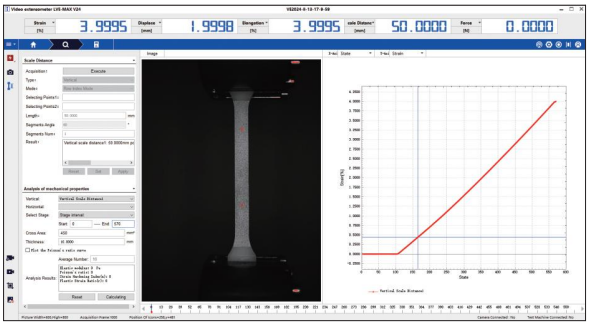
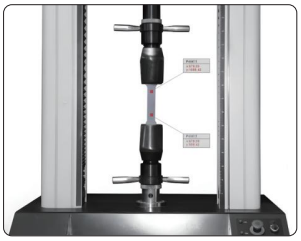
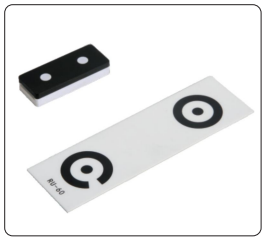
VIDEO EXTENSOMETERS



software (included)



application



calibration card (included)



UTM-MB1

- Video extensometer is a non-contact, high-precision real-time measurement system, based on vision and image-related algorithms, which realizes real-time measurement of displacement and strain by photographing and analyzing the changes in the image characteristics of the specimen during the loading process. It has the advantages of high precision, wide measurement range, and visualization of the results
- It is used for testing and analyzing the performance of specimens in tension, compression, bending, creep, fatigue, etc. It includes strain (elongation) measurement, tensile/compressive strength measurement, modulus of elasticity measurement and Poisson's ratio measurement
- According to ISO 9513

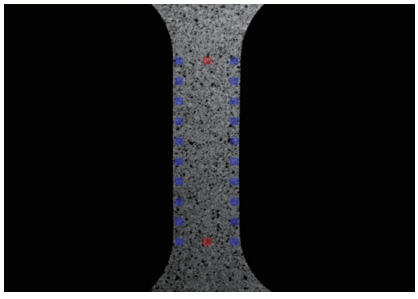
SPECIFICATION

Code	UTM-MA1	UTM-MA2	UTM-MA3	UTM-MB1	UTM-MB2	UTM-MB3	UTM-MC1	UTM-MC2	UTM-MC3
Accuracy	±1.5μm or ±0.5% of indicated value			±1.0μm or ±0.5% of indicated value			±0.5μm or ±0.5% of indicated value		
Resolution	0.1μm								
Range of deformation	standard: 60~100mm extensions: 100~500mm (±1%)			standard: 60~150mm extensions: 150~1000mm (±1%)			standard: 60~240mm extensions: 240~1500mm (±1%)		
Range of scale	≤500mm			≤1000mm			≤1500mm		
Number of scales	≤2	≤10	≤10	≤2	≤10	≤10	≤2	≤10	≤10
Frame rate	≤100fps			≤200fps					

STANDARD DELIVERY

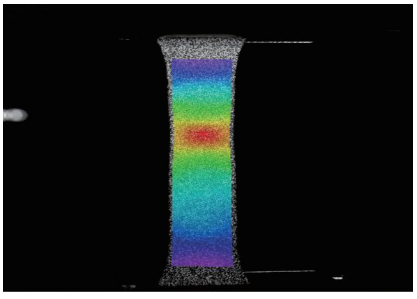
Code	UTM-MA1	UTM-MA2	UTM-MA3	UTM-MB1	UTM-MB2	UTM-MB3	UTM-MC1	UTM-MC2	UTM-MC3
Main unit	1 pc	1 pc	1 pc	1 pc	1 pc	1 pc	1 pc	1 pc	1 pc
Computer	1 pc	1 pc	1 pc	1 pc	1 pc	1 pc	1 pc	1 pc	1 pc
Control box	1 pc	1 pc	1 pc	1 pc	1 pc	1 pc	1 pc	1 pc	1 pc
Tripod	1 pc	1 pc	1 pc	1 pc	1 pc	1 pc	1 pc	1 pc	1 pc
Box	1 pc	1 pc	1 pc	1 pc	1 pc	1 pc	1 pc	1 pc	1 pc
Video extensometer module	√	√	√	√	√	√	√	√	√
2D-DIC module		√	√		√	√		√	√
Video strain module			√			√			√
Video displacement module			√			√			√
Video angle module			√			√			√
Fatigue extensometer module			√			√			√

