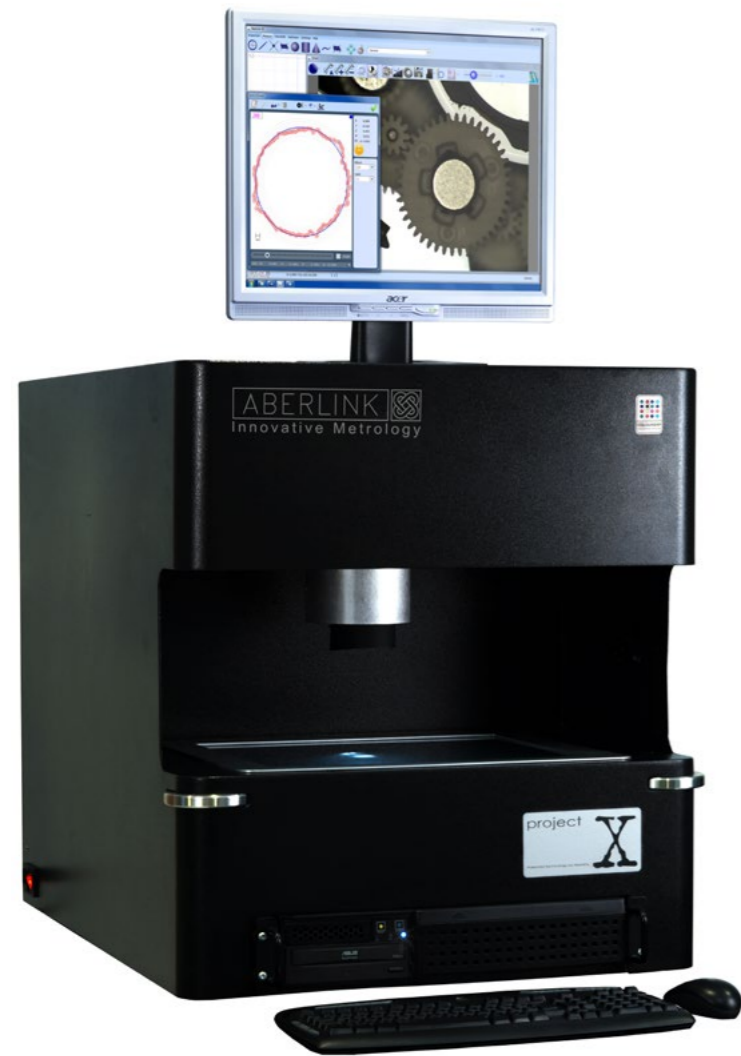




# VISION

**Enhance your Aberlink CMM  
with the power of vision**



## PROJECT X ADVANCED VISION SYSTEM

**Project X finally replaces the old technology of a profile projector. It is easier and quicker to use than a profile projector and it will deliver reliable, consistent inspections time after time.**

Project X is different. It utilises a totally new, patented technology XY scale, that records not only X and Y position but also any rotational movement of the camera system. In addition, this is an absolute scale system, which means as soon as you switch on the machine it knows exactly where it is - no need for referencing. The camera is free to glide around the measurement area mounted on a simple air bearing system, without any worry about constraining the mechanics to avoid losing accuracy.

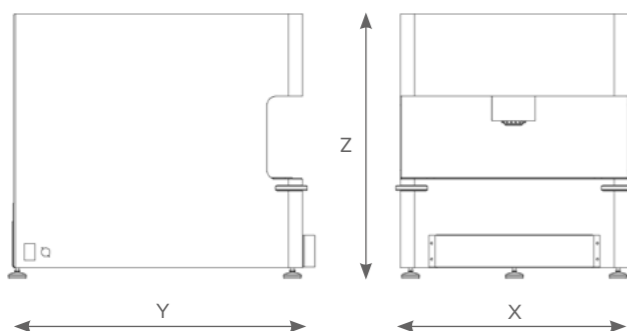
Components can be placed on a glass table and remain stationary, while the camera is moved around taking measurements above. There is no need to secure the component on the table as there would be on a moving stage machine.

Combine this simple mechanical structure, made possible by the revolutionary scale technology, with the Aberlink measurement software and you will soon understand why Project X is the standard for 2-dimensional measurement.

Project X is available as either a manual machine or with full CNC control.

### Technical Information:

Axis Travel (mm)	Overall Size(mm)	2D Accuracy
X 400 Y 300 Z 125 (focus only)	X 583 Y 722 Z 670	7.5µm
Stand Off (mm)	Field of View (mm)	Temp Range
125.0	10.0	18 - 22°C



### Key Features:

- High speed optical scanning - up to 5000 points/second
- Fully programmable digital zoom, no need to change lenses
- Powerful edge detection tools for maximum accuracy
- Aberlink's easy-to-use vision measurement software



## CMM CAMERA TOUCH & VISION ON THE SAME MACHINE

**Aberlink's camera system offers non-contact vision measurement for manual and CNC Aberlink CMMs.**

A clever design of magnetic, kinematic joint allows the probe and camera to be swapped in just seconds. This means that components can be inspected using both touch trigger and vision inspection technology on the same machine.

The camera incorporates a telecentric lens that gives a distortion-free image on the monitor. It also contains a fully programmable 16-LED light ring which contains alternate white and UV LEDs. The white LEDs provide surface illumination in the normal manner while the UV LEDs provide an ingenious solution to the perennial problem of backlighting on a CMM - the component to be measured is simply placed on a plate containing special reflective paper.

