

Your **Next** Intelligent **Move**

TECHNOSOFT
MOTION TECHNOLOGY

iPOS2401 MX-CAN Intelligent Servo Drive

Miniaturized Motion Controller For Brushless And Step Micro-Motors

Specifically designed for high performance positioning applications where space is critical, the iPOS2401 represents a universal control solution for a complete category of micro motors that usually do not require more than 1A continuous even in dynamic regimes. Brushed DC, brushless DC, stepper or linear motors can be controlled by the Technosoft micro-drive that supports incremental TTL encoder and digital Halls as position sensors.

The iPOS2401 is based on a new design concept offering a cost effective, compact and modular solution for the control of micro-motors of powers up to 25W, with 24V nominal voltage.

Designed to cover from low- to high-volume applications, the iPOS drive integrates all the basic motor control functions and the motion control functionality on a single plug-in module. A series of I/O signals, both digital and analogue, are available for easy interfacing with the application.

With only 9 cm-square surface, on a plug-in module, the iPOS micro-controller offers a large flexibility in terms of integration into the user motherboard where the size, shape and connectors can be customized to respond exactly to the application requirements.

Thanks to the TML (Technosoft Motion Language) instruction set, the iPOS2401 is a drive with embedded motion controller programmable at user's level. In simple applications the unit can operate as a single-axis motion controller and drive, in stand-alone mode, autonomously running the program residing in its non - volatile memory. In systems that request a host, the iPOS drive operates as an intelligent slave executing motion sequences triggered by input lines or commands received via RS-232 or CAN bus communication.



TML CANopen

iPOS2401 Features

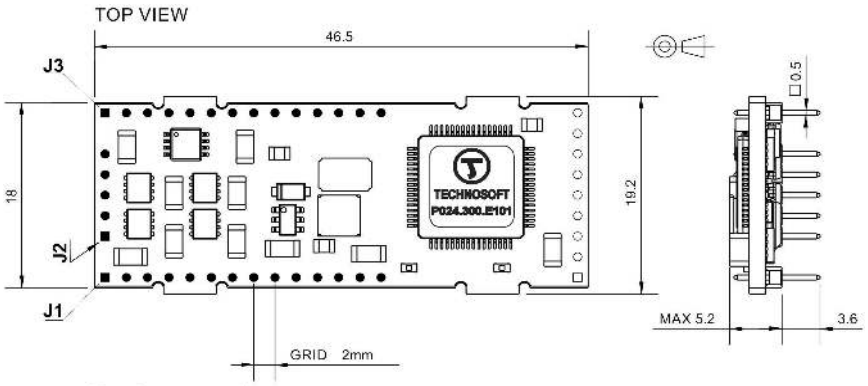
- Micro-sized motion controller and drive for small motor up to 25W continuous
- Suitable for any motor technology (brushed, brushless, step or linear)
- Sinusoidal (FOC) control of brushless motors and 2 / 3-phase step motor
- Miniaturized design (19.2 x 46.5 x 8.6 mm)
- Various modes of operation: torque, speed or position control
- Enhanced internal trajectory generator for position profiles or external reference via communication bus
- TMLCAN and CANopen (CiA 301 and 402) protocols
- Digital inputs: 5-24V, NPN (Enable, 2 Limits switches, plus 2 general- purpose)
- Digital outputs: 5-24V, 0.5A, NPN open-collector (2 general-purpose)
- Analogue inputs: 12-bit, 0-5V: Reference or Feedback or general-purpose
- Incremental quad encoder and digital Hall sensors
- Single power supply 7-30V; optional separated logic supply
- Output current: 1A cont. (BLDC mode) up to 100KHz PWM



Application notes with TML program examples available at www.technosoftmotion.com.

This information is subject to change without notice.

Dimensions, Specifications, Ordering Information



Drawing not to scale
Tolerance ± 0.1mm (unlesss otherwise noted)
Weight: 6g

Electrical Specifications

Maximum DC supply voltage: motor and logic	24V
Maximum continuous current	1A
Peak current	1A (optional 3A)
Nominal switching frequency	20-60kHz
Operating ambient temperature	0°C-40°C

Ordering Information

P024.300.E101	iPOS2401 MX-CAN Intelligent Drive, 24V, 1A, Plug-in, Enc., CAN
P024.300.E804	iPOS2401 MX-CAN Starter Kit with brushless motor

Flexibility

Control schemes supported by the iPOS2401 Drive

Motor types	Torque Control	Speed Control	Position Control
Brushless DC/AC	√	√	√
DC Brush	√	√	√
Step	√	√	√

EasyMotion Studio

The configuration, tuning and programming of the iPOS2401 drive is easy with Technosoft's powerful graphical platform, EasyMotion Studio. System configuration and parameterization are performed by selecting and testing the system structure, motor and sensor types and control mode.

The high level graphical development environment EasyMotion Studio, supports the configuration, parameterization and programming of the drive, through:

- Motion system set-up wizard
- Tuning assistance with capture functions
- Definition, programming and testing of motion sequences
- Development of complex motion applications for either stand-alone configurations

Motion Control Libraries

The TML_LIB Motion Control Libraries can be used to implement a motion control application on a PC from Visual C / C++, C#, Visual Basic, Delphi or LabVIEW under Windows or Linux operating systems.
If a PLC is used as host, implementations of the TML_LIB following PLC open standard are available for Siemens, B&R and Omron PLCs.

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