Rayon Embedded Modules Micro, Tiny, Single-Board

Micro
← 25mm →

Tiny
← 40mm →

Single-Board
← 70mm →

Highly efficient and high power density low voltage drives, that can power up to 1000W. Easily integrated into any robotic or industrial application, these compact and lightweight modules enable OEMs to develop tailor-made multi-axis motion solutions.

Fast and efficient development of multi-axis motion

The embedded modules can be easily integrated with peripheral components and proprietary hardware, providing OEMs the building blocks for a fast and efficient development of multi-axis motion systems.
The modules can be used as surface-mounted-devices (SMD), which simplifies production and reduces costs.

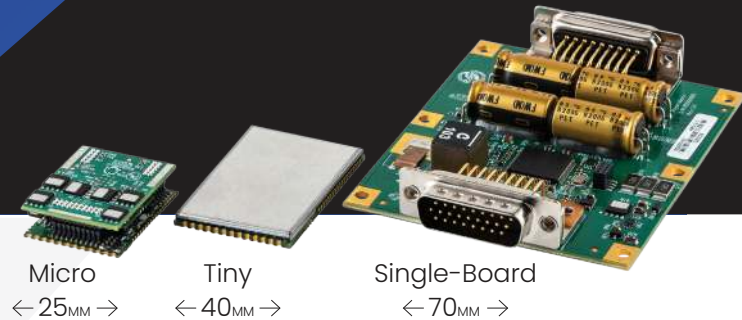## Optimal servo performance in a high power-density drive

A fully digital control enables fast response and high bandwidth closed loop control of position, speed, current and stepper modes. Both automatic and manual tuning of the control loops and filters are possible.

Supporting multiple types of motor feedback

The Rayon embedded modules meet any resolution requirement, ranging from simple positioning to precise and dynamic applications. They support common motor feedback devices, including SSI encoders, incremental encoders with Hall sensors, and sine/cosine encoders.

Get started with an evaluation kit

Rayon evaluation boards and cable sets for single-axis and dual-axis applications are available to help you design and test your system.
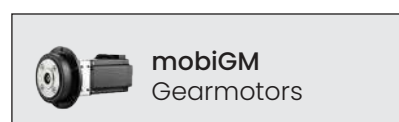
Key benefits

- High power density miniature modules
- Suited for tailor-made multi-axis motion solutions
- Can be used as surface-mounted-devices (SMD)
- Support 400W to 960W motor power
- Power low voltage motors with 12.5 to 20 Arms continuous current
- High bandwidth closed loop control of position, speed, current and stepper modes
- Supports multiple types of motor feedback (SSI, incremental, sine/cosine)
- Near-motor mounting for applications with tight space constraints

Simple commissioning Motor Controller GUI with comprehensive parameterization and scope analyzing options.

Related products

softMC
Multi-Axis Motion Controller

mobiGM
Gearmotors

Rating and Dimensions

Rayon Micro Module

Motor Power
100–400 W

Mounting
PCB-mount

Digital I/Os
5 x Input
3 x Output

Analog I/Os
1 x Input

Operational Conditions
Temperature: -40–85ºC

Motor Feedback
Incremental encoder
Hall sensors
SSI encoder
Sine/cosine encoder

Model	Communi-cation	Input bus (VDC)	Optional input logic (VDC)	Continuous current (Arms)	Peak current (Arms)	Width (mm)	Depth (mm)	Height (mm)
RD000133	RS232	12–48	12/24	12.5	20	30.4	25	9.6
RD000135	RS422	12–48	12/24	12.5	20	30.4	25	9.6
RD000194	RS232	Evaluation board for two Rayon Micro modules RS232 (RD000133)						
RD000195	RS422	Evaluation board for two Rayon Micro modules RS422 (RD000135)						
RD000182	RS232	Evaluation board for one Rayon Micro module RS232 (RD000133)						
RD000178	RS422	Evaluation board for one Rayon Micro module RS422 (RD000135)						

Rayon Tiny Module

Motor Power
200-600 W

Mounting
PCB-mount

Digital I/Os
4 x Input
2 x Output

Analog I/Os
1 x Input

Operational Conditions
Temperature: -40–85ºC

Motor Feedback
Incremental encoder
Hall sensors
SSI encoder
Sine/cosine encoder

Model	Communi-cation	Input bus (VDC)	Optional input logic (VDC)	Continuous current (Arms)	Peak current (Arms)	Width (mm)	Depth (mm)	Height (mm)
Upcoming	RS422 RS232	12–48	12/24	15	25	30	41.35	3.3

Rayon Single-Board Module

Motor Power
600–960 W

Mounting
D-type

Digital I/Os
4 x Input
2 x Output

Analog I/Os
1 x Input

Operational Conditions
Temperature: -40–85ºC

Motor Feedback
Incremental encoder
Hall sensors
SSI encoder
Sine/cosine encoder

Model	Communi-cation	Input bus (VDC)	Optional input logic (VDC)	Continuous current (Arms)	Peak current (Arms)	Width (mm)	Depth (mm)	Height (mm)
RD000121	RS232 CAN	12–48	12/24	20	40	85	70	14
RD000181	RS422 CAN	12–48	12/24	20	40	85	70	14
RD000202	Cable set for Rayon Single-Board module							

STXIMotion

Contact STXI Motion for optimal motion and automation solutions
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