



I-8431



I-8831



I-8431-G



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I-8431-80/I-8831-80 I-843180-G/I-8831-80-G Ethernet embedded controller

Introduction

The I-8431-80/ I-8831-80 are ethernet embedded controller with 4/8 I/O slots. Both are equipped with MiniOS7,an embedded OS similar to DOS that is developed by ICPDAS Co., LTD.

The MiniOS7 can boot up in a very short time (0.4~0.8 second).It has built-in hardware diagnostic function, and supports the full functions to access all 8K and 87K series I/O modules, such as DI, DO, DIO, AI, AO, Counter/Frequency, motion modules etc.

To simplify the TCP/IP program developing process, we designed a XServer architecture. It is a reliable, opened, expandable, all purposed,and easily to be used library. The Xserver implements 90% functionalities of Ethernet communication. Refer the rich demo programs we provided, software engineer can easily finish the 10% remaining funtionalities and greatly shorten the developing time.

The I-8431-80/I-8831-80 are equipped an ethernet port and their back planes are equipped three serial COM Port, they include RS-232 and RS-485 ports and can be used in remote data acquisition and control applications, including environment monitoring, power management and factory automation. By using S-256 (256 KBytes) or S-512 (512 KBytes)battery backup SRAM, they provide data logger storage function.

Note: S256 and S512 are optional accessories.

Features

- Provide multi Serial Port interface on back plane
COM1: RS-232
COM3: RS-232/RS-485
COM4: RS-232
- The built-in watchdog circuit will reset the CPU module if a failure occurs in either the hardware or software, allowing the controller system more reliable and stable in harsh and noisy environments
- Dual Bus designed to supports i-8K and i-87K series I/O modules, such as DI/DO, AI/AO, Counter/Frequency modules
- Compact I/O Expansion slot allows the quick installation of various 8K and 87K I/O modules
- The XServer architecture greatly simplify the programming of TCP/IP protocol
- Supports the VxComm technique for all ports (Serial Port and Ethernet Port)
- Firmware updated via the RS-232 port
- Ventilated housing designed to operate between -25°C to +75°C
- Using DIN rail clips or Screw poles around the corners allows the control unit to be easily mounted on the control box
- Frame Ground provides a path for bypassing ESD, allowing enhanced static protection (ESD) capability and ensures that the module is more reliable
- Equipped with MiniOS7, ,an embedded OS similar to DOS that is developed by ICP DAS Co., LTD
- Provides full C library functions such as 8K, 87K I/O, 7-segment LED, RTC (real time clock), EEPROM etc

Specifications

CPU module

CPU	80186 or compatible (16-bit and 80MHz)
SRAM	512KBytes
Flash	512KBytes
EEPROM	2KBytes
NVRAM	Yes
RTC (real time clock)	Yes

Hardware Serial Number	-
Built-in Watchdog Timer	Yes
Communicate Interface	
COM 0	Internal communication with the 87K modules
COM 1	RS-232 (to update firmware)
COM 2	-
COM 3	RS-232/RS-485
COM 4	RS-232
Ethernet Port	10BaseT NE2000 compatible

SMMI

5 - Digit LED Display	Yes
3 - Programmable LED Indicators	Yes
4 - Push Buttons	Yes

I/O expansion slots

8431-80	4 Slots
8831-80	8 Slots

Dimensions

8431-80	230 x 110 x 75.5 mm
8831-80	354 x 110 x 75.5 mm

Operating Environment

Operating Temperature	-25°C to +75°C
Storage Temperature	-30°C to +85°C
Humidity	5 ~ 95%,non-condensing

Power

Protection	Power reverse polarity protection
3KV power isolation	-
Power requirement	10 ~ 30 V/DC
Power supply	20W
Power consumption	I-8431-80: 3.9 W I-8831-80: 5.1 W

Ordering information

I-8431-80	I-8431-80 Embedded Controller
I-8831-80	I-8831-80 Embedded Controller
I-8431-80-G	I-8431-80 Embedded Controller with gray color
I-8831-80-G	I-8431-80 Embedded Controller with gray color

Optional Accessories

S256	256K battery backup SRAM module
S512	512K battery backup SRAM module
KA-52F	AC100~250V input, DC 24V/1A output, flat type power supply
DIN-KA52F	KA-52F with DIN-Rail mount
DP-665	AC 85 ~ 270 V input, DC 24V/1.7A and 5V/0.5A output power supply
DP-660	24V/1.7A 5V/0.5A Power Supply
DP-1200	24V/5A Power Supply