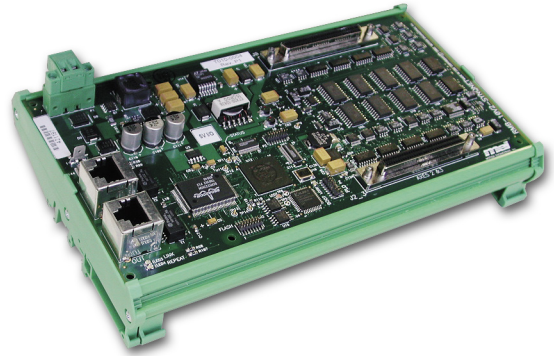




# RMB-10V2-SynqNet

## Hardware Specification



### Key Features

- SynqNet® network interface provides digital networked connections to drives and I/O modules
- Allows for a wide range of analog drives to work on a SynqNet network
- Supports up to 4 axes
- Supports encoder inputs, DAC outputs, transceiver inputs & outputs, opto inputs & outputs, ADC Inputs
- Dedicated I/O supports fast position capture over SynqNet
- Remote Motion Block supports Sinusoidal Commutation

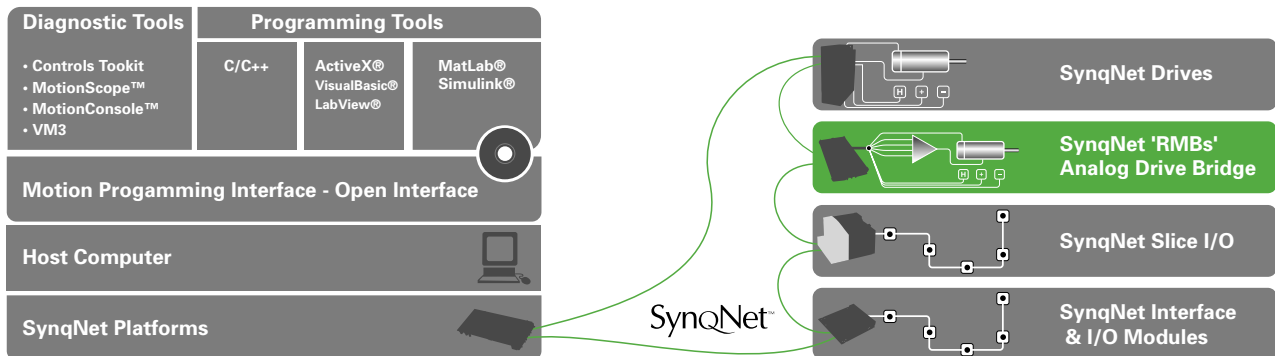
MEI's Remote Motion Block (RMB) is designed to connect conventional analog drives into a SynqNet® motion network system. Each Remote Motion Block can support up to four axes of high precision analog drives, including encoder feedback, DAC outputs, transceivers, and associated I/O.

The RMB is designed to support instances where a SynqNet drive is not available or suitable for certain applications. Remote Motion Blocks are also ideal for rapid prototyping with existing machine components.

SynqNet motion control networks provide a 100Mbps synchronous real-time connection between motion controllers and torque drives, stepper drives, and I/O modules. SynqNet is the only digital motion control network that offers true plug and play interoperable node support, fault tolerant operation, robust service channel capabilities, firmware & configuration file upload/download, as well as a dramatic reduction in system wiring.

### RMB Functionality



Remote Motion Blocks allow for the integration of any drive or node on a SynqNet network. The RMB acts as the analog to digital conduit between the drive and the controller. For applications where a SynqNet specialized drive is unavailable, a RMB can easily be integrated on the network to accommodate a variety of applications and I/O.



