

### A board-level indexer for stepper drives

Offering similar basic functionality to the standalone 6200 indexer, this OEM version provides a very economic solution in applications where the extensive I/O capability of the 6200 is not required. It comes complete with an L-bracket for mounting into an equipment cabinet, and requires only a single 5V or 24V DC power supply. The full standard 6000 Series support software is included. Where optical isolation of the I/O is required, this can be provided by OPTO-22™ signal conditioning modules.

This board-level indexer will be particularly attractive to OEMs and system builders looking for a space-saving, cost-effective solution to multi-axis control.

### OEM6200 features

#### Performance

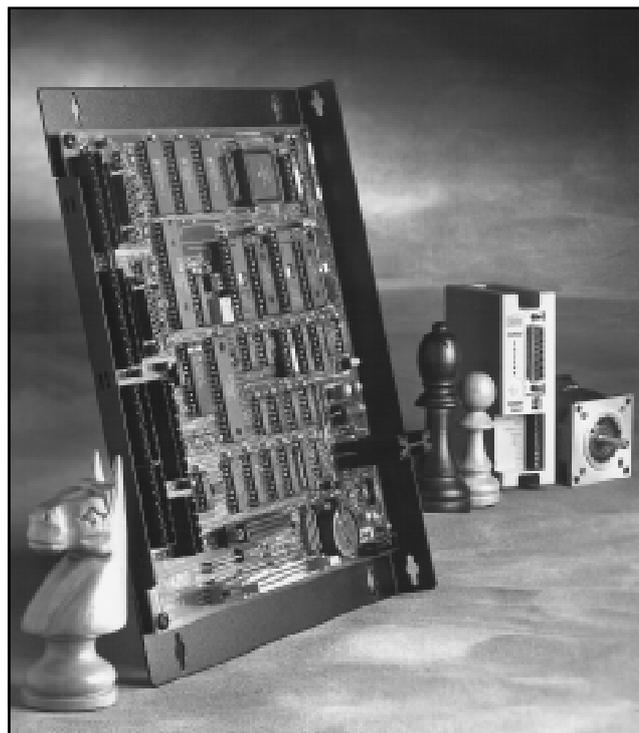
- One or two axes of step and direction control with encoder feedback (1.6 MHz step output frequency, 1.6 MHz post-quadrature encoder input frequency)
- Encoder channels can be configured as hardware up/down counters

#### I/O

- Home limit, POS (CW) and NEG (CCW) end-of-travel limits for both axes
- Sixteen programmable inputs & eight programmable outputs (optical isolation provided by user if necessary)
- Two interrupt-driven inputs for encoder capture
- Three 8-bit, 0-2.5 VDC analog inputs that can be used for joystick, feedrate override, or variable input (temperature, tension, etc.)

#### Language

- MS-DOS support disk is provided
- Linear & circular interpolation
- Variable storage, conditional branching, and maths capability
- Program debug tools—trace mode, break points, and I/O simulation
- Capable of interrupting program on error conditions
- Scaling of distance, velocity and acceleration parameters
- Programmable timer
- 150K bytes of non-volatile memory for storage of programs and paths



#### Software provided

- Motion Architect, Microsoft Windows™-based application development software
- DOS-based program editor and terminal emulator software available
- Dynamic Link Library (DLL) provided for use with Microsoft Windows and Microsoft Windows-NT™ software development kits

#### Optional software

- CompuCAM computer-aided motion software imports geometry from CAD programs, plotter files, or NC programs and generates 6000 Series code
- Motion Toolbox™ library of LabVIEW virtual instruments (VIs) for icon-based programming of 6000 Series controllers
- Dynamic Data Exchange (DDE) server available allowing data exchange between different Windows software applications
- Motion Builder icon-based programming

