with our target markets and industries to ensure that our solutions and platforms are relevant and simple to use.

We have been recognised for our innovation and product design capabilities with national and international Awards. The company continues to grow and evolve year on year as it exports over 90% of its inspection and measurement solutions to a broad range of industries and OEM/ODM partnerships. Our distribution network spans over 35 countries including UK, Germany, USA and China to name a few.



At Ash we are passionate about innovation and design. We use creative Design Thinking to actively empathize with our customers to understand their real unmet needs and jobs to be done. We seek meaningful engagement and co-creation with our end users so we can develop the best possible solutions and services in the quality assurance industry resulting in cost savings, reduced test time, waste reduction and an overall improved quality process.

Innovation Process



So How Do We Do It ...

We use a variety of tools and methodologies to discover the hidden needs of the end user. Our creative thinking process generates the ideas and concepts based on the insights from our discovery phase. A prototype is developed through our excellent R&D skills and iteratively validated with our end users in the wild. We've even managed to innovate our own business model which has allowed us to pivot into new markets with our new offerings.

In recognition of our innovation programme we were announced as winners of the Innovator of the Year award 2016 from the Small Firms Association (SFA) and Most Innovative Company 2016 from the Innovation for Growth (I4G) programme from the Institute of Management Ireland (IMI), awarded by Enterprise Ireland and Deloitte.

In 2017 our latest product Omni won the coveted Red Dot Award for Product Design.



- **Ergonomic Design**
Allow the user to sit or stand comfortably for longer periods
- **Easy to Use**
Connects to HDMI monitor, one button image capture
- **Documentation/Data Recording**
Easily capture and store images to share or catalogue
- **Intuitive Integrated Software**
Omni's mouse controlled graphical user interface is just like using a PC
- **Group Discussion/Collaboration**
More than one person can view the live image on a monitor



