iTK

Positioning systems made to measure.

| OEM Machines | Positioning Systems | Modules | **Components** |

Andromeda CM

Andromeda Base Controller

Andromeda TT

Andromeda Series
Fine positioning in the sub-micrometer range

The Andromeda series controllers are based on a modular concept and allow fine positioning in the sub-micron range. Andromeda controllers are very compact and scalable up to a full 6-axis controller. The MR sensors used ensure a position resolution of < 2 nm. The optimised control of the power output stages results in a low self-heating of the axis modules. Andromeda controllers are compatible with all common motor types in the extra-low voltage range and offer real-time data processing. In addition to the version for control cabinet installation (Andromeda CM), the Andromeda controller is also available as tabletop version (Andromeda TT).

Key Features.

- Scalable up to 6 axes, internal and/or external
- Fast and versatile communication
- Extremely high position resolution down to < 2 nm
- Analogue/digital inputs for incremental/absolute position and angle measuring systems
- Tabular error correction
- Precise position-trigger pulse generator
- 24 to 48 Volt power supply
- Motor power maximum 160 W (RMS) per axis
- Precise integrated motor current measurement
- Real-time data logging
- Script programmes can be executed directly on the controller, even without PC connection

Your advantages.

- Versatile application possibilities through flexible connection of the motors to be controlled or complete positioning systems
- Compact size
- High computing power through 1.2 GHz Quadcore CPU
- Supports all common motor types
- Axis modules for the microscopy range remain cool
- Axis modules can be networked in real time with LVDS, no longer need to be spatially close to the CPU
- Versatile digital inputs and outputs
- Available as tabletop version TT or for control cabinet installation

Highlights.

Realtime Data Capture.

Motion sequences can be simulated in the MotionManager. Currents, power, voltage and travel profiles are displayed. In interaction with the MotionManager, the Quicklog function in the Andromeda controller allows the real-time data to be displayed as in the simulation shown. This provides a direct comparison between target and actual values. This is the prerequisite for optimally adjusting the servo controller.
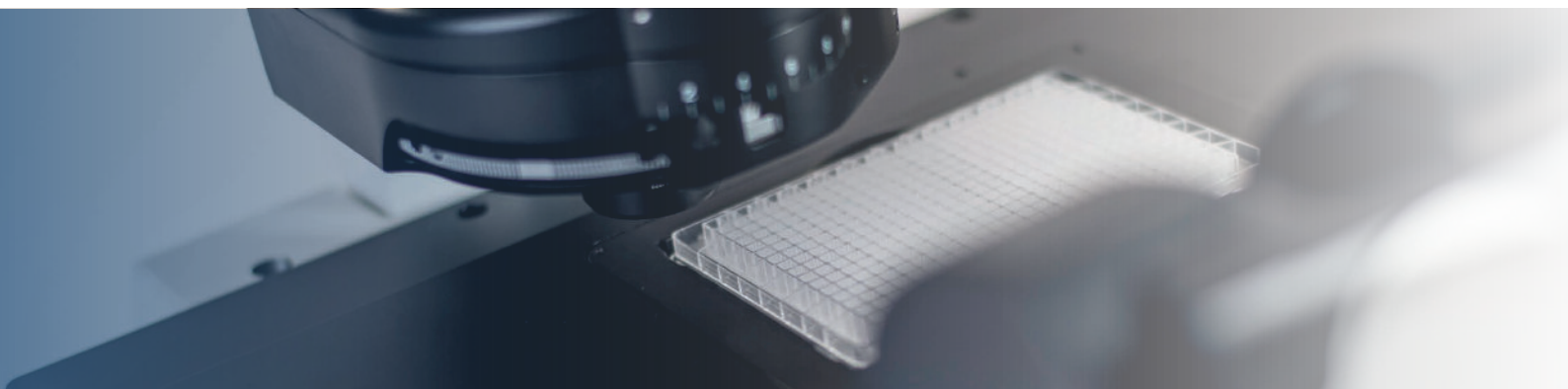
MotionManager 3
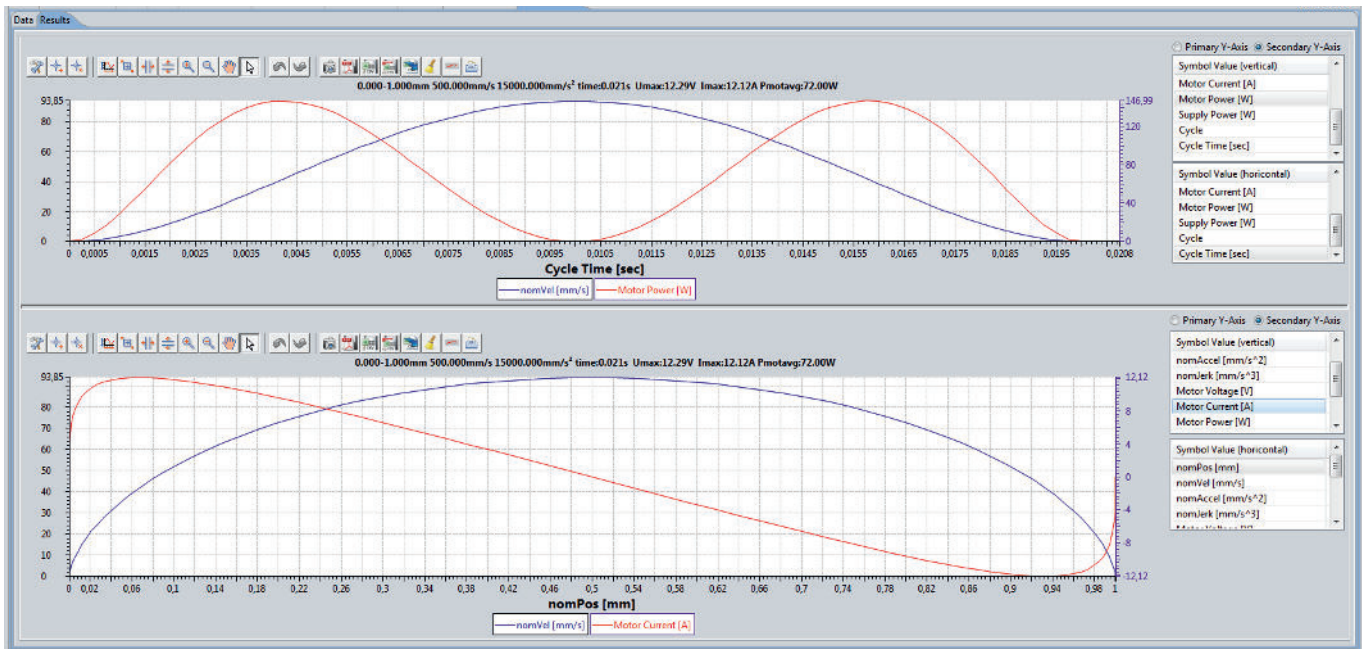
Fast Response Technology (FRT).

