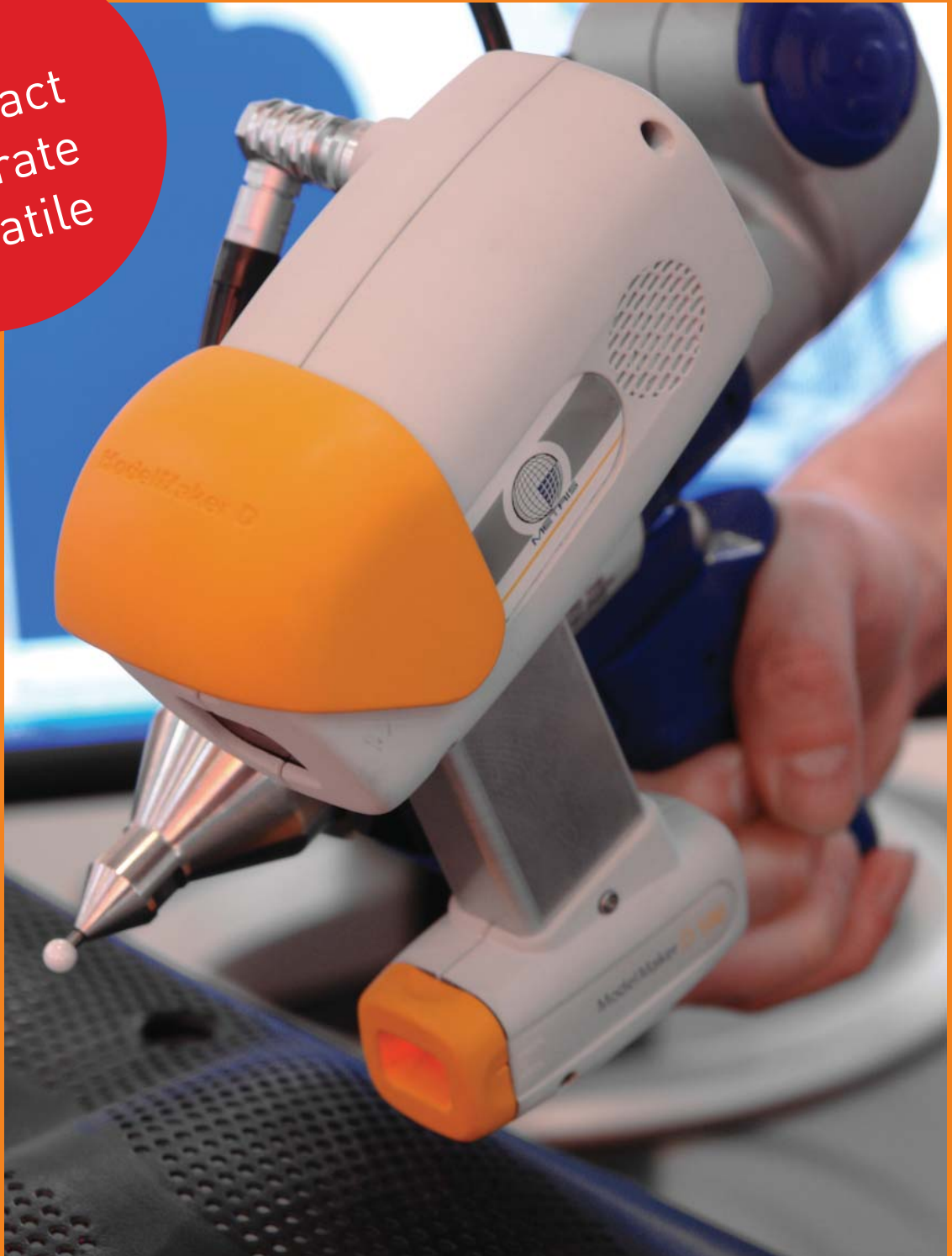




ModelMaker D

Fast
Compact
Accurate
Versatile

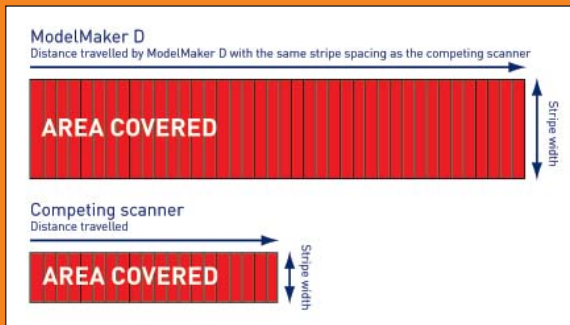


The digital handheld laser scanner

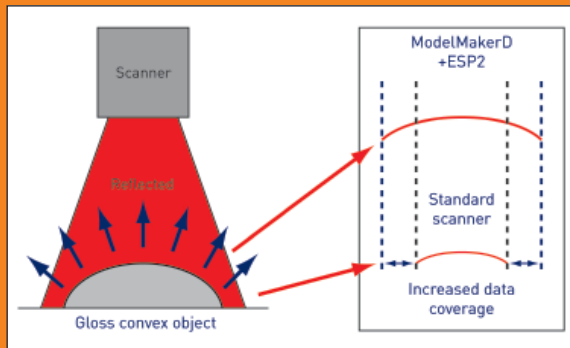
Ground breaking performance

BEST-IN-CLASS PRODUCTIVITY

With a maximum frame rate of 80 stripes per second and a stripe scan width of up to 180mm ModelMaker D's digital technology provides the ultimate in scanning productivity. The digital camera benefits from a 'real' (non-interpolated) resolution of 1000 points per stripe providing the user with the optimum resolution for fast efficient scanning and capturing of features.



The ModelMaker D with ESP2 adapts its laser power to suit the optical characteristics of the scanned object. ESP2 enables e.g. the scanning of steep sides of convex surfaces, often an issue with a standard laser scanner due to poorly reflected light. This increases the data coverage and substantially eliminates the need for re-scanning.