Medical Device



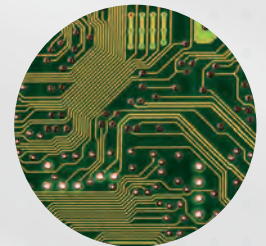
Aerospace



Automotive



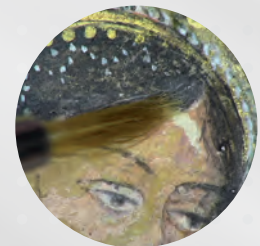
Metallurgical/Precision
Engineering



Electronics



Forensic Science



Conservation
& Restoration

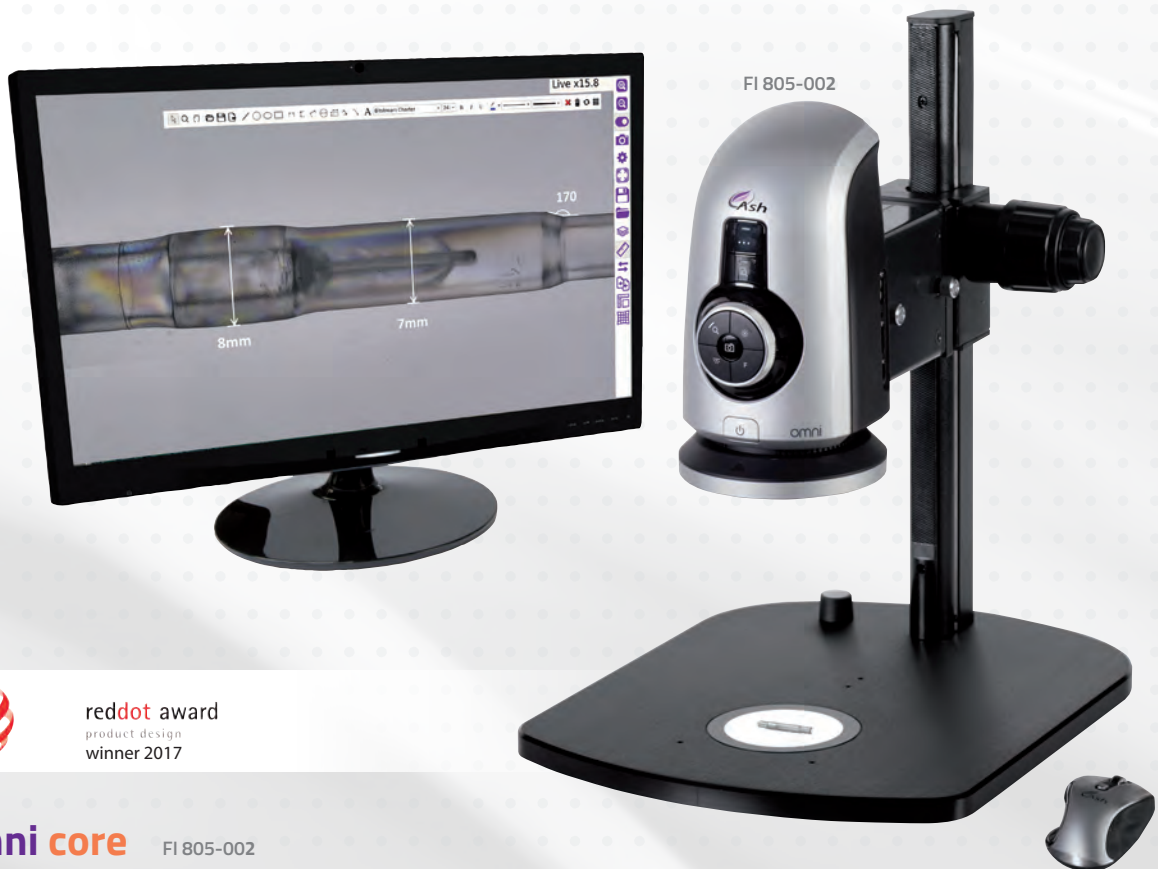


Jewellery/Watchmaking



Polymers/Plastics

A flexible digital microscope inspection system that is configurable with advanced inspection & measurement applications and system components to suit a wide range of inspection and measurement requirements.



reddot award
product design
winner 2017

Omni core FI 805-002

The Omni Core is a stand-alone full HD digital microscope and measurement system that operates without a PC. The Omni Core platform can be configured with a range of advanced inspection & measurement apps such as: 2D Measurement, Annotation & Graticules, Image Stacking, Side by Side Image Comparator, Image Overlay Comparator and DXF File Import.

The Omni Core platform has a powerful image processing and control engine that delivers superb full HD live video image quality at 60 frames per second enabling it to be utilised as a solution in a broad range of quality control, testing, rework, assembly, inspection and documentation tasks.



NEW

System Components

OMNI Diffused LED Dome Light
AI 100-045



OMNI +10 Plan 1x
AI 100-055



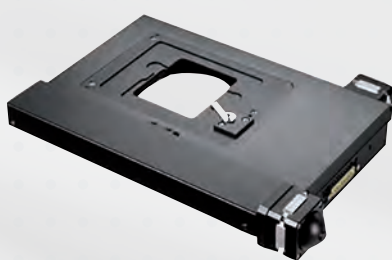
OMNI +25
AI 100-053



ASH 360° Rotating viewer
AI 801-422



OMNI Motorised XY Stage
AI 100-050



OMNI Touchscreen Workflow Controller
AI 100-049



For full details please visit www.ash-vision.com

Lens Specification Table*

	+5	+10	+10 Plan 1x	+25
Part Number	AI 280-150	AI 280-131	AI 100-055	AI 100-053
min optical mag	2.5	4	4.3	175
max optical mag	61.3	118.9	122	305.5
min optical fov (mm)	231 x 136	60 x 50	71 x 71	3.09 x 1.73
max optical fov (mm)	8.654 x 4.875	4.462 x 2.514	3.992 x 2.24	1.736 x 0.978
Dof @ min zoom (mm)	78	57	40	.025
Dof @ max zoom (mm)	0.5	0.2mm	0.2	0.01
working distance (mm)	200	100	76	35.1
max mag digital	133.1	259.4	266.6	662.4
digital fov (mm)	3.99 x 2.239	2.047 x 1.149	1.992 x 1.118	1.992 x 1.118

* Specifications obtained using a 24" Monitor.
* Depth of field measured with optimal image settings.