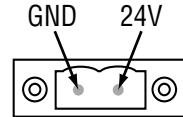
**SynqNet Interface  
Pin-out & Connector Information**

**SynqNet Connector**  
AMP Connectors  
Mfg P/N 1116353-1

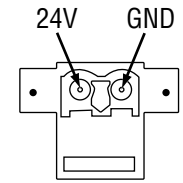
**Mating Connector**  
AMP Connectors  
Mfg P/N 5-557315

	1	Transmit +
	2	Transmit -
	3	Receive +
	4	Unused 1+
	5	Unused 1-
	6	Receive -
	7	Unused 2+
	8	Unused 2-
	1	Receive +
	2	Receive -
	3	Transmit +
	4	Unused 1+
	5	Unused 1-
	6	Transmit -
	7	Unused 2+
	8	Unused 2-

**Power Connector**  
Phoenix Connectors  
Mfg P/N 17 77 07 3



**Mating Connector**  
Phoenix Connectors  
Mfg P/N 17 77 98 9



For more information:  
www.amp.com

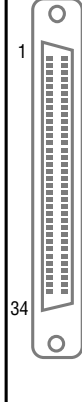
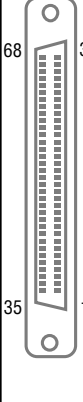
For more information:  
www.phoenixcontact.com

**RMB10V2  
Pin-out & Connector Information**

**Axis Connector**  
AMP  
Mfg P/N 749070-7

**Mating Connector**  
Honda  
Mfg P/N PCS-XE68MB

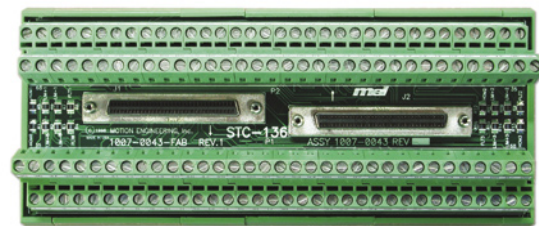
For more information:  
www.amp.com  
www.hondaconnectors.com

	1	Analog_IN_0+*	Analog_IN_0-	35
	2	Analog_IN_1+*	Analog_IN_1-	36
	3	Gnd	AGnd	37
	4	Enc0_A+	Enc0_A-	38
	5	Enc0_B+	Enc0_B-	39
	6	Enc0_I+	Enc0_I-	40
	7	Home0_IN	5V_OUT	41
	8	Pos_Lim0_IN	Gnd	42
	9	Neg_Lim0_IN	HomeLim0_Rtn	43
	10	Cmd_Dac_OUT_0+	Cmd_Dac_OUT_0-	44
	11	Aux_Dac_OUT_0+	Aux_Dac_OUT_0-	45
	12	Amp_Fit0_IN	Amp_Fit0_Rtn	46
	13	Amp_En0_Collector	Amp_En0_Emitter	47
	14	UserIO_A0	UserIO_A0_Rtn	48
	15	Xcvr0A+	Xcvr0A-	49
