

Rayon Slim

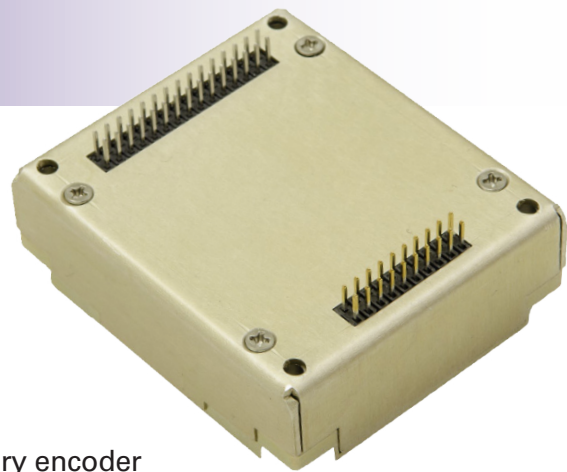
Small Medium applications motor controller driver

The Advantage of being small

Typical Applications:

- Small and medium mobile Robots
- Small “real-estate” applications
- Medium actuators’ movement control

- BLDC Sinusoidal, Trapezoid and PWM DC Brush
- Hall, analog/digital Primary Encoder with Digital secondary encoder
- PID closed loop modes: Position, speed, current and stepper
- Esafe-Eeprom parameter file system protection
- 20A continuous current. (3 sec 40A over drive), 20KHz to 60KHz PWM
- Communication: CAN BUS (1Mbit- CANopen) and RS232
- Analog and / or digital commands
- Lab-view Load/Read parameters and live graph monitor
- Protections: Temperature, voltage, CPU, encoder hall, motor stuck ... more
- Encoder to Hall on the fly switch-over
- Comprehensive Error messages
- Reliability: high current low R_{ds(on)}, 120V Power MOSFETs, hardware short protection
- Auto initialization of motor and feedback connections
- PID Auto Calibration
- Temperature operation environment -55°C to 71°C. (extended to 85°C by demand)



Specifications:

Function	Parameter	Remarks
CPU and Memory		
CORE	TI- TMS320-28F09	32bits DSP
Flash	Kbytes 256	
RAM	Kbytes 36	
CORE Speed	100Mhz	
Motor Interface		
BLDC 3 phases Bridge Drivers	100V@180A*6	TOP/BOTTOM drive PWM
Bridge Drivers	IRS21834S	1.4 A turn on 1.8 A turn off
Motor Current	17.7A RMS Continues, and 35.5A RMS Peak	Need suitable heat sink
Hall angel inputs	°60	Open collector/Drain
Output hall devices power	5VDC	@200mA
Encoder Interface-A	Sin/Cos or incremental	sinusoidal output signals 1VPP
Encoder Interface-B	Digital RS422	CLK A CLK B IndexC
Motor Current Sense measurement	Channels 2	0-3V 12bits resolution
Adjustable Motor Current limiter	Channels 2	256 currents levels
General Purpose Interface		
Digital Input / Output	Channels 6	Optically isolated
(Analog input (analog command or CLK A CLK B	Ch analog input or 2 Ch 1 incremental encoder	±10V or ±5V 12bits resolution
Communication Interface		PWM + Low pass
CAN BUS	Single CANopen	CAN 2.0B 1Mbit/Sec
UART	Channels 1	RS232 or RS422 comm
Power Supply/Operating temperature		
Voltage	16V to 40V	
Current	100mA +Motor current	Core @ 100Mhz
Operating Temperature	c +71°C-65	Optional +85°C
Storage Temperature	c - +150°C-65	
I/O Connection		
Power Input and Phase output Connector	TWTH-10-07-F-D-512-196	2,54mm .100" Pitch
Signals Input and Digital I/O Connector	WTH-15-11-F-D-140-196	1,27mm .050" Pitch



Tecknowledgey Inc.

Address: 8 John Walsh Blvd, Peekskill, NY 10566 USA

Tel: +1-914-739-4499 | **Fax:** +1-914-739-5599

Contact us: info@tecknowledgey.com
Website: defense.tecknowledgey.com