



## RAYON 40/70

**Multi applications, High power compability**  
High performance and high power,  
A game changer, motor controller driver

### Always in motion

#### Advantages:

- Robust, addresses a wide range of current supply
- Stable in harsh environments and voltage

#### Typical Applications:

- 70A and 40A Drivers
- Hybrid small vehicles
- Mobile Robots
- Machines (printing, production, food etc.)
- OEM version available
- Reliable: rigid construction high current 180A 100V Power MOSFETs
- Sinusoidal, flux oriented control and trapezoid drive
- Hall, Digital SSI. Incremental encoder feedback
- PID closed loop modes: Position, speed, current and stepper
- Esafe – Eeprom file system management
- Up to 40/70A continues current. (10 sec 80/140A over drive)
- Communication: CAN BUS (1Mbit- CANopen) RS422-485 and RS232
- Analog and / or digital commands
- Master Slave Mode
- Load/Read parameters and high speed live graph monitor
- Protections: Temperature, voltage, CPU, encoders, hall, motor stuck more
- Encoder to Hall on the fly switch-over
- Comprehensive Error massages
- Optically isolated input. 2 digital optically isolated outputs
- Hardware short motor winding protection
- 2 encoders input with automatically switchover
- Operating temperature -40°c to 71°c (extended to -55°c 85°c by demand)



## Specifications:

Function	Parameter	Remarks
<b>CPU and Memory</b>		
CORE	TI-TMS320F-28069	32bits DSP
Flash	256 Kbytes	
RAM	100 Kbytes	
CORE Speed	90Mhz	
<b>Motor Interface</b>		
BLDC 3 phases Bridge Drivers	6 100V@180A	FOC
Bridge Drivers	IRS21834S	1.4A turn on 1.8A turn off
Motor Current	30A Continues	Need suitable heat sink
Hall angle inputs	60°	Open collector/Drain
Output hall devices power	5VDC	@200mA
Encoder Interface-A	SSI or SPI	SDI SDO SCLK
Encoder Interface-B	Digital RS422	CLK A CLK B Index
Motor Current Sense measurement	2 Channels	0-3V 12bits resolution
Adjustable Motor Current limiter	2 Channels	One Over load Point.
<b>General Purpose Interface</b>		
Digital Input / Output	4 Inputs 2 Output Channels	Optically isolated
Analog input (analog command)	1 Channel	±10V / ±5V /0-10V
<b>Communication Interface</b>		
CAN BUS	Single CANopen	CAN 2.0B 1Mbit/Sec
UART	1 Channels	RS232 or RS422 comm
<b>Power Supply</b>		
Operating Voltage	12-75V	
Control Voltage	12V to 48V	
Quiescent Current	125mA @24V	Core @ 90Mhz
<b>Environment</b>		
Operating Temperature	-40°c +71°c	Optional -55°c to +85°c
Storage Temperature	-65°c - +150°c	
<b>I/O Connection</b>		
Power Input and Phase output	ITS4107R20-14S Bayonet	2X46A 3X23A @80°c
Power Input and Phase output - OEM	NorComp 6815W5103L001	5W5 Pin straight 40A
Signals Input and Digital I/O	Harting 09563517512	Dtype-HD 44PIN
Dimension	TBD	



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