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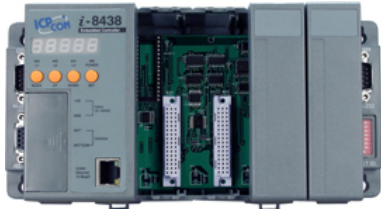sales@icp-australia.com.au
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I-8438-G/I-8838-G

Matlab embedded controller

Model: I-8438-G

Model: I-8838-G

Introduction

Matlab/Simulink is very powerful and flexible software for technical computing, which includes modeling, simulating, analyzing dynamic system , etc. Simulink provides a graphical user interface (GUI) for building models as block diagram by click-and-drag mouse operation. And Real-Time Workshop based on Matlab/Simulink supplies a real-time development environment—an approach from system design to hardware implementation. You can shorten development cycles and reduces costs with real-time workshop by testing design iteration on target hardware.

Matlab embedded controller, which is based on real-time workshop and real-time workshop embedded coder, presents a real-time embedded control solution for I-8438-G/8838-G equipped with various I/O modules. There are more than 20 I/O-bridge and system-level Simulink function blocksets built for customized application. By using Simulink development environment and Matlab Embedded Controller blocksets, control algorithms can be easily and quickly developed and verified. As soon as the algorithm has been confirmed, by pressing a build button, users can convert the control model to executable code, and download it to the controller for test and practical application via RS232 and Ethernet interface without any hand coding process. Therefore, engineers and researchers can put more focus on algorithm design and development in order to obtain a high performance control system.
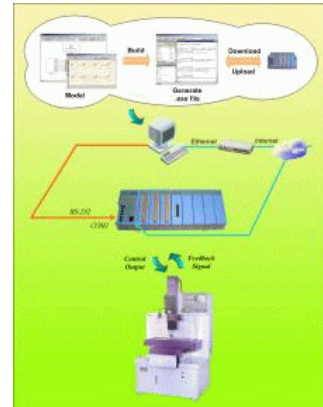
Features

- **RS232 & Ethernet Communication Interfaces:**
  The I-8438-G/8838-G gives you the function needed for your control program to download and upload experimental data through the media of RS232 & Ethernet communication interfaces.
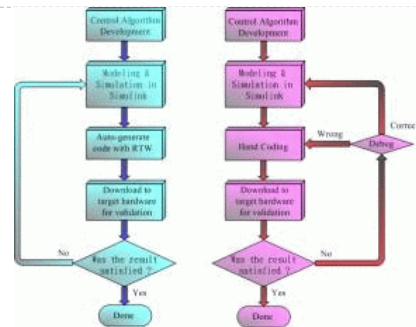
- **Reduce the design cycle of your product:**
  Matlab embedded controller in conjunction with MATLAB/Simulink/real-time workshop/embedded coder provides you the model-based control design approach. The model-based control design approach is a timesaving and cost-effective approach, allowing control engineers to work with a single model of a function or a complete system in an integrated software environment.

- **The extensibility of I/O driver blocks:**
  Matlab embedded controller solution is tailored for the I-8438-G/8838-G control system, which provides 4 or 8 expansion slots. Therefore, you can expand your I/O capability if necessary. Currently, this software driver provides over 20 I/O blocks to cooperate with Matlab development environment, which including DI, DO, DIO, AI, AO, Relay, and Encoder blocks. Note that more I/O blocks will be developed in the future.

Note: issues that SMMI 5-Digit LED Display will shows "E0001"and autoexec.bat can't auto run file, updating OS Image can solve it.

Software

- MATLAB 6.5 or 6.1
- Real-Time Workshop 4.1 or 5.0
- Stateflow and Stateflow Coder 4.1 or 5.0(opt.)
- Simulink 4.1 or 5.0
- Real-Time Workshop Embedded Coder 2.0 or 3.0

Specifications

CPU	80186, 80MHz
Flash ROM	512 KBytes
SRAM	512 KBytes
EEPROM	2 KBytes
Built-in Watchdog Timer	Yes
COM 0	Internal use
COM 1	RS-232/Program download port
COM 2	10 BaseT NE2000 compatible
COM 3	RS-232/485
COM 4	RS-232
Ethernet Port	10 BaseT NE2000 compatible
SMMI	Small Man Machine Interface
I/O Expansion Slot	4-slot for I-8438-G 8-slot for I-8838-G
Power Supply	20 W Unregulated +10 V_{DC} ~ +30 V_{DC}
Environmental	
Operating Temperature	-25 °C ~ +75 °C
Storage Temperature	-30 °C ~ +85 °C
Humidity	0 ~ 95%,non-condensing
Mechanical	
Dimensions	230 x 110 x 75.5 mm (4 slot) 354 x 110 x 75.5 mm (8 slot)

Ordering Information

I-8438-G	80M CPU ,512K Flash,512K SRAM,4 Slot,10M Ethernet
I-8838-G	80M CPU ,512K Flash,512K SRAM,8 Slot,10M Ethernet

Accessories

DP-660	24 V_{DC}/2.5 A, 60 W and 5 V_{DC}/0.5 A, 2.5 W Power Supply with DIN-Rail Mounting
DP-665	AC 85 ~ 270 V input, DC 24V/1.7A and 5V/0.5A output power supply
DP-1200	24 V_{DC}/2.5 A, 60 W and 5 V_{DC}/0.5 A, 2.5 W Power Supply with DIN-Rail Mounting
KA-52F	AC 100 ~ 250 V input, DC 24V/1A output, flat type power supply
DIN-KA52F	KA-52F with DIN-Rail mount