

iPOS3604 INTELLIGENT SERVO DRIVES

144W

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

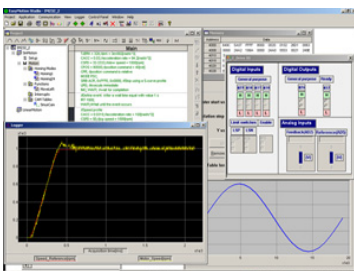
The iPOS3604 is based on a new design concept offering a cost effective, compact and modular solution for the control of rotary or linear brushless, DC brush, and step motors of powers up to 144W, with 36V nominal voltage.

Designed to cover for low- to high-volume applications, iPOS3604 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.

iPOS3604 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 iPOS3604 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 or CAN bus communication.

The configuration, tuning and programming of the iPOS3604 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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iPOS3604 FEATURES

- Fully digital servo drive suitable for the control of rotary or linear brushless, DC brush, and step motors
- Very compact design
- Standard PCIe 4x mating connectors (VX models)
- Standard header 2.54 mm pitch connectors (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
- 1K x 16 SRAM for data acquisition
- 4K x 16 E²ROM to store TML motion programs and data
- RS-232 serial communication
- CAN-Bus 2.0B up to 1 Mbit/s
- TMLCAN and CANopen (CiA 301v4.2 and 402v3.0) protocols
- EtherCAT communication via additional extension module (optional)
- Digital and analogue I/Os:
 - Digital inputs: 5-36V, NPN [Enable, 2 Limits switches, plus general-purpose: 2 (VX model), 1 (MX model)]
 - Digital outputs: 5-36V, 0.5A, NPN open-collector [Ready, Error, plus general-purpose: 2 (VX model), 1 (MX model)]
 - Analogue inputs: 12-bit, 0-5V: Reference, Feedback (VX model) 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
- Single power supply: 9-36V; optional logic supply: 7-36V
- Output current: 4A cont. (BLDC mode); 10A_{PEAK} up to 100KHz PWM
- Operating ambient temperature: 0-40°C (over 40°C with derating)
- Hardware protections: short-circuit between motor phases and from motor phases to GND, over-voltage, under-voltage and I²t



iPOS3604 VX STARTER KIT

This information is subject to change without notice.

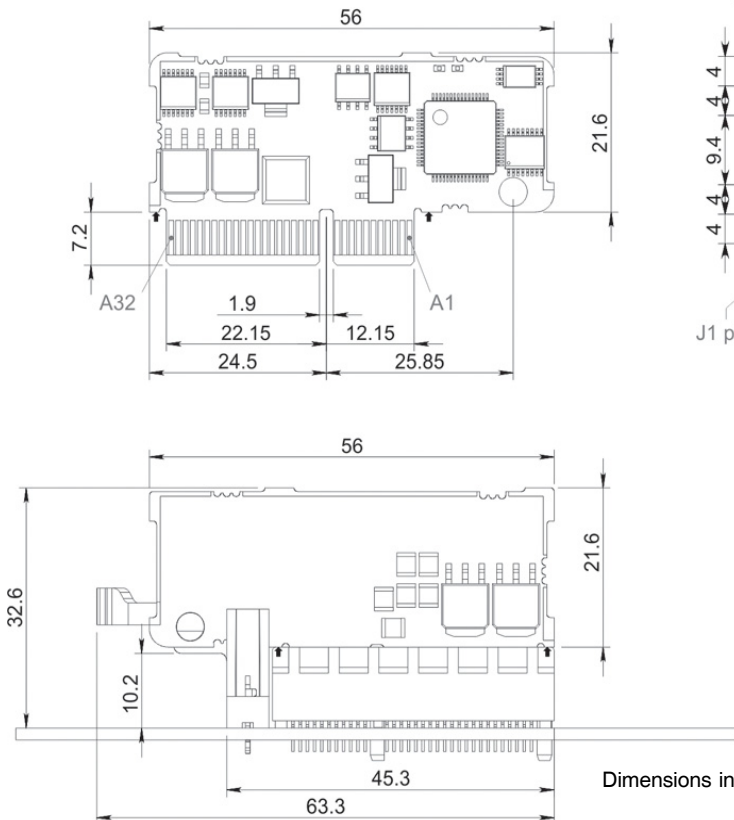
Your
Next
Intelligent
Move



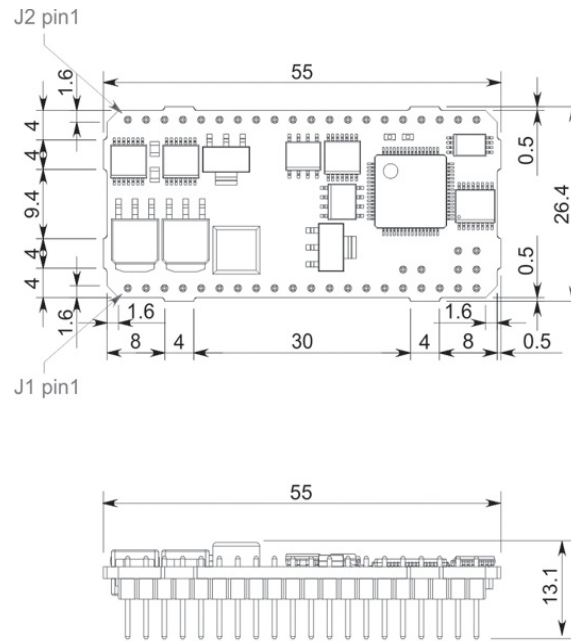
TECHNOSOFT
MOTION TECHNOLOGY

DIMENSIONS, SPECIFICATION, ORDERING INFORMATION

iPOS3604 VX



iPOS3604 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, through

- 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 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 observing the IEC-61131 standard are available for Siemens, B&R and Omron PLCs.

iPOS3604 STARTER KIT

Complete evaluation packages for the iPOS3604 drives, containing the servodrive, motor, I/O board, EasyMotion Studio software, that are supported by a collection of application notes and documentation.

iPOS3604 INTELLIGENT SERVO DRIVES

Electrical Specifications

Maximum DC supply voltage: motor and logic	36V
Maximum continuous current	4A
Peak current (2.4 sec. max.)	10A
Nominal switching frequency	20-60kHz
Operating ambient temperature	0°C-40°C

Ordering Information

P028.002.E001	iPOS3604 VX-CAN Intelligent Drive, 36V, 4A, Plug-in, Enc., CAN
P028.002.E101	iPOS3604 MX-CAN Intelligent Drive, 36V, 4A, Pins, Enc., CAN
P028.002.E201	iPOS3604 BX-CAN Intelligent Drive, 36V, 4A, Closed-frame, CAN
P028.002.E801	iPOS3604 VX-CAN Starter Kit with Brushless Motor
P028.002.E804	iPOS3604 MX-CAN Starter Kit with Brushless Motor
P028.002.E880	iPOS360x VX-CAN I/O Board
P028.002.E881	iPOS360x MX-CAN 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 iPOS3604 Drive

Motor Types	Torque Control	Speed Control	Position Control
Brushless DC / AC (Rotary or Linear)	✓	✓	✓
DC Brush	✓	✓	✓
Step	✓	✓	✓

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