

# ICM-xxxx

## Custom Interconnect Module

### Product Development Worksheet

#### Optima Series

### 1. Controller Model:

### 2. Maximum Allowable Size for ICM:

HEIGHT	WIDTH	LENGTH

### 3. Signal Access:

Select the signals required from the list below. Use a letter to designate signals that need to be in the same connector group. For example, the motor command and encoder signals for the X-axis might be in connector group A, and the Y-axis signals might be in group B. Leave unused signals blank. This worksheet is intended for 4-axis. Consult Galil for other configurations.

#### Servo Motor Signals

SIGNAL	SIGNAL GROUP
Motor command X	
Motor command Y	
Motor command Z	
Motor command W	

#### Stepper Motor Signals

SIGNAL	SIGNAL GROUP
Step X	
Direction X	
Step Y	
Direction Y	
Step Z	
Direction Z	
Step W	
Direction W	

### Amplifier Enable Signals

SIGNAL	SIGNAL GROUP
Amp Enable X – Active Low	
Amp Enable Y – Active Low	
Amp Enable Z – Active Low	
Amp Enable W – Active Low	
Amp Enable X – Active High	
Amp Enable Y – Active High	
Amp Enable Z – Active High	
Amp Enable W – Active High	

### Limit Switch Signals

SIGNAL	SIGNAL GROUP
Forward Limit X	
Reverse Limit X	
Forward Limit Y	
Reverse Limit Y	
Forward Limit Z	
Reverse Limit Z	
Forward Limit W	
Reverse Limit W	

### Home Switch Signals

SIGNAL	SIGNAL GROUP
Home X	
Home Y	
Home Z	
Home W	

### Encoder Signals

SIGNAL	SIGNAL GROUP
X Axis Encoder A+	
X Axis Encoder A-	
X Axis Encoder B+	
X Axis Encoder B-	
X Axis Encoder I+	
X Axis Encoder I-	

Y Axis Encoder A+	
Y Axis Encoder A-	
Y Axis Encoder B+	
Y Axis Encoder B-	
Y Axis Encoder I+	
Y Axis Encoder I-	
Z Axis Encoder A+	
Z Axis Encoder A-	
Z Axis Encoder B+	
Z Axis Encoder B-	
Z Axis Encoder I+	
Z Axis Encoder I-	
W Axis Encoder A+	
W Axis Encoder A-	
W Axis Encoder B+	
W Axis Encoder B-	
W Axis Encoder I+	
W Axis Encoder I-	

**General Input Signals**

SIGNAL	SIGNAL GROUP
Input Common	
Input 1 (Latch X)	
Input 2 (Latch Y)	
Input 3 (Latch Z)	
Input 4 (Latch W)	
Input 5	
Input 6	
Input 7	
Input 8	
Abort Input	

**General Output Signals**

SIGNAL	SIGNAL GROUP
Output 1	
Output 2	
Output 3	
Output 4	
Output 5	

Output 6	
Output 7	
Output 8	

### Opto-Isolated General Output Signals

SIGNAL	SIGNAL GROUP
Output Common	
Opto-Isolated Output 1	
Opto-Isolated Output 2	
Opto-Isolated Output 3	
Opto-Isolated Output 4	
Opto-Isolated Output 5	
Opto-Isolated Output 6	
Opto-Isolated Output 7	
Opto-Isolated Output 8	

### Analog Input Signals

SIGNAL	SIGNAL GROUP
Analog Input 1	
Analog Input 2	
Analog Input 3	
Analog Input 4	
Analog Input 5	
Analog Input 6	
Analog Input 7	
Analog Input 8	
Isolated Analog Ground	

### Special I/O Signals

SIGNAL	SIGNAL GROUP
Error Output	
Encoder-Compare Output	
Reset Input	

### Power and Ground Signals

SIGNAL	SIGNAL GROUP
+5V (1 amp max available)	
+12V (250 mA available)	
-12V (250 mA available)	
GND	

**Auxiliary Encoder Signals**

<b>-SIGNAL</b>	<b>SIGNAL GROUP</b>
X Axis Auxiliary Encoder A+	
X Axis Auxiliary Encoder A-	
X Axis Auxiliary Encoder B+	
X Axis Auxiliary Encoder B-	
Y Axis Auxiliary Encoder A+	
Y Axis Auxiliary Encoder A-	
Y Axis Auxiliary Encoder B+	
Y Axis Auxiliary Encoder B-	
Z Axis Auxiliary Encoder A+	
Z Axis Auxiliary Encoder A-	
Z Axis Auxiliary Encoder B+	
Z Axis Auxiliary Encoder B-	
W Axis Auxiliary Encoder A+	
W Axis Auxiliary Encoder A-	
W Axis Auxiliary Encoder B+	
W Axis Auxiliary Encoder B-	
Sample Clock Input	

**4. Connector Specifications:**

Specify type of connectors to be used for each of the signal groups above. Example connectors:

1. Screw terminals - Single Level (terminals are grouped by 4)  
 - Double Level (terminals are grouped by 8)  
 - Triple Level (terminals are grouped by 12)
2. IDC-Type – 2 row connectors. Standard sizes include 10, 20, 26, 40, 50, 60 pin
3. D-Type – Standard sizes include 9, 15, 25, 37 pin
4. Molex
5. High density

<b>SIGNAL GROUP A</b>	
TYPE:	
# OF PINS:	
MODEL NUMBER:	
# OF GROUNDS:	
ORIENTATION:	

PIN ASSIGNMENTS IF PRE-ASSIGNED	
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<b>SIGNAL GROUP B</b>	
TYPE:	
# OF PINS:	
MODEL NUMBER:	
# OF GROUNDS:	
ORIENTATION:	
PIN ASSIGNMENTS IF PRE-ASSIGNED	

<b>SIGNAL GROUP C</b>	
TYPE:	
# OF PINS:	
MODEL NUMBER:	
# OF GROUNDS:	
ORIENTATION:	
PIN ASSIGNMENTS IF PRE-ASSIGNED	

<b>SIGNAL GROUP D</b>	
TYPE:	
# OF PINS:	
MODEL NUMBER:	
# OF GROUNDS:	
ORIENTATION:	
PIN ASSIGNMENTS IF PRE-ASSIGNED	

<b>SIGNAL GROUP E</b>	
TYPE:	
# OF PINS:	
MODEL NUMBER:	
# OF GROUNDS:	

ORIENTATION:	
PIN ASSIGNMENTS IF PRE-ASSIGNED	

**5. Special Requirements:**

MOUNTING REQUIREMENTS FOR ICM	
BOARD-LEVEL OR BOX-LEVEL?	
ARE PIN-OUTS PRE-ASSIGNED?	
OTHER:	

**6. Comments/Drawing:**

**7. Order / Contact Information:**

<b>CUSTOMER CONTACT INFO</b>			
Name			
Company			
Address			
City			
State		Zip	
PHONE		FAX	
EMAIL			
ESTIMATED ANNUAL USAGE			

**8. Quotation (completed by Galil Motion Control)**

ICM part number	
Engineering Charge (NRE)	
Unit Price	
Minimum Order Quantity	
Lead Time	
Galil Contact	
Date	