Technical Specifications

Zoom Range (with supplied 5D lens)	2.5x – 122x		
Camera Resolution	1920 x 1080 Resolution	60 fps	30x Optical, 2x Digital
Monitor Connections	HDMI / DVI		
Monitor Requirements	HD Ready or Full HD (recommended)		
Input / Output	<ul style="list-style-type: none"> · HDMI Output · USB 2.0 Port x 4 · Mini USB Port · RJ45 Ethernet Connector (for networking) · General Purpose IO Port x 3 · DC Power Jack (24V) 		
Image Capture	<ul style="list-style-type: none"> · Internal Image Storage · Removable USB Image Storage · USB On The Go (PC Connectivity) 		
Power	24W		
Dimensions	216mm x 125mm x 136mm		
Weight	1.75Kg		
Operating Temperature	Storage: -10C to +60C Operating: +5C to 40C		

Package Contents

- Omni
- Quadrant Controllable Ring Light
- Lens 5x
- Mouse & Mat
- Keyboard
- Power Supply
- HDMI to HDMI Cable
- Mini USB Cable
- USB Memory Stick (8GB)
- Grounding Cable
- 2 x Arm Brackets (for stand mounting)
- Arm Receiver
- User Manual
- Cleaning Cloth

Inspex HD 1080p



Full HD 1080p
Image Quality



Image Capture
to USB key



Integrated, Real-Time,
On-screen Dimensioning
Grids & Cursors.

Inspex HD 1080p

The Inspex HD 1080p is a high definition camera inspection system offering superb 1080p full HD image quality, colour reproduction, contrast and resolution. Its versatile design makes it compatible with a wide range of mounting options. Real-time on-screen dimensioning is provided by integrated XY grids and cursors.

Key Features:

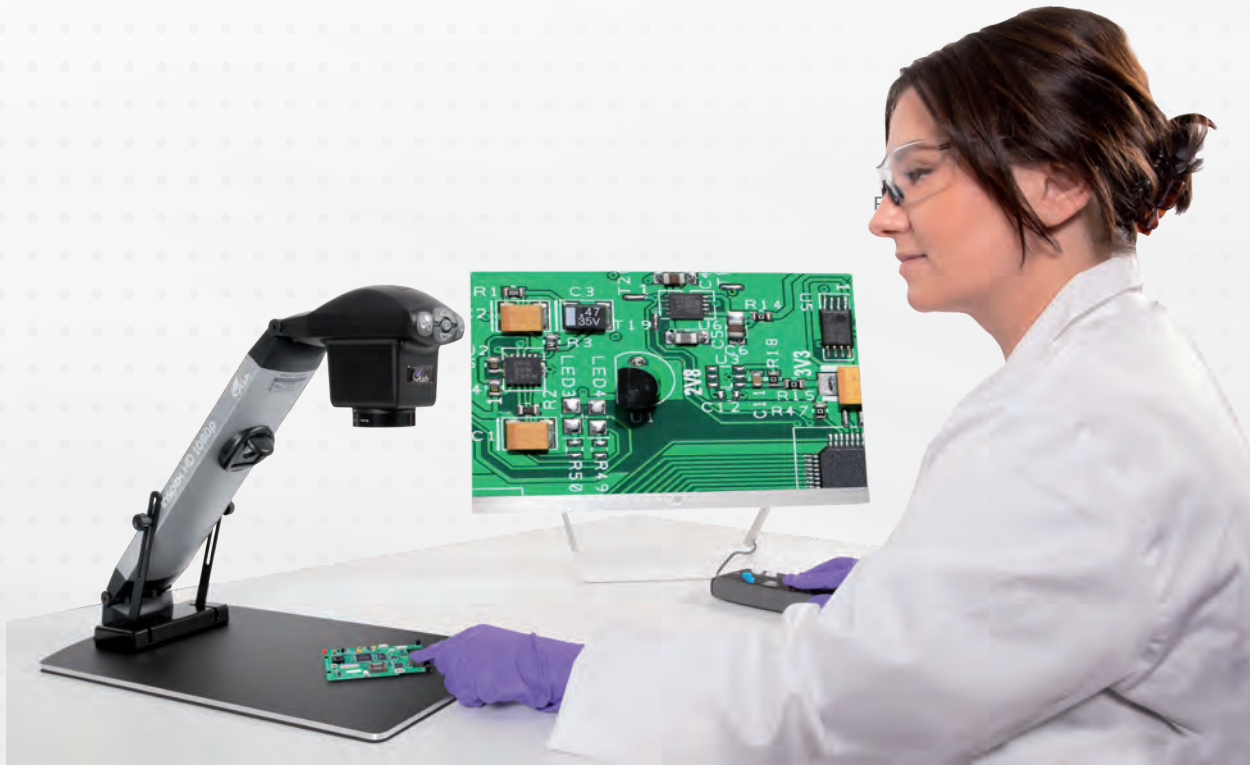
- Accurate & detailed inspection with superb HD image resolution, dynamic range of magnification levels & integrated LED illumination.
- Real-time on-screen dimensioning provided by integrated XY grids & cursors
- Less operator fatigue & improved production efficiencies due to ergonomic design enabling user to sit or stand in a comfortable and safe posture providing relief from back, neck and eye strain typically associated with traditional microscopes.
- Easy documentation & traceability for accurate quality control records using image capture to USB key.