INTELLIGENT PATCH GENERATION

Intelligent Patch Generation (IPG) creates an optimal polygon mesh in real-time, while edges, features and 3D geometry are preserved.

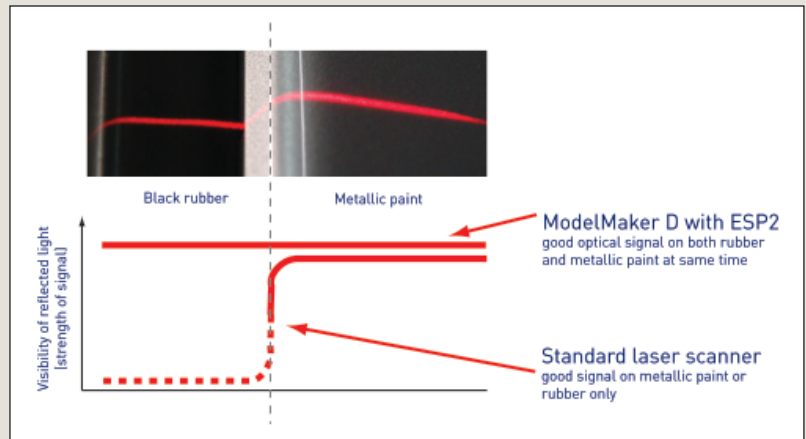
THE DIGITAL SCANNER

The unmatched accuracy, usability and performance of the ModelMaker D make it the perfect data capture tool for inspection, reverse engineering or any other 3D data capture applications.

The ModelMaker D, featuring True Digital Camera Technology, is a leap forward in 3D laser scanning including several groundbreaking innovations such as second generation Enhanced Sensor Performance (ESP2).

SCAN ANY MATERIAL

ModelMaker D with ESP2 enables the scanning of a wider range of colors and surfaces. While moving the scanner over the object, the MMD tracks changes in surface conditions —shape, color, reflectivity— and adapts the laser power and sensor settings in real-time. This enables the scanning of almost any material and any surface finish.



