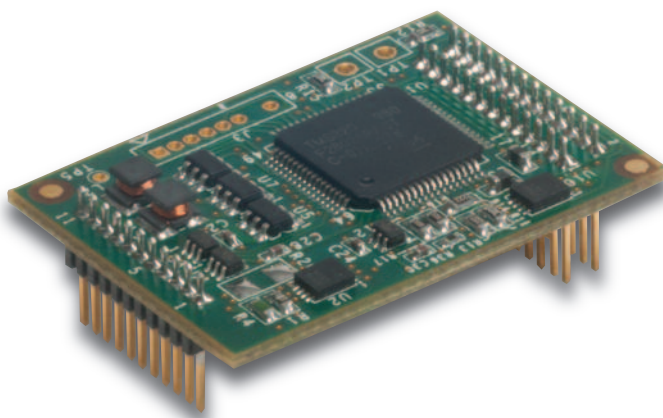


# XCD-EDGE-BD-01

## Drive and Control

### Application Recommendations

- Auto Focus/Zoom Modules
- Shutter & Aperture Control
- Filter Changers
- Pan and Tilt Modules



### ORDERING INFORMATION

**Part Number:** XCD-EDGE-BD-01  
Drive and Control

### RELATED PRODUCTS/ ACCESSORIES

**Part Number:** EM1-S-0  
EM1-V-0  
EDGE motor

**Part Number:** XCDE150100-00  
XCD EDGE Motherboard Assembly

### Product Description

Nanomotion's XCD – Drive & Control redefines the art of miniaturized drive and control electronics with the smallest hardware for operating piezo ceramic servo motors. The XCD provides complete servo control for the OEM market, coupled with the power stage and drive electronics on one board. XCD will have an OEM specific, motherboard for connecting to the motor, position sensor, communication and power.

The XCD for the Edge motor is provided as a single axis board which can operate in the 'AB5' mode with brake on/off, or in the more traditional AB1A mode. The XCD for the Edge motors accepts a single ended encoder signal and is programmed via an IIC interface and the NanoCommander user software.

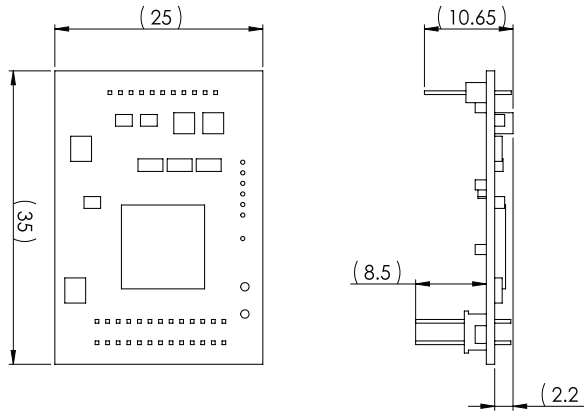
## MECHANICAL DRAWINGS AND INTERFACE

### TECHNICAL SPECIFICATIONS

Dimensions:  
 35.0 x 25.0 x 10.65 mm  
 Motors supported : EDGE  
 Input Power: 5 V  
 Drive Mode AB5  
 (brake on/off) or AB1A mode  
 Communication IIC  
 Operating Temperature:  
 -40 to 85 °C

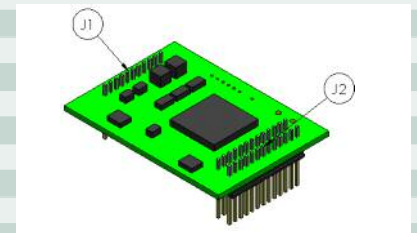
### ELECTRICAL

Power Consumption:  
 500 mW (max)



## ELECTRICAL INTERFACE

J2 Main Connector			J1 Motor and Encoder Connector	
pin number	pin name	pin description	pin name	pin description
1	+5v	5vdc pc:mer input	+5v	5vdc power out
2	+5v	5vdc pc:mer input	a	encoder incremental signals
3	spi clk	spiclock	b	encoder incremental signals
4	spi en	spi enable	index	encoder reference mark
5	miso	master in slave out	gnd	system ground
6	mosi	master out slave in	turn it sw right	limit switch right
7	n.c.	not connected	lim sw len	limit switch length
8	n.c.	not connected	gnd	system ground
9	rxd	rs232 receive	p1	mc(or phase 1)
10	txd	rs232 transmit	com	mc(or common)
11	sda	12c serial data	p2	mc(or phase 2)
12	scl	12c serial clock		
13	gpi01	ppw		
14	gpi02	n/a		
15	gpi03	general purpose digital output 3		
16	gpi04	general purpose digital output 4		
17	an2	analog input 1		
18	an1	analog input 2		
19	emergency	emergency stop		
20	an3	analog input 3		
21	anlg out2	analog output 2		
22	anlg out1	analog output 1		
23	n.c.	n/a		
24	pwm out	keep alive		
25	gnd	system ground		
26	gnd	system ground		



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