

ETEL MOTION CONTROL

The full ETEL solution allows machine builders to simplify mechanical integration in their machine thanks to a very consistent design and a modular architecture that is easy to wire and mount. It also gives customers the opportunity to focus on their core competence and technology while ETEL takes care of motion systems development.

ETEL's motion control solutions have been integrated into leading edge machines of various high-tech industries for more than 20 years. ETEL's range of motion controllers (UltimET) and position controllers (AccurET) allows machine builders to drive any available servo motors on the market (brushless, DC motors, steppers) with the highest performance regulation in a minimal footprint.

Its decentralized architecture ensures the same level of performance and speed regardless of the number of axes driven in the machine. Distributed architecture also makes cabling easier to manage and to maintain in the field. Last but not least, the software environment, ComET and EDI, simplifies software development, machine installation and maintenance.

➤ For more information, refer to our **Motion Control** catalog or leaflets.



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Motion Control

MOTION CONTROL

HUMAN MACHINE INTERFACE

Customer application software.



ComET is the ETEL software environment for commissioning and maintenance.

IMP

Software for time/accuracy optimization of complex trajectories.

EDI

Library provided to interface machine software with ETEL controllers.



UltimET can run three multi-axis structured code motion sequences at the same time. Available both in interpolated and synchronized.



AccurET can run two multi-axis structured code motion sequences on each axis.

SOFTWARE

HARDWARE

ETEL

ETEL

MULTI-AXIS MOTION CONTROLLERS

UltimET light UltimET Light motion controllers can reliably manage axis synchronization or interpolation of up to 63 axes on the TransnET bus. Notably, the level of performance will be the same no matter the number of axes, allowing high-end machine design.

2 versions

- UltimET Light interpolation (interpolated movements)
- UltimET Light smart gateway (synchronized movements)



Multiple hardware formats

- PC based board (PCI or PCIe)
- AccurET optional board (TCP/IP)

SOFTWARE ENVIRONMENT

ComET ComET is a user friendly interface for commissioning and maintenance with ETEL's controllers. Thanks to ComET, the user can optimize the machine design during the development phase as well as the controller parameter set. As a result, machine stability and robustness are improved at runtime.



axis X is
b:ULTIMET
terr = dsa ope
axis X is on d
DSA_DIAG(err.

The ETEL Device Interface (EDI) is a library which enables the communication between ETEL's motion control system and the customer's application.

The Interpolated Motion Planning (IMP) is a piece of software for optimisation of complex trajectories which require geometry fitting, automatic transition and trigger placement. Using IMP increases throughput without compromising on accuracy.

AccurET MODULAR

AccurET AccurET dual axis controllers are key in ETEL's distributed motion control architecture. They perform setpoint generator, position and current loop real-time control algorithms. AccurET also computes all encoder and local I/O related programming. In addition, they run up to 2 embedded programs per axis, so machine builders can manage any process specific tasks at the controller level.

Max. DC bus voltage

600 V						MODULAR 600
400 V		MODULAR 400		MODULAR 400		MODULAR 400
340 V		MODULAR 300		MODULAR 300		
48 V	MODULAR 48		MODULAR 48			
	2.5 / 5 Arms	4 / 7.5 Arms	5 / 10 Arms	7 / 15 Arms	10 / 20 Arms	15 / 40 Arms

Cont. / peak current

Highlights

- Modular mounting concept and compact solution
- An optional board can be embedded
- Easy power and cabling
- 3D mapping available as standard
- Very well suited for electronics and semiconductor applications

Advanced features

- Fast triggers (1D and 2D)
- Force control
- Identification tools
- Gantry control
- Stage protection
- Cogging and friction compensation
- Dual encoder feedback
- RTV (Real Time Values)
- Trajectory filters



AccurET VHP

AccurET For the most demanding applications, ETEL developed a unique Very High Performance position controller range called AccurET VHP. This range of product is equipped with both specific hardware and software that maximizes the performance. AccurET VHP position controllers are compatible with all the other AccurET controllers and can be dedicated to the most demanding axes of a multi-axis motion system.

Max. DC bus voltage

100 V			VHP 100	VHP 100
48 V	VHP 48	VHP 48		
	1.5 / 3 Arms	5 / 10 Arms	7 / 15 Arms	10 / 30 Arms

Cont. / peak current

Highlights

- Achieve outstanding signal to noise ratio of 100 dB @ 10 Arms
- Enable extremely low tracking errors and sub-nanometer position stability
- 3D mapping available as standard
- Control the most demanding axes in terms of speed accuracy
- Enable extremely high resolution position feedback in combination with high speed motion

Advanced features

- Fast triggers (1D and 2D)
- Force control
- Identification tools
- Gantry control
- Stage protection
- Cogging and friction compensation
- Dual encoder feedback
- RTV (Real Time Values)
- Trajectory filters
- Built-in analog Input/Output
- High Speed Encoder Interface (HSEI)