#### Interface capability

- Operates stand-alone or interfaces to PCs and PLCs
- Two RS-232C Communications Ports
- Stand-alone “L” bracket, open frame, 6U size
- Requires 5 VDC or 24 VDC, (user supplied)
- 3 metre indexer-to-drive cables optional
- Removable screw terminal connections

Parameter	Value
<b>Power</b>	
DC Input	5 VDC ±5%, 2 A or 24 VDC ±10%, 1A
<b>Performance</b>	
Position Range	±2,147,483,648 steps
Velocity Range	1 to 1,600,000 steps/sec
Acceleration Range	1 to 24,999,975 steps/sec <sup>2</sup>
Stepping Accuracy	±0 steps from preset total
Velocity Accuracy	±0.02% of maximum rate
Velocity Repeatability	±0.02% of set rate
Motion Algorithm Update Rate	2 ms
Calculation to determine contouring deviation from an arc (due to straight line approximation to a curve)	Error in steps = $\left[ \frac{[V_p (0.001 \text{ sec})^2]}{2r} \right]$ Where: $V_p$ = steps/sec and $r$ = radius in steps
<b>RS-232C Interface</b>	
Connections	3-wire (Rx, Tx and GND) connection to the AUX connector
Max no. of Daisy-chained OEM6200s	8 units; 99 with ADDR command
Address Settings	Selectable (see ADDR command and optional DIP switch settings)
Communication Parameters	9,600 baud (auto-baud option—see optional DIP switch settings), 8 data bits, 1 stop bit, no parity, full duplex
<b>Inputs</b>	
Home, CW/CCW Limits,, Pulse Cutoff, Joystick Trigger, Joystick Release, Axes Select, Joystick Velocity	TTL-compatible*; internal 6.8 kΩ pull-ups to 5V; voltage range is 0 - 24 V
Drive fault, In-position	TTL-compatible*; internal 1.0 kΩ pull-ups to 5V; voltage range is 0 - 5V
Incremental Encoder	Accepts two-phase quadrature encoders with differential (recommended) or single-ended outputs (+5 VDC TTL-compatible*). Max frequency = 1.6 MHz. Min time between transitions = 625 ns.
16 Programmable	TTL-compatible*. Factory default has inputs pulled up through 6.8 kΩ resistor to +5V (with a zero ohm resistor R21). If resistor R21 is removed, then inputs can be pulled up to user-supplied voltage of up to 24V by using IN-P pin (sourcing current), or inputs can sink current by connecting IN-P to ground. Voltage range = 0 - 24V. 50-pin plug is compatible with OPTO-22™. Controllable the 6000 Series programming language.
with	
Triggers (fast triggers) [TRG-A and TRG-B] on AUX connector)	TTL-compatible* with internal 6.8 kΩ pull-up to +5 VDC. Controllable with the 6000 Series programming language.
Analogue (joystick)	Voltage range = 0–2.5 VDC, 8-bit A/D converter.
<b>Outputs</b>	
8 Programmable	TTL-compatible*, open collector output. Factory default has outputs pulled up through 10 KΩ resistor to +5V (with a zero ohm resistor R22). If resistor R22 is removed, then outputs can be pulled up to user-supplied voltage of up to 24V by using OUT-P pin. Max voltage in OFF state (not sinking current) = 24V, max current in ON state (sinking) = 30 mA. 50-pin plug is compatible with OPTO-22™. Controllable with the 6000 Series programming language.
Step, Direction, Shutdown	Differential line driver output. Signal high > 3.5 VDC @ +30 mA, signal low < 1.0 VDC @ -30 mA. +output for each differential driver is active high; -output for each driver is active low. Step pulse width is 0.3 μs to 20 μs (depending on the PULSE command—default is 0.3 μs).
<b>Environmental</b>	
Operating Temperature	0°C to 50°C
Storage Temperature	-30°C to 85°C
Humidity	0% to 95% noncondensing

\* TTL-compatible voltage levels: Low ≤ 0.4 V, High ≥ 2,4 V