video extensometer module



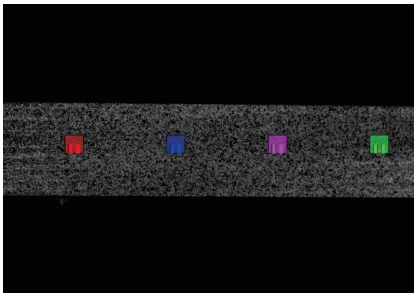
- It is suitable for a wide range of samples, including specimens, parts and machine deformations.
- It can measure different sizes of specimens, customizable from microns to around ten metres.
- It has a wide strain range, customizable from 0.002% to 1000%.
- It has high measurement accuracy and its core algorithms are accurate to sub-pixel level (0.01 pixels).
- Its distance can be customized, it has a wide range of distances to choose from, and the distance within the field of view can be set arbitrarily.
- It enables full-process tracking without downtime and without damaging the measuring device when the sample breaks.
- Its environment is very versatile. It can customize high and low temperature, high pressure, radiation and other scenarios.

2D-DIC module



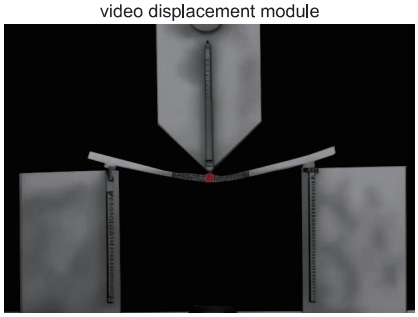
- It can measure over the entire area, which is equivalent to hundreds of virtual strain gauges.
- It is a single-phase frame, which can effectively save the hardware cost.
- It offers high measurement accuracy, with a maximum strain accuracy of better than 0.002%.
- It can measure specimens of different sizes, from a few millimeters to several meters.
- Its processes are traceable and it is possible to analyse the measurement process repeatedly.
- It is possible to select any measurement area for specific analysis of different areas.

video strain module



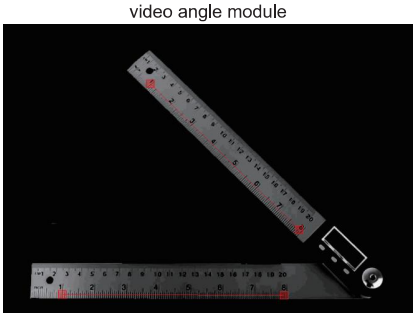
- It is a virtual strain gauge, it is non-contact measurement, it does not require a high material surface.
- It is adjustable in size, it can be set to adjust the size of different strain gauges.
- It has a large measuring range, its strain range is 0.002%~1000%.
- It can be used to measure small samples to solve the problem of conventional strain gauges pasting small samples.
- It can measure multiple data, strain X/Y/XY, maximum/small principal strain, etc.
- It can be used in high and low temperatures to replace the traditional strain gauge testing.
- It is very easy to use, no sanding, gluing, processing to use, it does not need to be set up.
- Its test procedure is traceable, and the measurement process can be repeated and analyzed retrospectively.

video displacement module



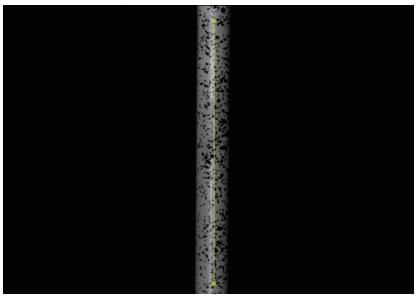
- It is a video sensor that can be adapted to non-contact displacement measurement and monitoring scenarios.
- It is a deflection meter, it can meet the various environments and various scales of deflection testing.
- It is a motion sensor, it can meet the needs of speed and acceleration testing.
- It can test deformable bodies. It is suitable for both rigid and deformable body testing.
- There is no limit to the number of test scenarios it can cover from microns to meters.
- It can perform high-precision testing, it can realize sub-pixel calculation accuracy, it is better than traditional vision.
- It can realize multiple data acquisition, it supports multiple measurement points and displacement X/Y/E test.

video angle module



- It allows for non-contact measurements, it requires no hardware connection to the measuring device, and it is easy to use.
- It can perform dynamic angle measurement, it can provide real-time feedback on the change of angle during dynamic testing.
- It can perform single line angle measurement, it can realize the angle measurement in the dynamic change of single line mechanism.
- It can carry out double line angle measurement, it can realize the angle measurement in the dynamic change of double line angle.
- It can perform linearity measurements, which is used to characterize the linearity of the motion of the mechanism in the dynamic test.

fatigue extensometer module



- It can perform non-contact measurements, it can avoid slipping of the jaws and so on.
- It can perform full-cycle testing, it can be a key to deal with low-week fatigue.
- It can run at high frame rates, and it can collect dozens of times the fatigue cycle.
- It can transmit for a long time, and it can realize stable output of large data.
- It can participate in the control, it can through the data on the test machine for the control of related actions.