Applications:

The Inspex HD 1080p is suited for repair & rework, quality control & failure diagnosis processes in industries such as: Automotive, aviation, electronics, engineering, forensics, jewellers, medical devices, packaging & labelling, pharmaceuticals and security.



FI801-027 FI801-028 FI801-018 FI801-024



KP1 External Keypad FI 801-008

The optional KP1 unlocks integrated real-time on-screen dimensioning grids and cursors. It also allows access to a variety of functions including 3 Memory Presets, Exposure and Focus, Zoom, Brightness, LED Intensity, Image Capture...



Magnification*

Lens (Dioptre) (mm)	Max Height (mm)	Min Height	Minimum Magnification*	Maximum Magnification* Optical/Digital	Field of view at minimum mag. (mm)		Field of view at maximum mag. (mm) Optical/Digital		Max. & Min. Depth of field	
					X	Y	X	Y		
2	500	405	1.1	29/57	X: 595	Y: 334	X: 20/10	Y: 11/5.5	176	5
3	333	280	1.3	36/71	X: 400	Y: 225	X: 14/7	Y: 8/4	120	4
4	250	205	2	50/98	X: 280	Y: 164	X: 10/5	Y: 6/3	106	1
5	200	170	2.5	62/122	X: 231	Y: 136	X: 8/4	Y: 5/2	78	.50
10	100	85	4	121/237	X: 60	Y: 50	X: 5/2	Y: 3/1	57	.20

* Specifications obtained using a 24" Monitor.

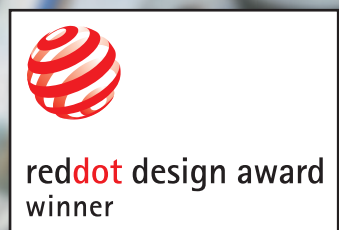
* Depth of field measured with optimal image settings.

Technical Specifications

Specifications	Vesa (FI801-018)	Table (FI 801-017)
Zoom Range (with supplied lens)	5D Lens – 2.5x - 122x	4D lens – 2x - 98x
Camera Resolution	HD 1080p, 1920 x 1080 at 50/60 Hz	HD 1080p, 1920 x 1080 at 50/60 Hz
Monitor Connections	HDMI / DVI	
Monitor Requirements	HD Ready or Full HD (recommended)	
Dimensions	37cm x 12cm x 14cm	Table 24cm x 41cm Folded Height 11cm, Raised Height 42cm Weight
Weight	1.2kg	2.5kg
Power	8 Watts	
Operating Temperature	Storage: -10 C to +60C Operating +5C to +40C	
Image capture	USB 2.0 highspeed	

Package Contents

- Inspec HD 1080p
- Power supply
- HDMI to HDMI cable
- Operation Manual
- Grounding Cable
- USB Memory Stick (16GB)



ion 4.3" Inspection Magnifier FI 800-102

The Ion 4.3 is an award winning inspection magnifier that provides a crystal clear image for the user. Suitable for quick and immediate use, the Ion is fast to start, comfortable to hold and highly intuitive to use as the product has been designed to replicate the look and feel of an optical magnifier.

The Ions display delivers an unrivalled sharp, bright and high contrast image. The Ion 4.3s stunning colour image and wide viewing angle provides comfortable use in awkward to access places and in poor lighting conditions. Its unique patent applied for dimensioning grids and cursors enhance the capability and efficiency of decision making for inspection operators and technicians.