	16	Xcvr0B+	Xcvr0B-	50
	17	Xcvr0C+	Xcvr0C-	51
	18	Enc1_A+	Enc1_A-	52
	19	Enc1_B+	Enc1_B-	53
	20	Enc1_I+	Enc1_I-	54
	21	Home1_IN	5V_OUT	55
	22	Pos_Lim1_IN	Gnd	56
	23	Neg_Lim1_IN	HomeLim1_Rtn	57
	24	Cmd_Dac_OUT_1+	Cmd_Dac_OUT_1-	58
	25	Aux_Dac_OUT_1+	Aux_Dac_OUT_1-	59
	26	Amp_Fit1_IN	Amp_Fit1_Rtn	60
	27	Amp_En1_Collector	Amp_En1_Emitter	61
	28	Gnd	Gnd	62
	29	Xcvr1A+	Xcvr1A-	63
	30	Xcvr1B+	Xcvr1B-	64
	31	Xcvr1C+	Xcvr1C-	65
	32	UserIO_A1	UserIO_A1_Rtn	66
	33	RESET_IN*	UserIO_A2	67
	34	ESTOP_IN*	UserIO_A2_Rtn	68
	1	EncA_A+	EncA_A-	35
	2	EncA_B+	EncA_B-	36
	3	EncA_I+	EncA_I-	37
	4	Enc2_A+	Enc2_A-	38
	5	Enc2_B+	Enc2_B-	39
	6	Enc2_I+	Enc2_I-	40
	7	Home2_IN	5V_OUT	41
	8	Pos_Lim2_IN	Gnd	42
	9	Neg_Lim2_IN	HomeLim2_Rtn	43
	10	Cmd_Dac_OUT_2	Cmd_Dac_OUT_2-	44
	11	Aux_Dac_OUT_2	Aux_Dac_OUT_2-	45
	12	Amp_Fit2_IN	Amp_Fit2_Rtn	46
	13	Amp_En2_Collector	Amp_En2_Emitter	47
	14	UserIO_A3	UserIO_A3_Rtn	48
	15	Xcvr2A+	Xcvr2A-	49
	16	Xcvr2B+	Xcvr2B-	50
	17	Xcvr2C+	Xcvr2C-	51
	18	Enc3_A+	Enc3_A-	52
	19	Enc3_B+	Enc3_B-	53
	20	Enc3_I+	Enc3_I-	54
	21	Home3_IN	5V_OUT	55
	22	Pos_Lim3_IN	Gnd	56
	23	Neg_Lim3_IN	HomeLim3_Rtn	57
	24	Cmd_Dac_OUT_3	Cmd_Dac_OUT_3-	58
	25	Aux_Dac_OUT_3	Aux_Dac_OUT_3-	59
	26	Amp_Fit3_IN	Amp_Fit3_Rtn	60
	27	Amp_En3_Collector	Amp_En3_Emitter	61
	28	Gnd	Gnd	62
	29	Xcvr3A+	Xcvr3A-	63
	30	Xcvr3B+	Xcvr3B-	64
	31	Xcvr3C+	Xcvr3C-	65
	32	Gnd	AGnd	66
	33	Analog_IN_2+*	Analog_IN_2-	67
	34	Analog_IN_3+*	Analog_IN_3-	68