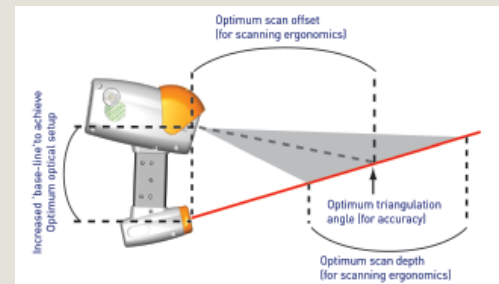
IMPROVED SYSTEM SIMPLICITY & PORTABILITY

The ModelMaker D plugs directly in your Windows based PC via an ethernet connection and requires no additional controller box. Only one compact cable is used to connect the MMD, the articulated arm and the PC. The scanner can be operated via battery power (optional).

IMPROVED USABILITY

With only 395 grams of weight and a large stand-off the ModelMaker D is optimized for ergonomics. The revolutionary "twin pod" casing offers several features designed for optimal performance:

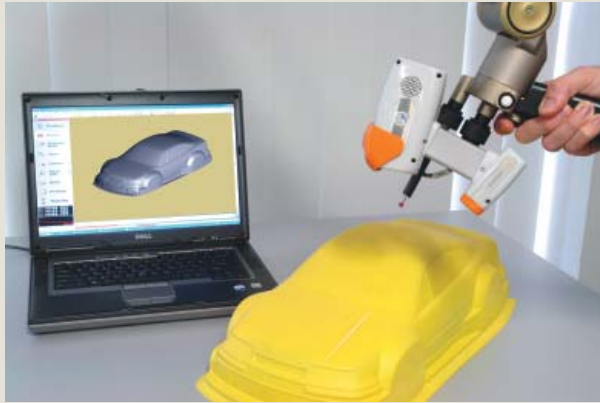
- All heat emitting electronics are isolated from the sensor enabling a minimal warm up time and stable accuracy in a large temperature range.
- The shock absorbent plastic casing is electrically and electromagnetically insulated for error-free results.



MODELMAKER D FEATURES

- High speed scanning (high frame rate, wider laser stripe)
- ESP2 (Enhanced Sensor Performance)
- Arm integration: Faro and CimCore 7-axis
- Intelligent patch generation
- No control box necessary
- On-board memory to store calibration data
- Battery operation enabled (optional)
- Innovative twin-pod design

Applications & Specifications



TOTAL SOLUTION

ModelMaker scanners are supplied with Metris's own KUBE software, making it the only laser stripe scanning system fully integrated into its own data capture and processing software for inspection and reverse engineering.

APPLICATION SOFTWARE

KUBE's algorithms have been specifically designed for processing laser stripe data to guarantee the highest quality and accuracy data possible. KUBE is a software package consisting of several seamlessly integrated modules.

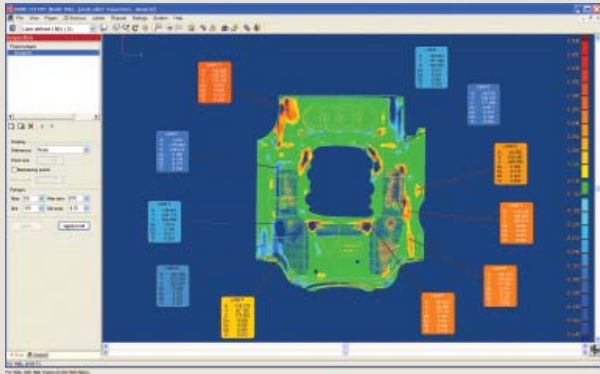
KUBE Scan is the most user friendly data acquisition software available for 3D scanning and also includes some basic pointcloud filtering.

KUBE Tools+ offers advanced datuming, coordinate system creation and meshing tools.

KUBE Inspect+ is an easy-to-use software tool providing essential surface inspection functionality, typically used for on-line inspection applications with immediate visual inspection results.

