

# UCC systems – the heart of your CMM



## UCC2

Provides the powerful platform for  
Renscan5™ 5-axis scanning systems



## Solutions for all CMMs

Supports industry standard  
I++DME protocol



## Ideal retrofit controller

Enhance the performance  
of your CMM



## Powerful control systems from Renishaw

Renishaw's range of controllers and servo power amplifiers bring unprecedented flexibility and productivity to users of co-ordinate measuring machines (CMMs).



Renishaw's controllers are amongst the first to support the I++DME protocol, which will allow a CMM user to use their preferred measurement software, by providing access to a wide range of metrology applications.

### Control solutions

The new family of universal CMM controllers (UCC2™ and UCC*lite*-2™), and servo power amplifiers (SPA2-2™ and SPA*lite*™) offer cost-effective solutions to every measurement requirement. They provide configurable packages that deliver unrivalled levels of probing flexibility and increased throughput, without compromising metrology excellence.

These products cover the full spectrum of CMM applications and requirements from basic TTP (touch-trigger probing) on manually operated machines up to fully automated multi-axis CMMs with highly advanced scanning capabilities.

These scanning functions are: Renscan3™ (traditional 3-axis CMM scanning) and the revolutionary new Renscan5™ (5-axis synchronised dynamic scanning).

### System flexibility

Combinations of the UCC/SPA product family can provide highly cost effective solutions for both new and retrofit CMM systems, precisely matching desired system functionality, and ensuring future upgrade potential (eg. from TTP to scanning).



## The range of controllers



### UCC2™ controller

The UCC2™ is a high power, multi-axis universal CMM controller, which offers greater measurement throughput by utilising sophisticated motion control algorithms and innovative scanning routines. UCC2™ provides the powerful platform for the revolutionary Reniscan5™ 5-axis system.



### UCClite-2™ controller

For applications requiring only TTP (touch-trigger probing) capability, UCClite-2™ is a highly cost-effective and compact CMM axis control solution configurable which uses a simple USB connection. UCClite-2™ is suitable for either manual or 3-axis DCC (Direct Computer Control) CMMs.



### SPA2-2™ servo power amplifier

The SPA2-2™ is a digitally controlled servo power amplifier that offers a flexible format to match system requirements and is available in configurations to accommodate between 3 and 7 axes. It also supports Renishaw's REVO™ 5-axis scanning system.



### SPA/ite™ servo power amplifier

SPA/ite™ is a lower powered digital 3-axis servo power amplifier unit suitable for smaller CMMs typically up to 1 m<sup>3</sup> volume. SPA2-2™ and SPA/ite™ digitally controlled servo power amplifiers have the advantage of comprehensive diagnostics and tuning programs, together with the capability of remote on-line support.



### Multifunctional hand control units

MCU1, MCU5™ and MCU/ite™ are designed for use with Renishaw's UCC range of controllers. The units are housed in an ergonomically styled enclosure that allows for hand-held or table mounted operation.

On the MCU1™ and MCU5™ models, a large LCD screen gives status information and allows interaction with the metrology program. The system allows navigation through operating software.

Both the MCU1™ and MCU5™ control units can be used to:

- control the motions of the CMM axes
- index the motorised head
- operate the rotary table
- operate as a computer mouse.

In addition MCU5™ has a STOP button which allows a rapid stop of the CMM without disengaging. MCU5™ is the hand control unit recommended for use with the 5-axis measurement REVO™ head.

The MCU/ite™ is a simple, cost effective joystick with all the control switches and indicators required to control a 3-axis CMM.



### Worldwide support

UCCserver.com is a dedicated website set up to support Renishaw's UCC controller range. It offers the latest controller software downloads, a comprehensive F.A.Q. (frequently asked questions) area and a post box for support files.

Renishaw's helpdesk, with a CMM knowledge database, allows us to offer proven solutions, kits and specific advice when dealing with your retrofit.

An international network of subsidiary companies and representative offices provides sales and technical support to customers around the world.

### Ideal retrofit controller

The flexible, modular system allows you to construct a customised solution to suit your application requirements.

The UCC controller range has been designed to seamlessly accommodate differences in voltage, polarity and configuration, offering an ideal retrofit solution.

Retrofits are carried out by a worldwide network of Renishaw trained and accredited companies.

### Future proofed

Choosing the UCC2™ ensures a guaranteed upgrade path to the latest Renishaw technology. Standard features of the UCC2™ include an interface for Renishaw's market leading SP25M scanning probe, 4-axis control, advanced calibration routines for Renishaw scanning probe technology, and a comprehensive error compensation system for geometric, temperature and machine dynamic errors.

New products can be added as plug-in daughter cards, and hardware and software upgrades can be carried out easily, with function enhancement available by email or telephone support.

The latest version of UCC software can be downloaded from [www.UCCserver.com](http://www.UCCserver.com)

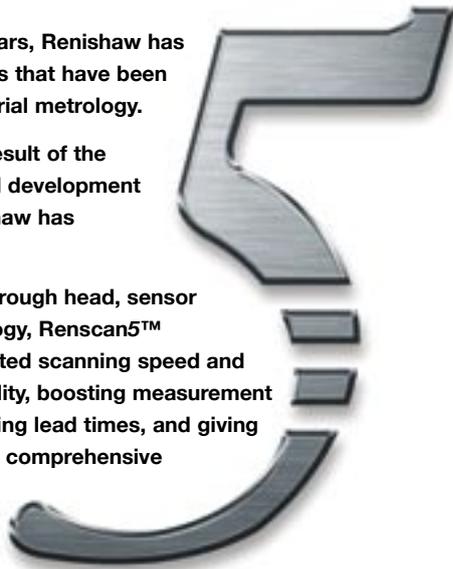


## RENSCAN<sup>5</sup>

For more than 30 years, Renishaw has delivered innovations that have been milestones in industrial metrology.

Renscan5™ is the result of the largest research and development program that Renishaw has ever undertaken.

Based upon breakthrough head, sensor and control technology, Renscan5™ delivers unprecedented scanning speed and measurement flexibility, boosting measurement throughput, minimising lead times, and giving manufacturers more comprehensive knowledge of their products quality.



### **Renscan5™ – a measurement revolution**

In conjunction with the astonishing new REVO™ servo scanning head probing system, Renscan5™ makes it possible to accurately measure at speeds of up to 500 mm/second, and virtually eliminates many of the measurement errors normally associated with scanning at speed on existing 3-axis scanning systems.



## Renishaw applies innovation to provide solutions to your problems

Renishaw is an established world leader in metrology, providing high performance, cost-effective solutions for measurement and increased productivity. A worldwide network of subsidiary companies and distributors provides exceptional service and support for its customers.

Renishaw designs, develops and manufactures products which conform to ISO 9001 standards.

Renishaw provides innovative solutions using the following products:

- Probe systems for inspection on CMMs (co-ordinate measuring machines).
- Systems for job set-up, tool setting and inspection on machine tools.
- Scanning and digitising systems.
- Laser and automated ballbar systems for performance measurement and calibration of machines.
- Encoder systems for high accuracy position feedback.
- Spectroscopy systems for non-destructive material analysis in laboratory and process environments.
- Styli for inspection and tool setting probes.
- Customised solutions for your applications.

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