

EM64



Encoder Multiplier and Splitter

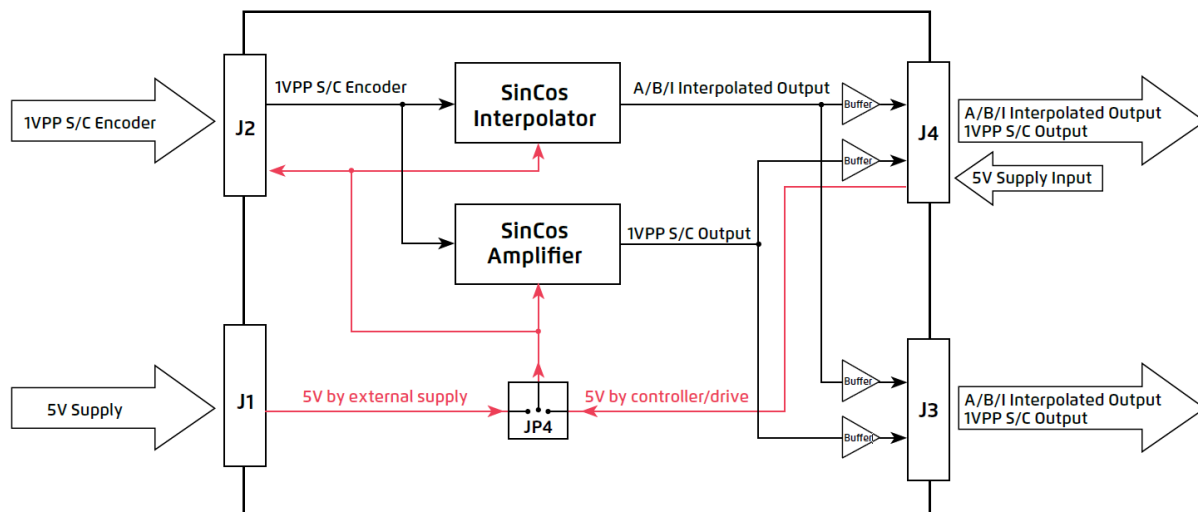
- > Analog Sin-Cos encoder multiplier
- > Programmable multiplication factor of up to 64 counts per encoder cycle
- > Two output connectors, each comprises of both the original analog encoder signals (buffered) and the digital post multiplication signals

The EM64 is a single channel analog Sin-Cos encoder multiplier. The resolution of the encoder is multiplied by up to 16, thus providing quadrature resolutions of up to 64 quadratures per encoder cycle. There are two output connectors, each with a digital post-multiplication output and the original encoder signals buffered.

The EM64 can also be used as an encoder splitter.

The EM64 addresses the needs of:

- > Generating Position Events and capturing position when using analog Sin-Cos encoders, with resolutions below one quarter of encoder cycle.
- > Interfacing analog Sin-Cos encoders to drives that do not support analog encoders, such as UDMmc and UDMlc.
- > Providing digital encoder signals to external devices such as camera triggering boards.



Specifications

Encoder multiplication

Sin-Cos Max. input frequency [KHz]	Multiplication Factor (MF)	Quadrature resolution
800	x4	16
640	x5	20
400	x8	32
320	x10	40
200	x16	64

Encoder Interface

Type: Incremental analog Sin-Cos, 1Vptp, differential

Electrical Interface: Input impedance ~120R

Input voltage range: 1.25Vptp

Maximum Cable length: 20m

Encoder supply [V]: 5V±5%

Encoder maximum current consumption [mA]: 600

If more current is needed, use a separate supply to power the encoder

Connector: Sub-D, 15 pin high density, female

Controller/drive interface

Number of interfaces: 2

Interface connector content:

J3 – Original analog Sin-Cos encoder signals. buffered, 1Vptp, differential

J4 - Original analog Sin-Cos encoder signals. buffered, 1Vptp, differential.

Encoder 5V supply input

Connector: Sub-D, 15 pins high density, male

Power Supply needed

Used to power both the EM64 itself and the encoder: 5V ±5%
The 5V can be supplied by one of the following (selected by jumper):

1. The controller/drive connected to the EM64 via J4. It should be used if the controller/drive can provide a total current of (200mA + the encoder current)
2. An external power supply via J1. It should be used when the controller/drive cannot provide the needed current.

Maximum current consumption [mA]: 200 + the current consumption of the encoder

Connector: 3 pins, Phoenix PN: 1830606

Mating: Phoenix PN: 1827716

Mounting: DIN- rail

Weight

65 gr

Dimensions

30 x 45 x 90 mm³

Environment

Operating: 0°C to +50°C

Storage and transportation: -25°C to +60°C

Humidity (operating range): 5% to 90% non-condensing

Ordering Options

Part Number: EM64

Package contents: 1 EM64 and 5V supply mating connector

Available accessories

EM64-ACC1 - A set of encoder input and outputs connectors:
Two outputs connectors, Sub-D, 15 pins high density, female, connector shells

One encoder input connector, Sub-D, 15 pins high density, male, connector shell