Key Features:

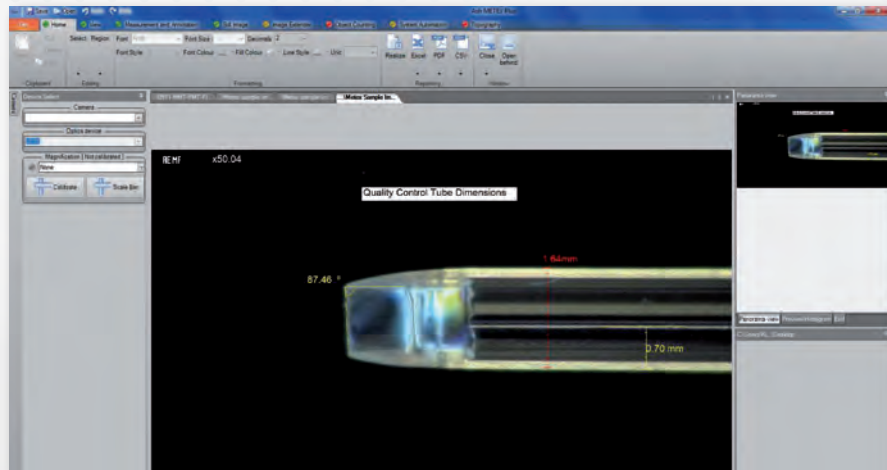
- **Accurate & detailed inspection of a wide variety of objects enabled** through lossless image quality & super sharp magnification up to 14x with high resolution TFT display and adjustable LED illumination.
- **Instant on screen measurement for quick & cost effective quality assurance** provided by integrated on screen XY dimensioning grids & cursor functions.
- **Easy recording & traceability of one hundred images with date stamp** using image capture software for accurate quality control records.
- **Mobile visual inspection tool suitable for awkward to access areas & poor lighting conditions** due to its compact, portable design.
- **Unique Liquid lens technology provides** a wide focus range, fast response time, excellent optical quality & low power consumption

Technical Specifications

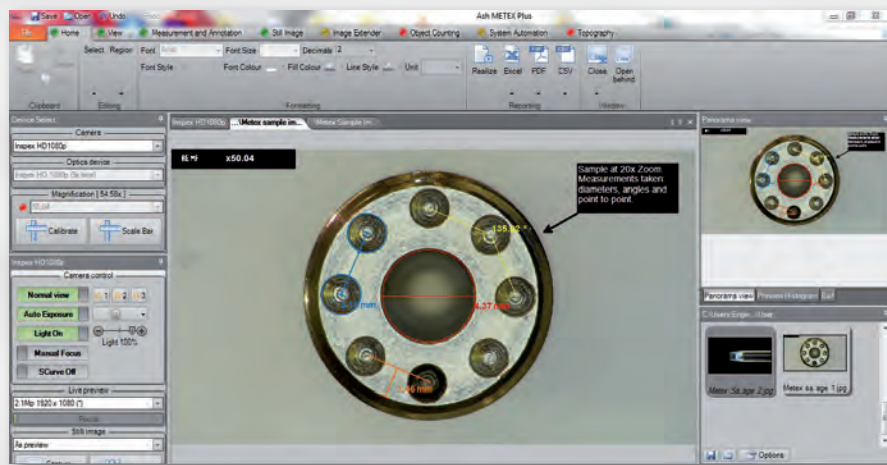
Specifications	Ion 4.3 FI 800-102
Screen size and resolution	4.3" diagonal TFT display, 480x272
Magnification	Far focus: 4x-8x & Near focus: 7x-14x
Image storage mode	100 images in 480 x 272 pixels, 24-bit bitmap format transferable to PC via USB link
Depth of field	3.5cm in overview, 1.5cm close
Dimensioning cursors/grids	Yes
Sensor	3MP CMOS, RGB565 video at 30fps
Battery – Lithium Ion	Up to 5 hours, charge time 4 hours
Connection cable	Micro USB cable
Charger supply	100V – 240Vac 50/60Hz with supplied adaptor
Unit supply voltage	5V dc, micro-USB connector
Weight	225 grams

Metex PC Measurement Software FI 803-001

The perfect Inspec partner, by any measure! Metex allows advanced measurement and live Full HD Video to your PC. With the included USB 3.0 interface Metex is ready to go out of the box.