**Connection Accessories**

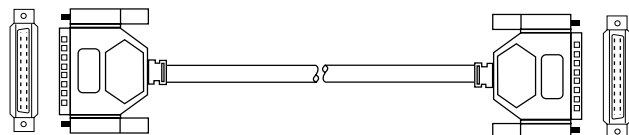
**Screw Terminal Module**

MEI provides STC-136 non-powered pass-through screw-terminal modules that allow easy wiring when prototyping.  
P/N C002-012



**RMB Connector Cables**

Provides a standard connection from RMB to STC-136 or other compatible device-.050 SCSI 68-pin.  
P/N C001-0028 (1 meter)

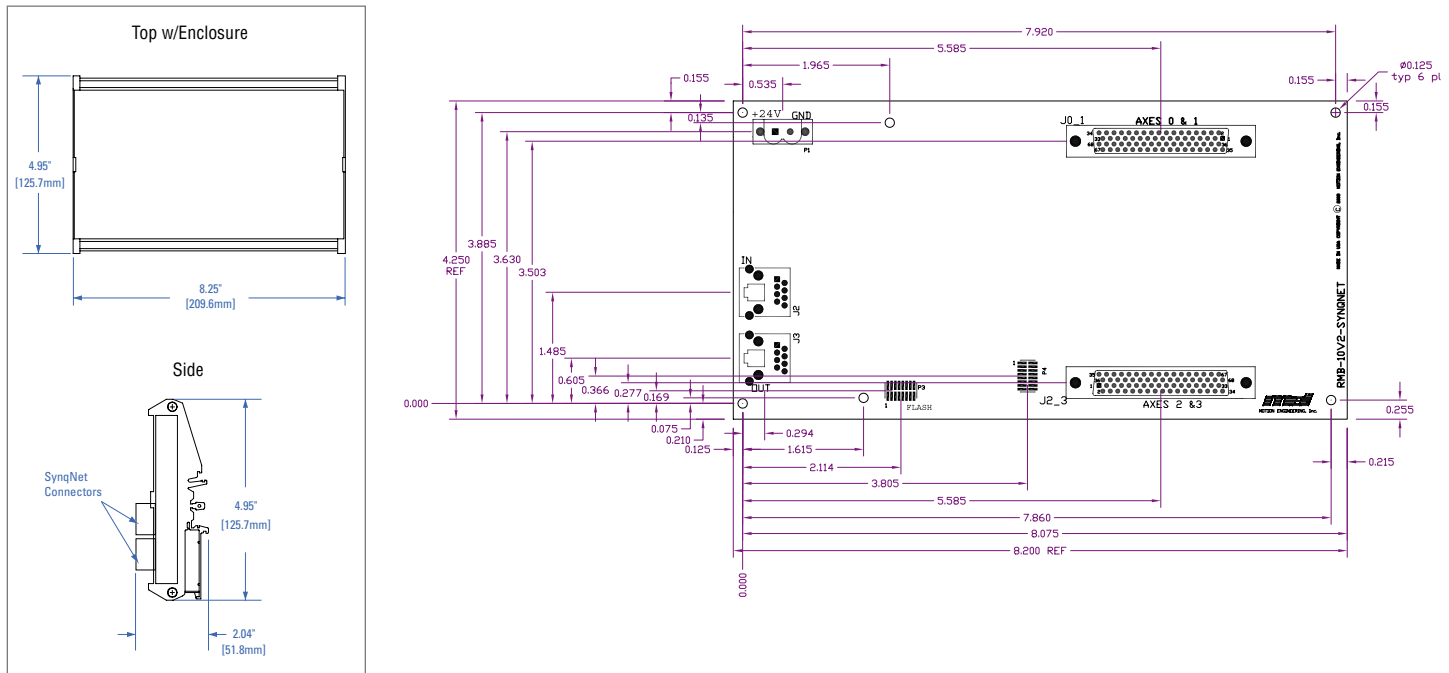


**24 V Power Supply**

1.25A, 24VDC,90-240VAC  
P/N 1022-0008



### RMB10V2 Dimensions



### RMB10V2-SynqNet Specifications

Function	Parameter	Specification
Servo Output	No. of Axes	4
	Resolution	±10 V @ 16-bit resolution
	Update	Simultaneous of all axes
	Sinusoidal Commutation	Standard
Dedicated I/O	Voltage	5 or 24 V logic*
	Current Output	10 mA max
	Current Input	2 mA min
	Latency	2 μs
	Isolation	Opto-isolated
	Output	Amp enable (1 per axis)
	Input	Home, +Limit, -Limit, Amp Fault (1 each per axis)
Transceiver I/O (EIA-422)	Latency	~60 nsec
	Modes	Step / Dir, CW/CCW, capture & compare, general purpose input or output
	Lines	12 Max: 3 per axis
Discrete User I/O	Voltage	5 or 24 V*
	Current Output	20 mA max
	Current Input	2 mA min
	Latency	2 μs
	Isolation	Opto-isolated
	Lines	4 (1 per axis)
Encoder Inputs (EIA-422)	Count Rate	20 MHz
	Current Termination	100 Ω
	Latency	19 nsec
	Power	5V, (4pins 250mA each), 1A total
ADC Inputs	Input Range	± 1.25V, 2.5V, 5V, 10V software selectable
	Continuous Current	± 30mA
	Input Voltage	± 25V
	Differential Input Resistance	> 2MΩ
Network Interfaces	Network Connectors	68-pin SCSI 2
	Synqnet Connectors	RJ-45
Environment	Operating Temperature	0-50° C
	Storage Temperature	0-50° C
	Humidity	20-90% RH, non-condensing
Safety	Encoder Broken Wire Detection	Enabled
	Encoder Illegal State Detection	Enabled
External Power Supply	Voltage	24 VDC
	Current Consumption Typical	500 mA
	Current Consumption Max	1000 mA

\*must be factory configured at time of order  
 5V Logic P/N T010-0001  
 24V Logic P/N T010-0002





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