

Pantec Metrology

Controllers and accessories for industrial metrology



# EAGLE™

Accuracy. Speed. Repeatability.  
Motion Control Solutions for CMMs

# EAGLE™

The EAGLE™ product family offers a comprehensive package of controllers for all kinds of coordinate measuring machines (CMM). Whether for machine builders or retrofiters, the EAGLE™ controller family stands for the highest speed, exceptional machine throughput and accurate results. Over 30 years of experience in metrology and some 15,000 Pantec-controlled CMMs installed worldwide mean a very high level of investment security, and assure you of maximum benefits.

**EAGLE™ basic**



**EAGLE™ pro**



## **EAGLE™ basic**

Reduced to the max. Pantec's EAGLE™ basic fulfills the requirements of medium profile CMMs, focusing on touch trigger probe applications at the highest performance level. Equipped with three servo drivers, interfaces to all established CMM softwares, and integrated power adaptor, all in a space-saving 2U 19" housing, EAGLE™ basic is the choice for standard applications.

## **EAGLE™ pro series**

**EAGLE™ pro/3** The EAGLE™ pro series are high-end controller systems with very high flexibility and unlimited measuring volume. By adding optional boards, the application areas can be easily extended.

**EAGLE™ pro/4** Equipped with a fourth axis for all machine types, like gantry or CMMs with rotary tables, EAGLE™ pro/4 is the ideal solution for complex metrology applications.

**EAGLE™ pro/4 HP** The additional fourth axis plus 1000 W total power makes EAGLE™ pro/4 HP the ideal controller for power-demanding measuring machines.

# APPLICATIONS AND HIGHLIGHTS

## VERSATILITY

EAGLE™ controls a wide range of CMM sensor applications – tactile, scan, laser & multi-sensor. The scope of applications is limitless – horizontal arm CMM, bridge CMM, gear inspection, milling and gantry CMM. EAGLE™ is compatible with almost any CMM software and supports standard touch trigger probes and motor types, and many scanning and probe head interfaces.

## DIRECT INTERFACES

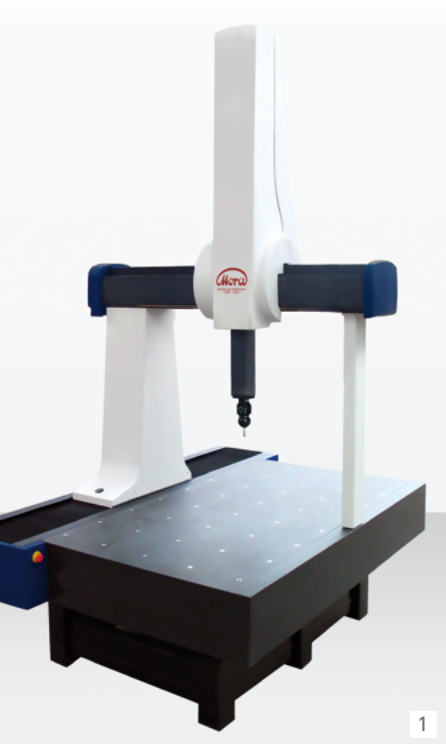
The direct connection to the CMM software driver ensures high data integrity for the end-user. No additional software is required, for higher user-friendliness and validity.

## OUTSTANDING REPEATABILITY, REPRODUCIBILITY AND HIGH SPEED

The high-end DSP technology ensures perfectly smooth machine movements and a very high sampling rate for reproducible, repeatable and accurate results at extraordinary speed. The fully digital T-Bus™ temperature monitoring, incorporated Geometric Error Compensation and sub-count interpolation for increased position resolution leave nothing to be desired.

### APPLICATIONS

- Bridge CMMs (1)
- Horizontal arm CMMs (2)
- Gantry CMMs (3)
- Gear inspection (4)
- Milling



## FIT AND FORGET

After initial installation and straightforward tuning, the EAGLE™ controller runs smoothly and stably for extended periods without intervention. A 100% QC pass rate over the entire supply chain and strict internal quality controls (security, functionality and endurance tests) ensure top product quality.

## EASY TO TUNE

The Pantec Support.Tool with integrated Wizard makes machine tuning fast and easy, and ensures optimum handling. Guided processes, dynamic adaptation of system parameters, and menu-guided operations result in higher operating safety. The Wizard is easily upgradable and provides continuous performance improvement to meet evolving requirements.

## GEOMETRIC ERROR COMPENSATION (GEC)

GEC involves the compensation of inherent geometric and thermal errors of CMMs. To actively maintain CMM accuracy, GEC adds dynamic temperature monitoring and compensation into the Pantec controller. For convenience and ease of use, the entire compensation procedure is done through the Pantec Support.Tool tuning and analysis software. The GEC Wizard incorporates the calibration laser and the machine type to add optimum flexibility in error capture, correction, and validation of results. An efficient design with minimal clicks offers a high level of operational convenience, while ensuring that the 21 or 23 parameterized compensation values cover virtually all possible scenarios.

