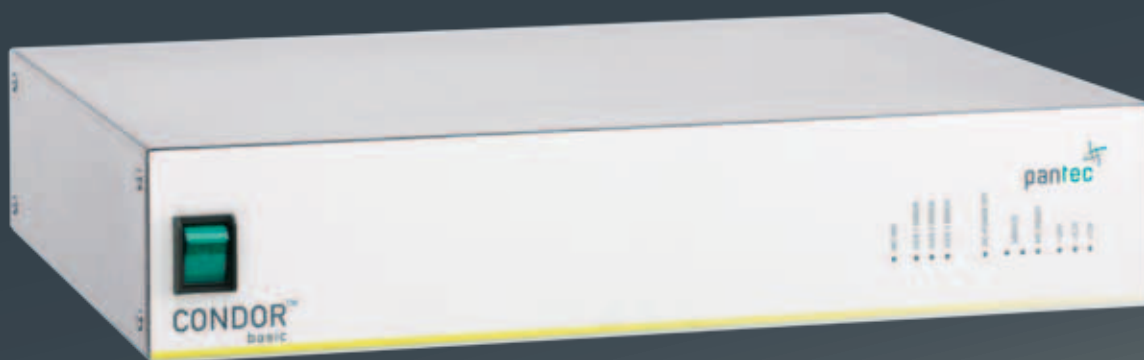**Pantec Metrology**

Controllers and accessories for industrial metrology

pantec

CONDOR™

The One-Box-Solution
Controller Solutions for multi-sensor CMMs

CONDOR™

The CONDOR™ product family offers a comprehensive package of controllers for all kinds of multi-sensor CMMs and applications. Whether for machine builders or retrofitters, the CONDOR™ controller family stands for an integrated one-box solution consisting of either 3 or 4 main axes, 2 secondary axes and LED driver for 20 independent, individually programmable and dimmable LED sectors. This results in fewer cable connections, compactness and plug & play installation, while still offering the highest speed, exceptional machine throughput and accurate results. 20 years of experience in metrology and some 15,000 Pantec-controlled CMMs installed worldwide mean a very high level of a secure investment, and assure you of maximum benefits.

CONDOR™ basic

CONDOR™ pro series

CONDOR™ basic

Reduced to the max. Pantec's CONDOR™ basic fulfills the requirements of medium profile, multi-sensor CMMs, focusing on touch trigger probe applications and optical systems at the highest performance level. Equipped with three main and two secondary axes, interfaces to all established CMM softwares, LED drivers and integrated power supply, all in a space saving slim housing, CONDOR™ basic is the choice for standard applications. All CONDOR™ controllers are available for 115 or 230 V input voltage.

CONDOR™ pro series

CONDOR™ pro/3 The CONDOR™ pro series are high-end controller systems with very high flexibility, unlimited measuring volume and additional RS232 interface.

CONDOR™ pro/3 Scan The addition of a scan option board extends this controller's functionality to scan applications.

CONDOR™ pro/4 Equipped with a fourth main axis for all machine types, CONDOR™ pro /4 is the ideal solution for complex metrology applications.

CONDOR™ pro/4 Scan The addition of a scan option board extends this controller's functionality to scan applications.

APPLICATIONS AND HIGHLIGHTS
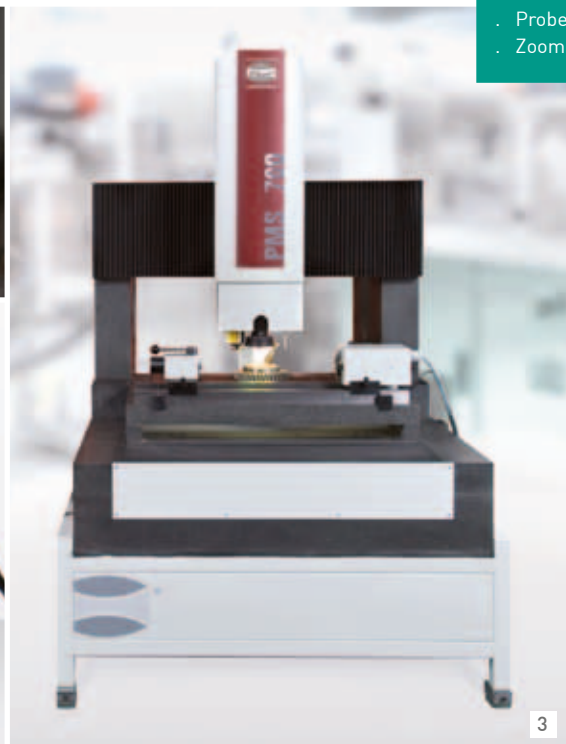
PLUG AND PLAY DEVICE

The plug-and-play design of the controller gives immediate installation capability without needing any preparations. Just plug in, tune and measure. This also greatly reduces service effort.

EASY TO TUNE

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

APPLICATIONS
. Rotary Table (1)
. LED Ring (2)
. Multisensor (3)
. Scanning Probe (4)
. Probehead
. Zoom

WORKS WITH ANY SYSTEM, HIGHLY VERSATILE

CONDOR™ controls any kind of multi-sensor CMMs. The variety of applications is almost limitless - rotary table, probe head, scanning probe, zoom, LED ring and illumination. CONDOR™ is compatible with almost any software and drivers. It supports established touch trigger probes, laser scanning systems, motor types and many scanning and probe head interfaces.

