

Specifications AT6250/AT6450

	Parameter	Value
Performance	Position range	±2,147,483,648 counts
	Velocity range	0.001 to 1,200,000 counts/sec
	Acceleration range	0.001 to 2,147,483,648 counts/sec ²
	Motion trajectory update period	Default: 1.6 ms for AT6250; 3.0 ms for AT6450
	Servo sampling update period	Default: 400 μs for AT6250; 785 μs for AT6450
Input Power	System update period	Default: 1.6 ms for AT6250; 3.0 ms for AT6450
	AT6250 and AT6450 PC Card	5VDC @ 3.5A from the PC-AT bus
	ANI Card	5VDC @ 0.75A for each card from PC-AT bus
Inputs	120V Auxiliary Board (AC or DC input)	90 - 132VAC, 50/60Hz, 1.5A @ 120VAC, single phase; or power from an external source of 5VDC, ±10%
	240V Auxiliary Board (AC or DC input)	90 - 264VAC, 50/60Hz, 0.75A @ 240VAC, single phase; or power from an external source of 5VDC, ±10%
	DC Auxiliary Board	+5VDC @ 1.6A and ±15VDC @ 50mA, ±10% from an external source
	Home, Pos/Neg limits, drive fault, joystick trigger, joystick release, joystick axes select, joystick velocity Encoder	HCMOS*-compatible; internal 6.8 KΩ Pull-ups to 5V; voltage range is 0-24V
Outputs	24 programmable	Differential comparator accepts two-phase quadrature incremental encoders with differential (recommended) or single-ended outputs (+5VDC TTL-compatible*), Maximum frequency = 1.6 MHz, post quadrature. HCMOS*-compatible with internal 6.8KΩ pull-up (Connect IN-P to +5V -24 to source current or connect IN-P to GND to sink current). Voltage range = 0-24V 50-pin plug is compatible with OPTO-22™ signal conditioning equipment.
	Trigger Inputs	AT6250 has 3 & AT6450 has 4 TTL compatible* high speed inputs for position capture & general purpose functions. Internal 6.8KΩ pull ups to +5V; voltage range is 0-24V.
	Analog (Joystick)	Voltage range = 0-2.5VDC, 8-bit A/D converter. Input voltage must not exceed 5V.
	Analog (ANI option)	Voltage range = ±10VDC, 14-bit A/D converter. one per axis. Requires an 8-bit slot.
	(See also I/O pin outs & circuit drawings) 24 programmable and OUT-A through OUT-D	Open collector output with 4.7KΩ pull-ups. Can be pulled up by connecting OUT-P to +5V on the auxiliary board, or to user-supplied voltage of up to 24V. Max. voltage in OFF state (not sinking current) = 24V, max. current in ON state (sinking) = 30mA. 50-pin plug is compatible with OPTO-22™ signal conditioning equipment.
Environmental	Command Out	±10V analog output. 12-bit DAC. Load should be >2KΩ impedance.
	Shutdown	Shutdown relay output. Max. rating: 175VDC, 0.25A, 3W
	Auxiliary Analog Output (ANA)	±10V analog output. 8-bit DAC. Load should be >2KΩ impedance. Accuracy is ±5%.
Physical	Board Monitor Alarm (BMA)	Detects unrecoverable faults in hardware and software. When BMA detects fault, status light on AT6n50 card turns off and status light on auxiliary board turns red.
	Operating temperature	32° to 122°F(0° to 50°C)
	Storage temperature	-22° to 185°F(-30° to 85°C)
Physical	Humidity	0% to 95% non-condensing
	120 VAC and 240 VAC AUX Boards	
	• Height	10.10 in (256.54 mm)
	• Width	6.10 in (154.94 mm)
	• Depth	2.00 in (50.80 mm)
	DC Input AUX Board	
	• Height	11.60 in (294.64 mm)
	• Width	6.10 in (154.94 mm)
	• Depth	1.75 in (44.45 mm)
	* HCMOS-compatible voltage levels: low ≤1.67v, High ≥3.3v	
* TTL-compatible voltage levels: low ≤0.4v, High ≥2.4v		

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