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Find the *ETAS ES16RS* at our website: *Click HERE*

ES16RS
Resistor Simulation Board

User's Guide

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1 Introduction

This section contains:

- A block diagram to show the schematic layout of the board
- A front-panel diagram

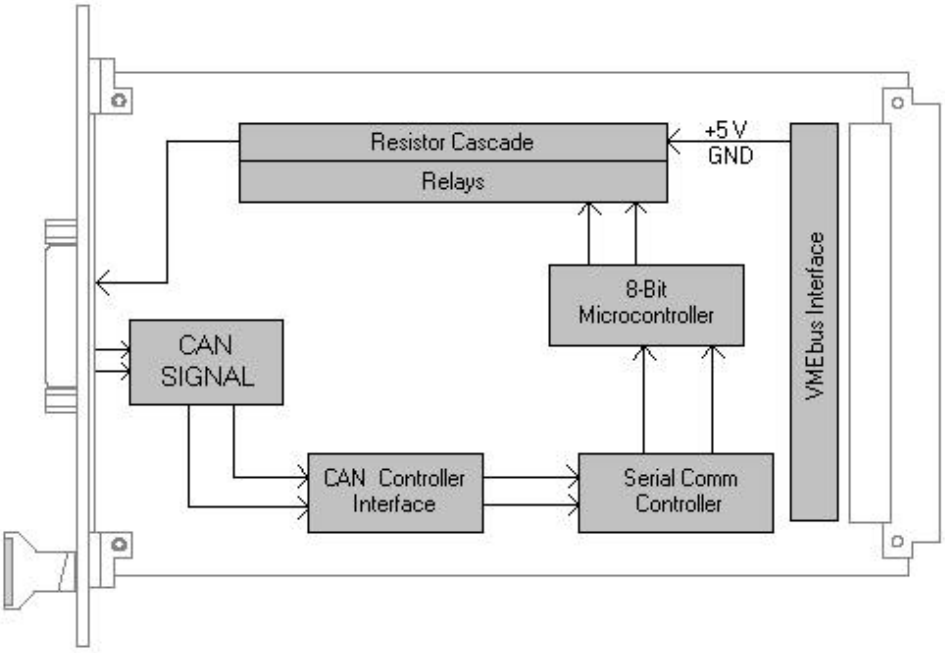


Fig. 1-1

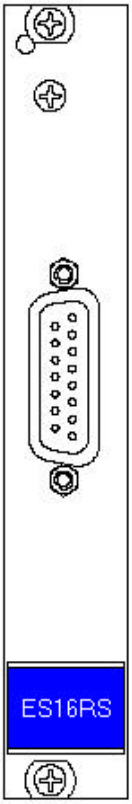


Fig. 1-2

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2 Hardware

This section contains:

- Jumper setting information for setup of 1-4 cards in 1 chassis.
- Individual pin information

2.1 Jumper Settings

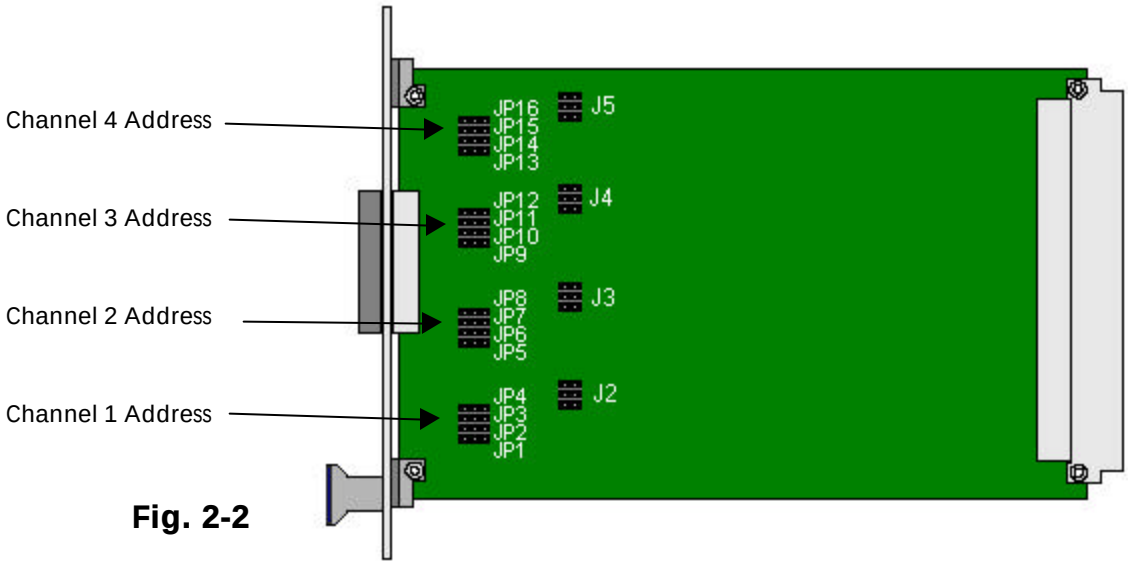


Fig. 2-2

There are 16, 3-Pin jumpers (JP1 - JP16) needed for software configuration on the ES16RS board as shown in Fig. 2-2. The other 4, 2-Pin jumpers (J2 – J5) are reserved for flashing the board and are **not to be used**. Each channel address (4 pins) is labeled with 'MSB' (Most Significant Bit) and 'LSB' (Least Significant Bit) as shown in Fig. 2-3. The MSB is the bit all the way to the left in an address (e.g. 0 is the MSB in the address '0111'). In jumpers JP1-JP16, a '1' jumper setting is set when the jumper is placed over the middle pin and the pin column labeled with a '1'. Conversely, a '0' jumper setting is set when the jumper is placed over the middle pin and pin column labeled with a '0'. The example shown in Fig. 2-3 is a '0011' address setting. This indicates a logic value of 3. Tab. 2-1 shows the channel addresses for setup of 1-4 ES16RS cards.