# OPERATING UNITS

## EAGLE™ Pad

- . Robust and reliable
- . Economical standard solution
- . Proven technology
- . Ergonomic design, intuitive operation



## EAGLE™ Pad RC

- . Wireless connection



...Coming soon

The EAGLE™ Pad operating units are intended for use with the entire Pantec controller range. Enclosed in a rugged yet lightweight housing, these operating units offer exceptional performance, ergonomic design and high functionality – even under challenging operating conditions like the shop floor.

### EAGLE™ Pad – hand terminal for CMMs

Unquestionably in command. With the robust and reliable EAGLE™ Pad units. With its proven technology, ergonomic design and intuitive operation, EAGLE™ Pad is the economical standard solution for CMM operations.

### EAGLE™ Pad RC – hand terminal remote control

The EAGLE™ Pad RC, with its integrated battery and wireless module, communicates with the controller wirelessly and offers similar functionality as the cable variant. It allows for remote control of the machine from a longer distance and freedom of handling without an attached cable. A safety performance level D is achieved with this device.

## TECHNICAL DATA

	EAGLE™ basic	EAGLE™ pro/3	EAGLE™ pro/4	EAGLE™ pro/4 HP
<b>Specifications</b>				
▪ Configured for direct CNC controlled CMMs	✓	✓	✓	✓
▪ Number of CMM axes controlled	3	3	4	4
▪ Communications link with PC	Ethernet and RS232	Ethernet and RS232	Ethernet and RS232	Ethernet and RS232
▪ Direct Software integration	EAGLE.driver	EAGLE.driver	EAGLE.driver	EAGLE.driver
▪ Integrated motor power supply	✓	✓	✓	✓
▪ Touch-trigger probing function	✓	✓	✓	✓
▪ TP200 interface (with Head interface)	✓	✓	✓	✓
▪ SP600 interface (with Option Board)	-	✓	✓	✓
▪ SP25M interface (with Option Board)	-	✓	✓	✓
▪ SP80 interface (with Option Board)	-	✓	✓	✓
▪ Temperature sensor inputs (T-Bus™)	16 (with Head interface)	16	16	16
▪ Digital scale input RS422	✓	✓	✓	✓
▪ Pantec Support.Tool	✓	✓	✓	✓
▪ Emergency stop	✓	✓, extended	✓, extended	✓, extended
▪ Measurement volume	X+Y=3800 mm and Z=800 mm	unlimited	unlimited	unlimited
▪ Subcount interpolation	✓	✓	✓	✓
▪ Drive power	4 A / 60 V	5 A / 60 V	5 A / 60 V	5 A / 120 V
▪ Motor types	DC-Brush	DC-Brush	DC-Brush	DC-Brush
▪ GEC (Geometric Error Compensation)	✓	✓	✓	✓
<b>Electrical data</b>				
▪ Total input power (115 VAC / 230 VAC)	900 VA / 1250 VA	900 VA / 1250 VA	900 VA / 1250 VA	1150 VA / 1800 VA
▪ Input voltage	115 VAC / 230 VAC	115 VAC / 230 VAC	115 VAC / 230 VAC	115 VAC / 230 VAC
<b>Physical data</b>				
▪ Dimension (L x H x D)	490 x 90 x 380 mm	490 x 135 x 380 mm	490 x 135 x 380 mm	490 x 135 x 380 mm
▪ Weight	11.2 kg	13 kg	13 kg	18.5 kg
▪ Rack mounting	19" / 2U	19" / 3U	19" / 3U	19" / 3U
<b>Product Configuration</b>			<b>230 VAC</b>	<b>115 VAC</b>
▪ EAGLE™ basic	3 axis CMM controller		34607	34608
▪ EAGLE™ pro/3	3 axis CMM controller		34605	34606
▪ EAGLE™ pro/4	4 axis CMM controller		34609	34610
▪ EAGLE™ pro/4 HP	4 axis CMM controller		34611	34612
<b>Hand terminls</b>				
▪ EAGLE™ Pad	34530			
▪ EAGLE™ Pad RC	on request			
<b>Options</b>				
▪ SP25/600 Interface	33506			
▪ SP80 Interface	33507			
▪ SP25/80/600/PHS Interface	33508			
▪ TP200 Interface	34478			
▪ Analog Interface ±10 V	34480			
▪ SP25/80/600/PHS, Analog Interface ±10 V	34481			
▪ Brushless Axis with Scan Interface	55598			
▪ Brushless Axis	55599			



Pantec Metrology, located in Ruggell, Liechtenstein, develops technologies that make CMM and vision systems more competitive. With an installed base of more than 15,000 CMM controllers worldwide, the company plays a leading role in the field of CMM machine control. Pantec Metrology is a Business Unit of Pantec Engineering AG.

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Pantec Engineering AG provides solutions in automation and mechatronics for the mechanical engineering and medical device industries worldwide. Through its rigorous focus on niche strategies and high degree of service orientation, the company has become a world leader in its five primary markets.

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