Metex Plus Control Inspec from your PC! FI 803-002



Point to Point Measurement



Annotation



Image Comparison



View & Record Full HD Images & Video



Output Reports



Multiple Languages

Key Features:

- Obtain detailed dimensions for non-contact testing
- Angle, radius, centre point distances and perimeter values
- Annotation with customisable colours and font types
- Image Comparison
- View and record Full HD images and video
- Metric and Imperial units
- Output reports in common formats such as excel, pdf, csv
- Multiple Languages

System Requirements & Specifications

Hardware	Compatible with most major chipsets and expended USB 3.0 via PCIe Gen 1.1 x1, USB 2.0
Operating System	Windows 7,8,8.1
CPU	The processing of the video is done by the ASH Interface and will not occupy the CPU
Video Output	Up to 1920 x 1200 60fps
Dimensions	84.25 x 42.80 x 12.60 (LxWxH mm)
Power	<= 2.5W
Operating Temperature	Operating: 0 - 50 C Storage: -20 - 70 C

OMNI Track Stand

AI 100-037 No Light
AI 100-036 with Sub Stage Light



INSPEX Track Stand

AI 100-023 with Sub Stage Light for Inspex Vesa
& Vesa Short Flex Cam
AI 100-020 Inspex Vesa Short
AI 100-019 Inspex Vesa & Vesa Short Flex Cam
AI 100-028 Inspex Vesa Flex Cam



Dual Arm Boom Stand

AI 100-038



Articulated Arm Stand

AI 100-039



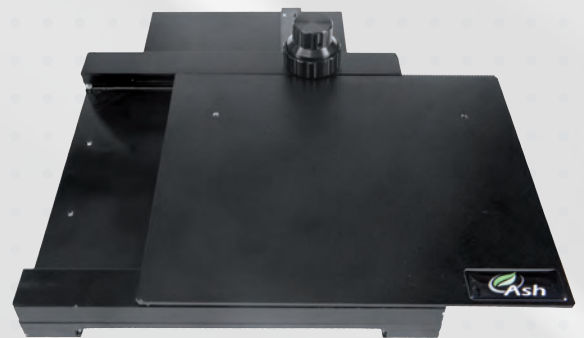
X-Y Stage for Illuminated Stands

AI 100-011



X-Y Stage

AI 100-010



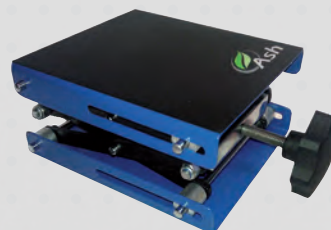
Vesa Mounting Arm

for Inspex & Monitor
AI 350-322



Height Adjustable Stage

6" x 6" AI 801-413
8" x 8" AI 801-420



Oblique Tilting Stage

AI 801-414



Lighting

OMNI Diffused LED Dome Light **NEW**

AI 100-045



8-Point LED Ring Light

AI 100-012



■ Polarizer
AI 100-000

Diffused LED Dome Light

AI 100-001



OMNI UV Ring Light 367nm **NEW**

AI 801-421

Contact ASH for different wavelengths



INSPEX UV Ring Light



AI 100-026 220V UV Ring Light 254nm
AI 100-025 220V UV Ring Light 375nm
AI 100-035 110V UV Ring Light 254nm
AI 100-034 110V UV Ring Light 375nm

LED Fibre Optic Illuminator with Dual Gooseneck

AI 100-033



Other Accessories

Foot Switch

AI 801-415



OMNI Lenses **NEW**



Omni +5 Lens AI 280-150
Omni +10 Lens AI 280-131
Omni +10 Plan 1x AI 100-055
Omni +25 Lens AI 100-053
Omni Polarizing Filter AI 100-041

INSPEX Lenses



Inspex +3 Lens AI 280-129
Inspex +4 Lens AI 280-125
Inspex +5 Lens AI 280-123
Inspex +10 Lens AI 280-124
Inspex Polarizing Filter AI 280-145

ASH PC Capture **NEW**

AI 801-503



OMNI & INSPEX Hard Cases



OMNI AI 801-563
INSPEX AI 801-561

Monitor 24"

AI 801-416



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