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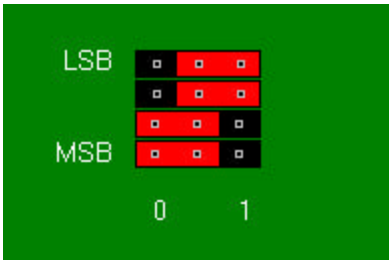


Fig. 2-3

Card 1				Card 2			
Chan #	**Jumper**	**Setting**	**Logic Value**	**Chan #**	**Jumper**	**Setting**	**Logic Value**
1	JP1	0	**0**	1	JP1	0	**4**
	JP2	0			JP2	1	
	JP3	0			JP3	0	
	JP4	0			JP4	0	
2	JP5	0	**1**	2	JP5	0	**5**
	JP6	0			JP6	1	
	JP7	0			JP7	0	
	JP8	1			JP8	1	
3	JP9	0	**2**	3	JP9	0	**6**
	JP10	0			JP10	1	
	JP11	1			JP11	1	
	JP12	0			JP12	0	
4	JP13	0	**3**	4	JP13	0	**7**
	JP14	0			JP14	1	
	JP15	1			JP15	1	
	JP16	1			JP16	1	

Tab. 2-1

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Card 3				Card 4			
Chan #	Jumper	Setting	Logic Value	Chan #	Jumper	Setting	Logic Value
1	JP1	1	**8**	1	JP1	1	**12**
	JP2	0			JP2	1	
	JP3	0			JP3	0	
	JP4	0			JP4	0	
2	JP5	1	**9**	2	JP5	1	**13**
	JP6	0			JP6	1	
	JP7	0			JP7	0	
	JP8	1			JP8	1	
3	JP9	1	**10**	3	JP9	1	**14**
	JP10	0			JP10	1	
	JP11	1			JP11	1	
	JP12	0			JP12	0	
4	JP13	1	**11**	4	JP13	1	**15**
	JP14	0			JP14	1	
	JP15	1			JP15	1	
	JP16	1			JP16	1	

Tab. 2-2

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2.2 Dsub Connector

The 15-Pin Dsub connector contains the Resistive Output signals and the CAN input signal. Pins 9-13 are not used.

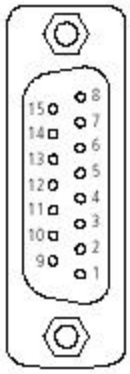


Fig. 2-3

Pin	Function	Pin	Function
1	Channel 1 A Out	9	Reserved
2	Channel 1 B Out	10	Reserved
3	Channel 2 A Out	11	Reserved
4	Channel 2 B Out	12	Reserved
5	Channel 3 A Out	13	Reserved
6	Channel 3 B Out	14	CAN LO In
7	Channel 4 A Out	15	CAN HIGH In
8	Channel 4 B Out		

Tab. 2-3

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3 Software

This section contains:

- How to import the ES16RS block into LabCar software

⇒ Open your project in LabCar Assistant

⇒ Open LabCar Developer from the workspace

⇒ Open the Database Browser for your project

⇒ Select 'Import' via the 'Database' menu bar

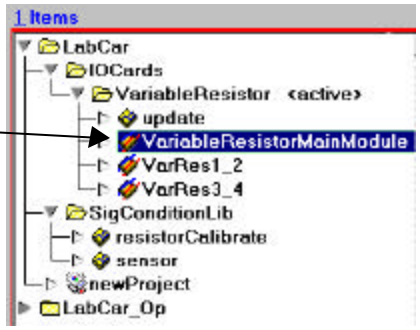
⇒ Browse for the 'VariableResistor.exp' file and select 'Open'

⇒ Open Project Editor from LabCar Developer

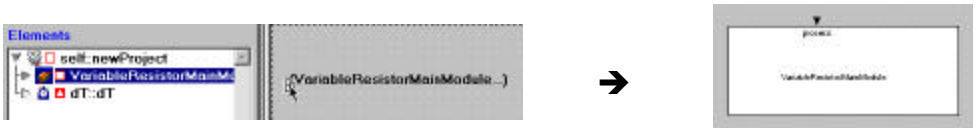
⇒ Select 'Add Item' via the 'Element' menu bar

NOTE: This adds blocks for 4 ES16RS cards

⇒ Select 'VariableResistorMainModule' under 'LabCar\IOCards\VariableResistor'



⇒ Once you have selected 'VariableResistorMainModule', drag it into the Project Editor workspace



⇒ Select 'Open Editor' via the 'RTIO' menu bar

⇒ Right-click on your target card (e.g. ES1130, ES1112) and select 'Paste ➔ to selected Item from Import'



⇒ Browse for the 'slot20.hws' file and select 'Open'

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⇒ Add HWC module to project, as normal

⇒ Add module processes to OS tasks, as normal

⇒ Click on the 'Generate Code for Current Experiment' icon in the toolbar



⇒ In Project Editor, select 'Resolve Globals' via the 'Global Elements' menu bar



⇒ Project can then go online

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4 Technical Data

Resistor Signal Characteristics

No. of Channels	4
Max. Current	350 mA fuse (Raychem miniSMDC014)
Resolution	2 Ω
Range	35 Ω - 125 kΩ
Control	CAN
	Not on VMEBus

Connectors

Front-Panel	15-Pin Dsub Female
Backplane	96-Pin DIN 41612 C (1 Slot)
	+5 V and GND source

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