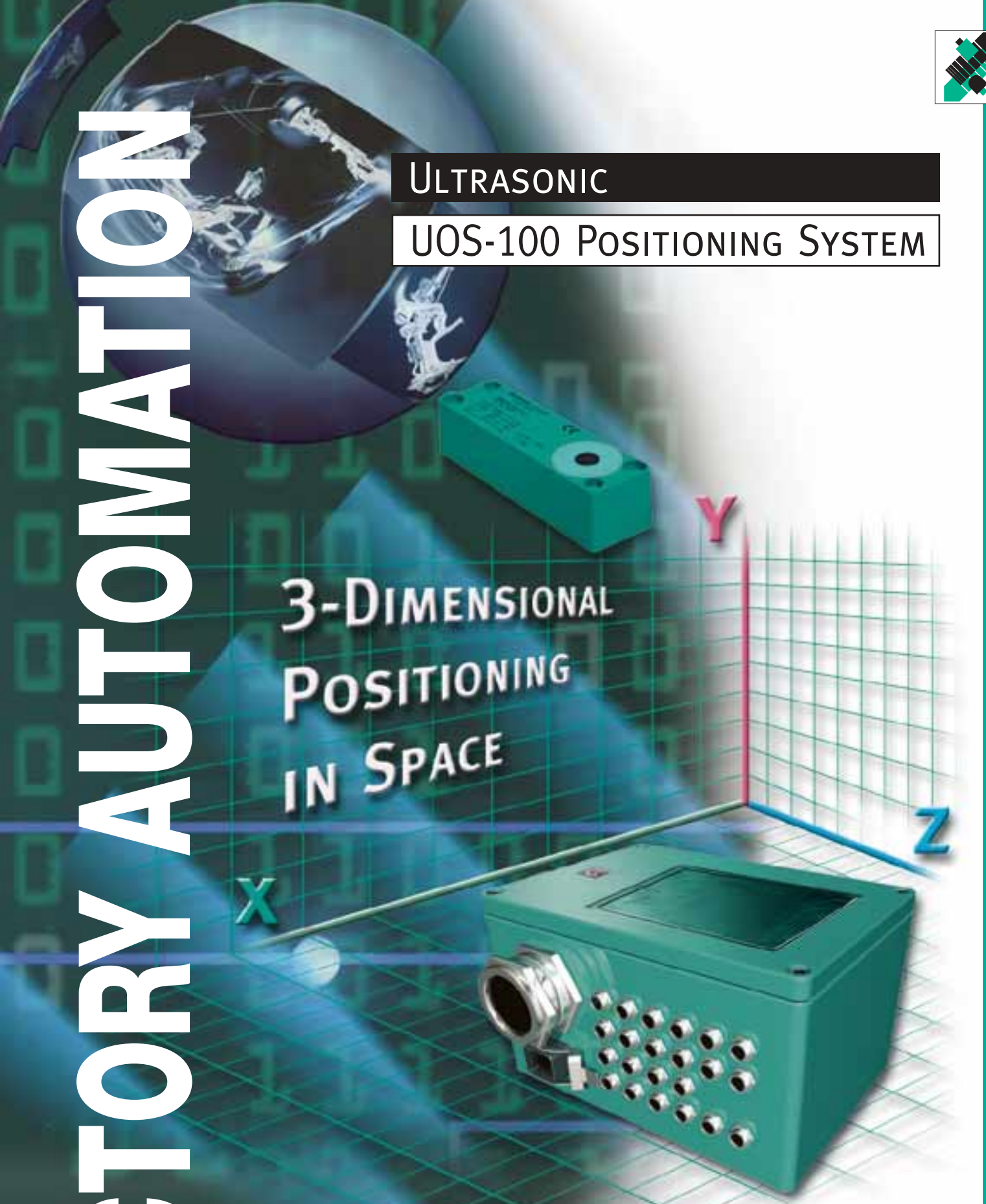
FACTORY AUTOMATION

Ultrasonic

UOS-100 Positioning System



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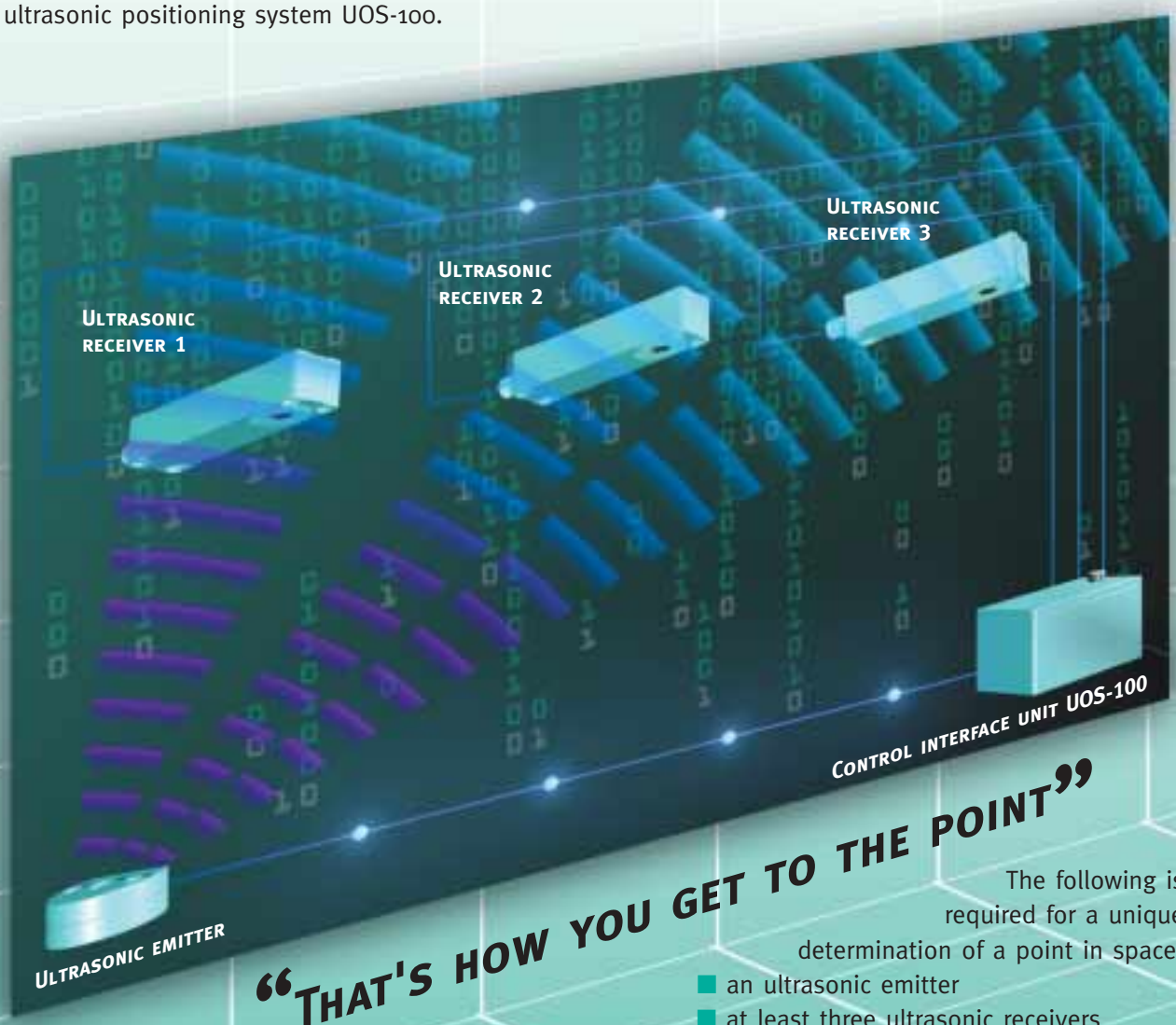
3D Positioning

by means of Ultrasonics

In almost all areas of automated and half-automated production, quality assurance is becoming increasingly important. Process reliability and the documentation of mounting procedures are the ultimate goals to ensure consistently high quality.
In future, the question whether all of the screws have been processed and in the correct order during the mounting process will be answered by the ultrasonic positioning system UOS-100.



"That's how you get to the point"

The following is required for a unique determination of a point in space:

- an ultrasonic emitter
- at least three ultrasonic receivers
- and a control interface unit UOS-100.

The principle of the 3-dimensional positioning of a point in space is realised on the basis of an ultrasonic propagation time measurement.
The UOS-100 system is a complete system – from propagation time measurement to the output of the calculated x, y, z coordinates of the object to be positioned. These coordinates can be used by a higher-level system control for individual workstation control.
The communication with the higher-level system control takes place via Ethernet.

