

Cygnus

Multi-axis PWM servo drive with advanced motion control

The Cygnus servo drive delivers high power density and advanced control performance in a compact, versatile format. Supporting a wide range of motor types, including **brushless**, **brushed**, **linear**, **stepper**, and **voice coil**, it offers exceptional flexibility for diverse motion architectures. With seamless MATLAB® and Simulink® integration, custom control algorithms can be deployed with ease, ensuring high performance in demanding applications.



Powerful & smart

Cygnus is available as a **stand-alone** drive (embedded controller) or as an **EtherCAT®** sub-device, both supporting custom control-loop design. With 4-axis output, dual-loop encoder support, and up to 20A per axis, it delivers the performance and flexibility needed to handle almost any high-performance motion requirement in a single compact unit.

Safety

Cygnus integrates certified **STO** and **SBC** functions for reliable machine protection. **STO** safely disables torque output, and **SBC** engages the motor brake to securely hold the axis. Together, they ensure safe stopping and axis retention with minimal system downtime.

Product features



Long lifetime / reliability



Compact and intelligent



Integrated EMC filters



MATLAB® Simulink® code generation

	Cygnus Q3-M	Cygnus Q3	Cygnus D3
Interface	Stand-alone Ethernet (to host)	EtherCAT® sub-device 100Hz-20kHz update rate	EtherCAT® sub-device 100Hz-20kHz update rate
Input voltage range	17 - 54VDC	17 - 54VDC	390 - 410VDC
Maximum phase current	10 ARMS	10 ARMS	4 ARMS
Peak phase current (1s)	20 ARMS	20 ARMS	8 ARMS
Rated switching frequency	16-20kHz	16-20kHz	16-20kHz
Functional Safety	STO (SIL3) SBC (SIL3)	STO (SIL3) SBC (SIL3)	STO (SIL3) SBC (SIL3)
Number of axis	x4 (3-Phase) or x6 (1-Phase) or x3 (Stepper)	x4 (3-Phase) or x6 (1-Phase) or x3 (Stepper)	x2 (3-Phase)
Supported motor types	Brushless Brush Linear Stepper Voice coil	Brushless Brush Linear Stepper Voice coil	Brushless Linear
Custom control loops	Yes	Yes (limited for sub-device functionality)	Yes (limited for sub-device functionality)
Encoder inputs	x8 encoders (x2 per axis)	x8 encoders (x2 per axis)	x4 encoders (x2 per axis)
Dimensions (WxDxH)	265x195x73mm	265x195x73mm	265x195x90mm
Mass (kg)	3	3	3.3