

iPOS4808 INTELLIGENT SERVO DRIVES

400 W

COMPACT DRIVE SOLUTION FOR ROTARY OR LINEAR BRUSHLESS, DC BRUSH AND STEP MOTORS

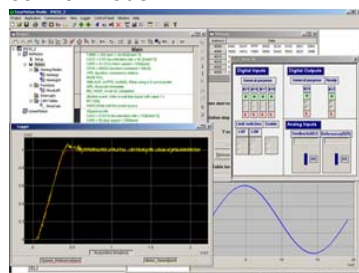
The iPOS4808 is based on a new design concept offering a cost effective, compact and modular solution for the control of rotary or linear brushless, DC brush, and step motors of powers up to 400 W, with 50 V nominal voltage.

Modularly designed to cover from low- to high-volume applications, iPOS4808 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.

iPOS4808 offers a flexible and modular solution at various levels: plug-in vertical (VX models) or horizontal (MX models) open PCB that can be integrated on the user's motherboard, or protected by a metal cover and provided with retractable connectors (BX models).

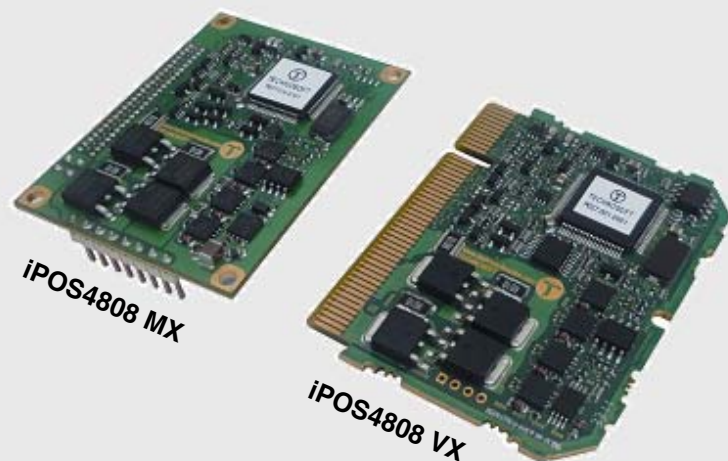
Thanks to the TML (Technosoft Motion Language) instruction set, the iPOS4808 is an intelligent drive programmable at user's level. In simple applications the unit can operate as a single-axis motion controller and drive, in stand-alone mode, autonomously running the program residing in its non-volatile 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, CAN bus or EtherCAT communication.

The configuration, tuning and programming of the iPOS4808 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.



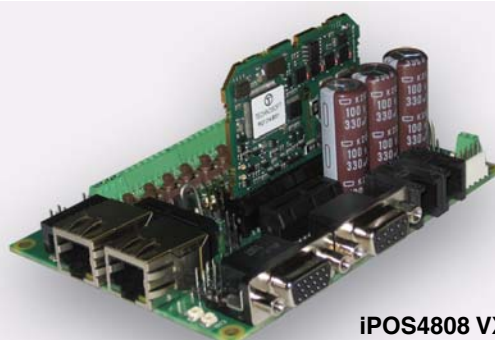
Application notes with TML program examples available at www.technosoftmotion.com.

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iPOS4808 FEATURES

- Fully digital servo drive suitable for the control of rotary or linear brushless, DC brushed, and step motors
- Very compact design
- Standard PCIe 8x mating connectors (VX models)
- Standard headers 2.54mm and 1.27mm pitch (MX models)
- Sinusoidal (FOC) or trapezoidal (Hall-based) control of brushless motors
- Open or closed-loop control of 2 and 3-phase steppers
- Various modes of operation, including: torque, speed or position control; position or speed profiles, external analogue reference or sent via communication bus
- Technosoft Motion Language (TML) instruction set for the definition and execution of motion sequences
- Standalone operation with stored motion sequences
- Communication:
 - RS-232 serial up to 115kbits
 - CAN-Bus up to 1 Mbit/s with TMLCAN and CANopen (CiA301, 305 and 402) protocol
 - EtherCAT (CoE protocol) via additional extension module
- Digital and analogue I/Os:
 - 8 digital inputs: 5 - 36 V, sourcing/NPN (Enable, 2 Limits switches and 5 general-purpose)
 - 5 digital outputs: 5 - 36 V, 0.5 A, sinking/NPN open-collector (Ready, Error and 3 general-purpose)
 - 2 analogue inputs: 12-bit, 0 - 5 V: Reference, Feedback or general-purpose
- Feedback devices supported:
 - Incremental quad encoder (single-ended, open collector and differential)
 - Analogue sine/cosine incremental encoder (differential 1Vpp)
 - Digital and linear Hall sensors
- Power supply: 11 - 50 V
- Logic supply: 9 - 36 V
- High current capability (8 A continuous, 20 A peak current)
- Protection to over-current, over-temperature, short-circuit, over- and under-voltage, I2t, control error



iPOS4808 VX STARTER KIT

This information is subject to change without notice.