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.

OPERATING UNITS

EAGLE™ Pad
. Robust and reliable
. Economical standard
  solution
. Proven technology
. Ergonomic design,
  intuitive operation

SmartPad™
. Openly programmable
. Wireless connection
. Touchscreen with all
  important information
  at a glance

The EAGLE™ Pad and SmartPad™ 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.
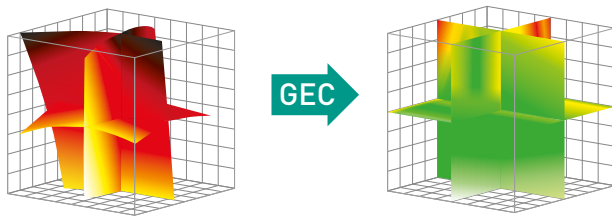
SmartPad™ – remote control for CMMs
In Command. Easily. With the new SmartPad™ units from Pantec. These devices provide multi-functional and comprehensive CMM operation with user-friendly wireless connection. Thanks to the open programmability of the SmartPad™ you can program the user interface, functions and interactions with the CMM software to meet your individual needs. The capacitive 4.3" color LCD display shows all information at a glance, and features single touch technology that ensures smooth and easy operation, even with gloves on. With optimal functionality, SmartPad™ ensures ideal measurement processes.

CONDOR™ TECHNICAL DATA

	CONDOR™ basic	CONDOR™ pro/3	CONDOR™ pro/3 Scan	CONDOR™ pro/4	CONDOR™ pro/4 Scan
General Specifications					
Configured for direct CNC controlled CMMs	✓	✓	✓	✓	✓
Number of CMM axes controlled	3+2	3+2	3+2	4+2	4+2
Communications link with PC	Ethernet	Ethernet and RS232	Ethernet and RS232	Ethernet and RS232	Ethernet and RS232
Software integration	EAGLE.driver	EAGLE.driver	EAGLE.driver	EAGLE.driver	EAGLE.driver
Integrated motor power supply	✓	✓	✓	✓	✓
Touch-trigger probing function	✓	✓	✓	✓	✓
TP200 interface	✓	✓	✓	✓	✓
Measurement volume	X+Y = 3800 mm and Z = 800mm	unlimited	unlimited	unlimited	unlimited
Pantec Support Tool	✓	✓	✓	✓	✓
Emergency stop	✓	✓, extended	✓, extended	✓, extended	✓, extended
Temperature sensor inputs (T-Bus™)	-	16	16	16	16
SP600 interface	-	-	✓	-	✓
SP25M interface	-	-	✓	-	✓
SP80 interface	-	-	✓	-	✓
Geometic Error Compensation	✓	✓	✓	✓	✓
Main Axis					
Number of main axis	3	3	4	4	4
Drive power	4A/60V	5A/60V	5A/60V	5A/60V	5A/60V
Digital scale input RS422	✓	✓	✓	✓	✓
Feedback	Encoder/Tachometer	Encoder/Tachometer	Encoder/Tachometer	Encoder/Tachometer	Encoder/Tachometer
Motor Types	DC-Brush	DC-Brush	DC-Brush	DC-Brush	DC-Brush
Secondary Axis					
Number of secundary axis	2	2	2	2	2
Drive power	2A/24V	2A/24V	2A/24V	2A/24V	2A/24V
Feedback	Encoder/Tachometer/Hall	Encoder/Tachometer/Hall	Encoder/Tachometer/Hall	Encoder/Tachometer/Hall	Encoder/Tachometer/Hall
Motor types	DC-Brush/Brushless/Stepper	DC-Brush/Brushless/Stepper	DC-Brush/Brushless/Stepper	DC-Brush/Brushless/Stepper	DC-Brush/Brushless/Stepper
LED Driver					
Number of mid current LED	16	16	16	16	16
Number of high current LED	4	4	4	4	4
Total LED power	20 W	20 W	20 W	20 W	20W
Electrical Data					
Nominal input power	550 VA	550 VA	550 VA	550 VA	550 VA
Input voltage	115 VAC / 230 VAC	115 VAC / 230 VAC	115 VAC / 230 VAC	115 VAC / 230 VAC	115 VAC / 230 VAC
Physical Data					
Dimension (L x H x D)	490 x 100 x 380 mm	490 x 135 x 380 mm	490 x 135 x 380 mm	490 x 135 x 380 mm	490 x 135 x 380 mm
Weight	11 kg	20 kg	20 kg	20 kg	20 kg
Rack mounting	19"	19"	19"	19"	19"

Product Configuration		**230 VAC**	**115 VAC**
CONDOR™ basic	3 axis CMM controller	34921	34922
CONDOR™ pro/3	3 axis CMM controller	35008	35009
CONDOR™ pro/3 Scan	4 axis CMM controller	35001	35012
CONDOR™ pro/4	4 axis CMM controller	35000	35001
CONDOR™ pro/4 Scan	4 axis CMM controller	35013	35014

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. Understanding the importance of this feature, Pantec has chosen to include and standardize the GEC software package as an added-value benefit of the EAGLE™ controller.

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.

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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