### Key Features:

- Swap between touch probe and CMM camera in seconds
- Use touch and vision technology within the same inspection programme
- High precision edge detection for feature inspection
- Thread measurement - min/max/mean pitch, left/right angles, effective diameter
- Fully programmable digital zoom (no need to change lenses)
- Directional overhead lights and back light for profile and surface feature inspection
- Telecentric lens measures accurately even when the feature is out of focus



### Specification:

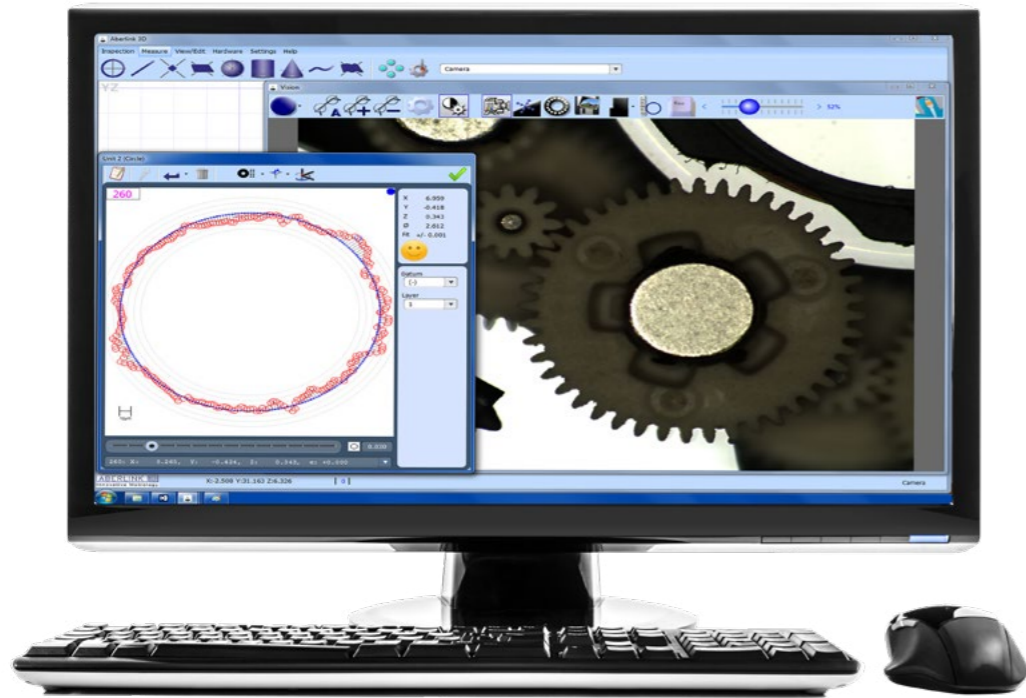
- Sensor: 3 Mega pixel high speed colour camera
- Resolution: 2048 x 1536 (QXGA)
- Stand off: min 125mm | max 1000mm (manually adjusted)
- Field Of View: min 9.5mm | max 125mm
- Pixel Size: min 4.8µm | max 48µm

A collimated back light option is available for when measuring 3D or small turned components.



# VISION SOFTWARE

## SOFTWARE MODULE



**The Aberlink Vision Software module enhances the capability of Aberlink 3D with a set of powerful vision measurement tools - use the same software with your touch probe and non-contact system.**

Fully automatic edge detection tools can be used in both manual and CNC mode ensuring fast and repeatable results without relying on the skill of the operator.

Powerful tools allow both geometric and complex shapes to be measured easily. Dimensions can either be called up by clicking on the measured features in the normal way, or alternatively measurement points can be best-fitted against a DXF file. As well as edge detection the operator may use either full cross hairs or mouse cross hairs with other advanced tools available including "smart measure", centre line detection, an "all edge points" function, a "thread measure" tool and a "screen ruler" for quick measurements between any two points on the image.

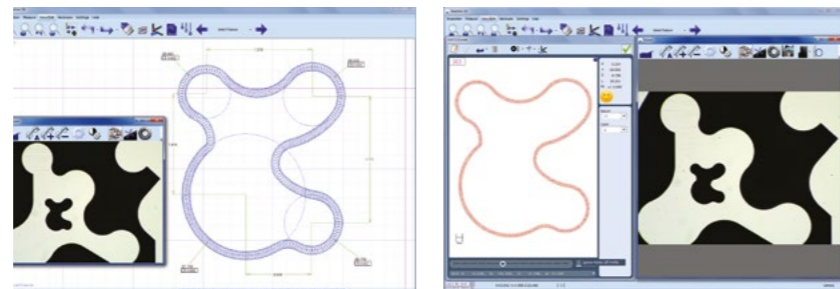
### Key Features:

#### Programming Tools

- Full colour video image
- CNC and manual machine controls
- Auto focus
- Digital zoom
- Light intensity
- Light direction
- Ancillary lighting

#### Feature Inspection

- Automatic measurement routines
- High speed edge detection
- Feature recognition
- Profile measurement
- Surface detail and feature measurement
- Z axis measurement using focus points
- Centre line detection
- Feature construction
- High/low point detection



#### Thread Inspection

- Measure threads with 2 mouse clicks
- Min, max and average thread pitch
- Left and right flank angles
- Effective diameter

#### Optical Scanning

- Automatic 2D profile scanning
- Scan geometric features
- Scan individual features
- Scan all visible features with a mouse click
- Digitise 2D profiles - data export via DXF

#### Screen Overlays

- XY cross hairs
- Angular cross hairs
- Align to mouse click
- Align to edge

Leading edge metrology without the price tag

Invest in an Aberlink CMM with Aberlink 3D measurement software and benefit from:

- No annual software subscription
- No annual software maintenance fees
- Free software upgrades for life

**Welcome to cost-effective precision.**

**ABERLINK**   
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