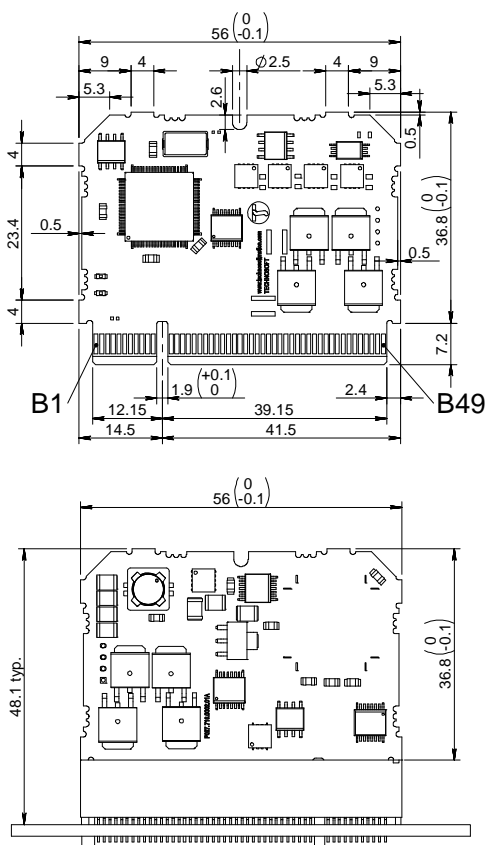
Your
Next
Intelligent
Move



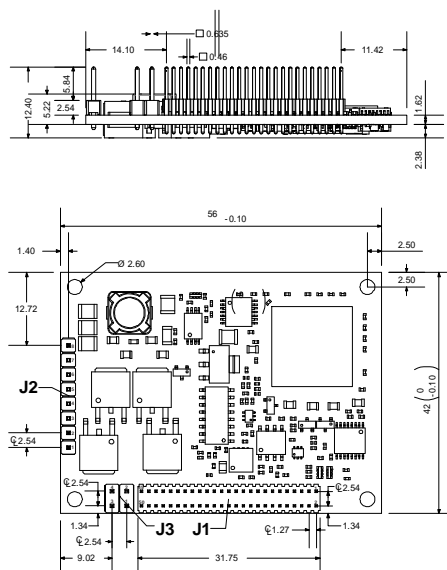
TECHNOSOFT
MOTION TECHNOLOGY

DIMENSIONS, SPECIFICATIONS, ORDERING INFORMATION

iPOS4808 VX



iPOS4808 MX



Dimensions in mm. Drawings not to scale.

EASYMOTION STUDIO

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

- Motion system set-up wizard
- Tuning assistance with capture functions
- Definition, programming and testing of motion sequences

MOTION CONTROL LIBRARIES

The TML_LIB Motion Control Libraries can be used to implement a motion control application on a PC from 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 observing the IEC-61131 standard are available for Siemens, B&R and Omron PLCs.

iPOS4808 STARTER KIT

Complete evaluation packages for the iPOS4808 drives, containing the servodrive, motor, I/O board and EasyMotion Studio software are available, supported by application notes and documentation.

iPOS4808 INTELLIGENT SERVO DRIVE

Electrical Specifications

Maximum DC supply voltage: motor and logic	50 V
Maximum continuous current	8 A
Peak current (2.4 sec. max.)	20 A
Nominal switching frequency	20 - 100 kHz
Operating ambient temperature	0 °C - 40 °C (*)

(*) or higher temperatures with derating

Ordering Information

P027.014.E001	iPOS4808 VX-CAN Drive, 50 V, 8 A, Plug-in, Enc., CAN
P027.014.E101	iPOS4808 MX-CAN Drive, 50 V, 8 A, Pins, Enc., CAN
P027.014.E201	iPOS4808 BX-CAN Drive, 50 V, 8 A, Closed-frame, CAN
P027.114.E221	iPOS4808 BX-CAT Drive, 50 V, 8 A, Closed-frame, EtherCAT
P027.014.E810	iPOS4808 VX-CAN Starter Kit without Motor
P027.014.E811	iPOS4808 VX-CAN Starter Kit with Brushless Motor
P027.014.E812	iPOS4808 VX-CAN Starter Kit with Stepper Motor
P027.014.E890	iPOS4808 VX I/O Board
P034.001.E002	EasyMotion Studio Software
P040.001.Exxx	TML_LIB Motion Library**

**ask for existing libraries types

FLEXIBILITY

Control schemes supported by the iPOS4808 Drive

Motor Types	Torque Control	Speed Control	Position Control
Brushless	✓	✓	✓
DC Brushed	✓	✓	✓
Step	✓	✓	✓

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