FRT defines a package of diverse measures for highly dynamic positioning while reducing mechanical vibrations and power requirements. The vibration time and amplitude at the target location has been reduced by a factor of 5 - 10 compared to conventional PID controllers. **FRT does positioning audibly better!**

Technical Data.

Andromeda TT

Parameter	Value
Operating voltage	24 or 48 Volt
Motor phase current (RMS)	5 Ampere cont.
Motor power per axis	160 W
Power supply	Internal power supply: 100 ... 240 Volt, 200 W
Position resolution	1 Nanometer
Axes	3
Communication	Ethernet, RS232, USB, CAN
Manual control units	Joystick, handwheel
Measurement interface (each axis)	1 Vss 16 Bit SinCos sensor or 3 Tracks 1 Vss absolute sensor or RS-422 Quadrature encoder
Input/Output	2 x TTL Trigger Output 2 x Diffential Trigger Output 2 x Analogue Input 4 x TTL Input/Output 4 x isolated input 7 x Open Collector input 2 x Switch Input per axis
Processor	1 .2 GHz ARM Cortex-A53 Quadcore
Storage	1024 MB RAM, 4 GB Flash
Command language	Venus 3

Andromeda CM

| Parameter	Value
Operating voltage	24 or 48 Volt
Motor phase current (RMS)	3 Ampere cont.
Motor power per axis	140 W
Power supply	External power supply available
Position resolution	1 Nanometer
Axes	1 to 6
Communication	Ethernet, RS232, USB, CAN
Manual control units	Joystick, handwheel
Measurement interface (each axis)	1 Vss 16 Bit SinCos Sensor or 3 Tracks 1 Vss absolute sensor or RS-422 Quadrature encoder
Input/Output	2 x TTL Trigger Output 2 x Diffential Trigger Output 2 x Analogue Input 4 x TTL Input/Output 4 x isolated input 7 x Open Collector input 2 x Switch Input per axis
Processor	1 .2 GHz ARM Cortex-A53 Quadcore
Storage	1024 MB RAM, 4 GB Flash
Command language	Venus 3

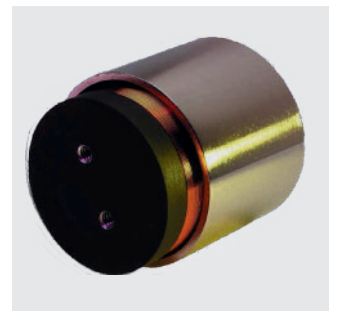# Supported Motor Types.

Stepper motors with / without sensors

Servo motors & DC motors
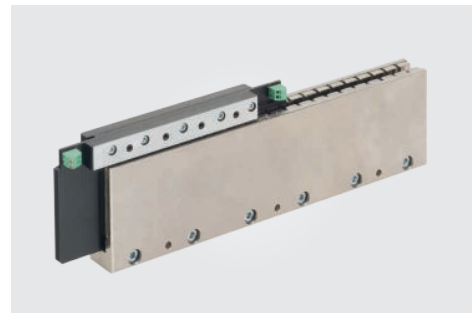
Linear motors

Torque motors

Voice coil motors
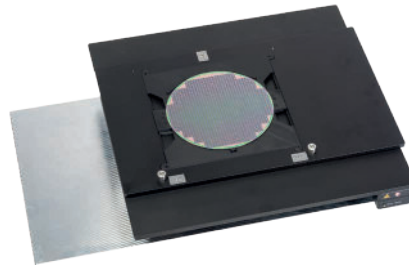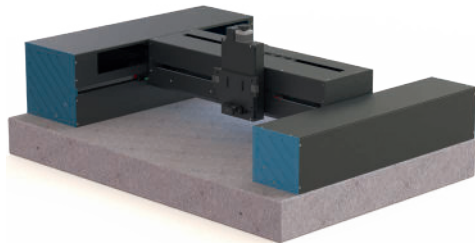
Typical Applications■

Cross stages

Microscope stages (LMT series)

PT15 series positioning systems

**OEM machines
(measuring and magnetization machines)**

Accessories■

Handwheel

- for moving two axes
- ergonomic and dynamic
- sensitive positioning due to high encoder resolution and precision roller bearings

2-axis Joystick

- 6 freely programmable buttons
- 8 LEDs
- conntected to the CAN-Bus
- versions available for normal or heavy use

Multiwheel

- for moving three axes
- 8 individually programmable buttons
- ergonomic design
- high encoder resolution and precision roller bearings