- **User-friendly configuration software**

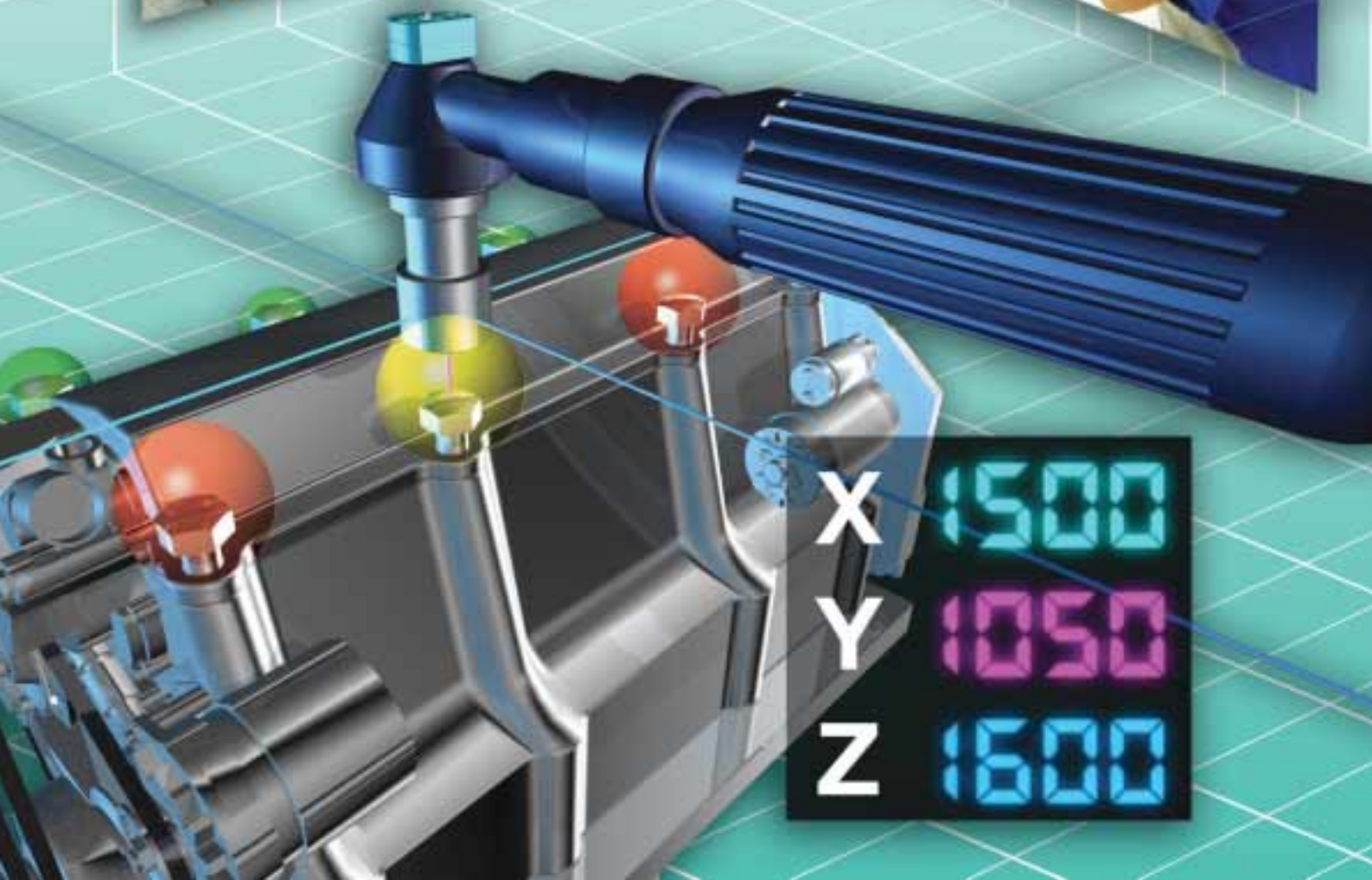
"Quality and Process Reliability by means of Ultrasonic Positioning"

The UOS-100 system supports up to four workstations at the same time. If several of these systems are cascaded, up to 128 workstations can be networked and thus also managed.

- Runtime-optimised calculation of the x, y, z coordinates
- High interference immunity
- Local storage of the process data
- Accuracy of measurement up to 1 cm (depending on the application)
- Range emitter - receiver up to 15 m
- Ethernet interface
- Monitoring of 4 workstations (4 ultrasonic emitters 16 receivers)
- Extendable to 31 times 4 workstations

Application examples

- Assembly process assurance for screwdriving technology
- Allocation of objects in an assembly line production
- Quality assurance systems
- .....

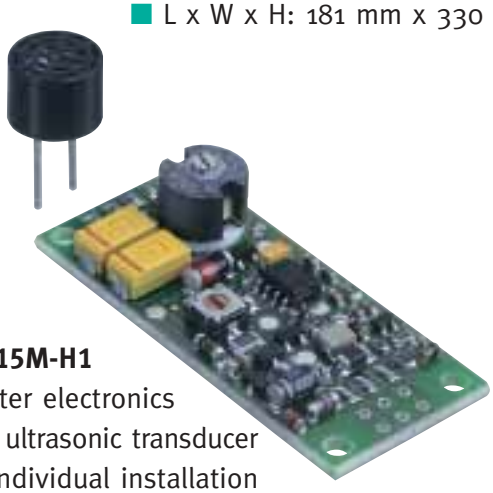


UOS-100 – System Components

UBE15M-F54-H2-V1
Ultrasonic receiver
- L x W x H: 25 mm x 105 mm x 32 mm

UBE15M-F54-H1-V1
Ultrasonic emitter
- L x W x H: 25 mm x 105 mm x 32 mm

UOS-100-B13
Control interface unit for determining the x, y, z object coordinates in space
- L x W x H: 181 mm x 330 mm x 230 mm



UBE15M-H1
Emitter electronics with ultrasonic transducer for individual installation
- L x W: 45 mm x 20.2 mm

Example for an ultrasonic emitter on a screw driver

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