For advanced inspection functionality, Metris recommends Focus Inspection, its own world-class inspection software. Focus Inspection can import KUBE projects directly with a single click. Alternatively other 3rd party inspection softwares can be used.

For reverse engineering applications, KUBE or the more advanced Focus Reverse Engineering offer powerful data processing tools such as mesh creation, hole filling, noise reduction, feature enhancement, polygon reduction etc.



KUBE scan data to CAD inspection

KUBE INCLUDES

- Intuitive interface
- Patented real-time rendering
- Menu navigation with articulated arm
- Touch probe datuming
- Point cloud filtering and optimisation
- Scan to CAD inspection
- Import/export of all standard CAD formats
- Polygon mesh generation and mesh tools

TECHNICAL SPECIFICATIONS

	D50	D100	D200
Max stripe length (Y) (mm)	50	100	200
Range (Z) (mm)	50	100	150
Stand-off distance (mm)	130	150	115
Min point spacing (Y) (mm)	0.05	0.075	0.1
Speed (stripes/second)	80		
Sensor weight (g)	395		
Laser power	Class 2M		

All specifications are subject to change without notification

THE RIGHT TOOL FOR THE RIGHT JOB

The ModelMaker D is available in 3 stripe widths to match your specific resolution and productivity needs.

- MMD50: high resolution for detailed scanning
- MMD100: optimal trade-off between accuracy and productivity
- MMD200: optimized for productivity

APPLICATIONS

- Fast & accurate 3D scanning
- Part-to-CAD inspection: 1st article inspection against CAD model
- Inspection of geometrical features
- Flush and gap inspection
- Reverse engineering: from concept studio clay to class A surfaces
- Input for rapid prototyping

MODELMAKER D BENEFITS

- Faster and more accurate scanning saves money and time
- Ergonomic, light and small scanner
- Optimized for hard-to-scan surfaces
- Easy and fast plug & play set-up
- Designed for use in all shop floor conditions
- Portable out-of-the box system



THE METRIS COMPANY

Metris designs, develops and markets a unique range of 3D hardware and software inspection systems servicing design and manufacturing industries. The company's reliable and innovative metrology solutions cover the full range of measurement volumes required by automotive and aerospace customers, in both fixed and portable configurations and with optical and touch sensors.

Metris provides best-in-class precision equipment and metrology solutions for precise measurements featuring **classical CMMs** and **articulated arm CMMs**.

Metris is the market leader for CMM based laser inspection, with the **Metris LC and XC laser scanners** offering full surface and feature measurement.

Metris Optical CMMs are portable, handheld coordinate measuring machines, with a proven track record in engineering, pre-production and quality control applications. The Optical CMMs can also be used in motion analysis and robot calibration applications.

Metris ModelMaker 3D scanners are the best-in-class articulated arm scanners for inspection and reverse engineering.

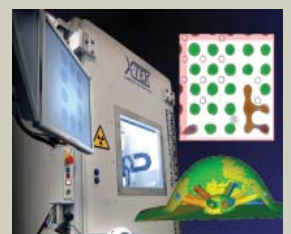
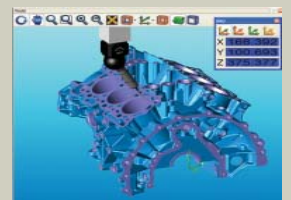
The **Metris Laser Radar** is the top solution available to the manufacturing industry that provides a fully automated, non-contact measurement and inspection capability for large-volume applications of up to 60 meters.

The **Metris iGPS** is a modular, large volume tracking system enabling factory-wide localization of multiple objects with metrology accuracy, applicable in manufacturing and assembly.

The **X-ray and CT inspection systems** provide a detailed insight in the internal structure of the part. Typically used for inspection of PCB electronics, small casting, plastics, these systems facilitate detection of material defects, assembly and interconnectivity issues

Metris also provides a full range of complementary **software solutions** for CMM and point cloud based inspection and reverse engineering applications.

Metris completes its product portfolio with a vast range of **support, metrology** and **integration** services.



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