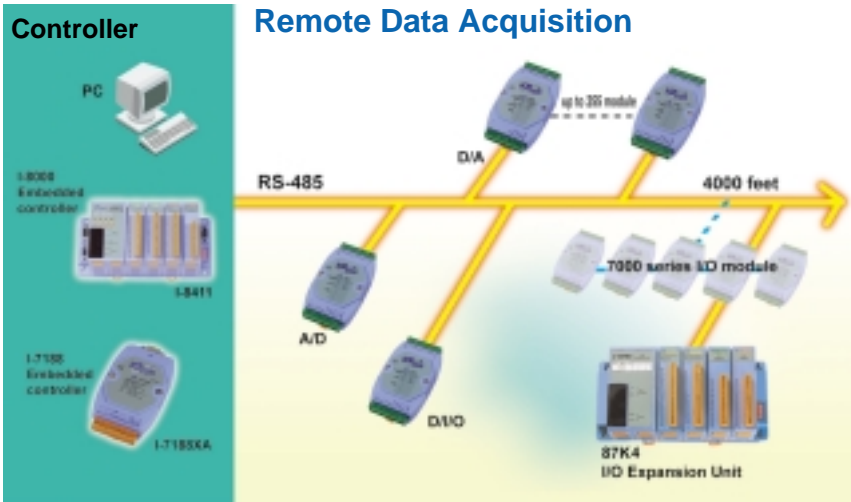


# i-7000 Remote I/O Modules

## SERIES



## Introduction

I-7000 series provide cost-effective protection and conditioning for wide range of valuable industrial control signals and systems. Our product line includes sensor-to-computer, computer-to-sensor, digital I/O, timer/counter, RS-232 to RS-485/422 converter, RS-485/422 repeater, Man machine interface, Data display and application software. I-7000 modules are good for small I/O channels, while I-87K I/O expansion units are good for middle-size I/O channels.

## Features

- More than 70 modules are provided and more new modules are coming
- Industrial quality
- Self-Tuner design
- Dual Watchdog design
- High Speed Isolated Repeater
- Intelligent Inside
- I/O Range Programmable
- Wide Range Power Input
- Easy Mounting and Connection
- Complete software environment



Piggy Back



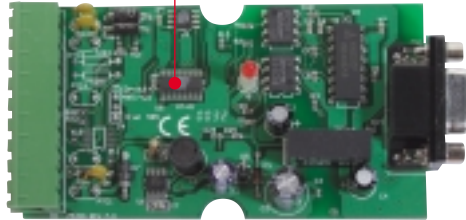
DIN-Rail Mounting

# i-7000 "Self Tuner" Innovative Design SERIES

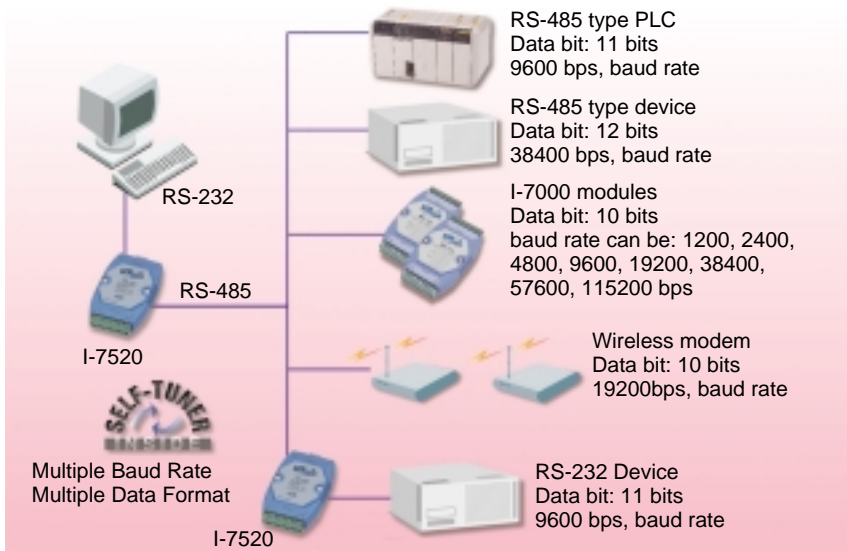
## "Self Tuner" A New Technology You Should Know !

U.S. Patent Pending,  
R.O.C. PAT No. 086674  
R.O.C. PAT No. 132457

Self Tuner Chip



Conventional RS-232 to RS-485 converter uses the DIP switch to choose the baud rate and data format for the whole RS-485 network. All modules, devices and equipment in the whole network should be configured to the same baud rate and data format. Unfortunately most real world applications can't be implemented in such a simple way. "Self Tuner" is an innovative chip and designed for solving this problem. Every converter contains a "Self Tuner" chip. This chip can auto-tune the baud rate and data format in the whole network. Therefore I-7520 can connect ot different baud rate and different data format devices in the same network.



# i-7000 "Self Tuner" Innovative Design SERIES

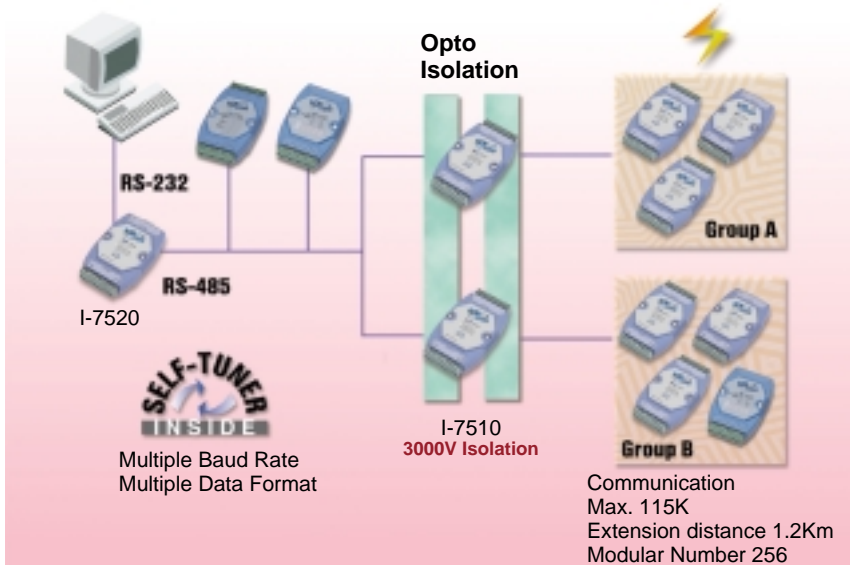
## High Speed & High Quality Isolated RS-485 Repeater

Drop the low-end Repeater,  
Save your RS-485 Network

Self Tuner Chip

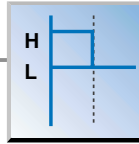
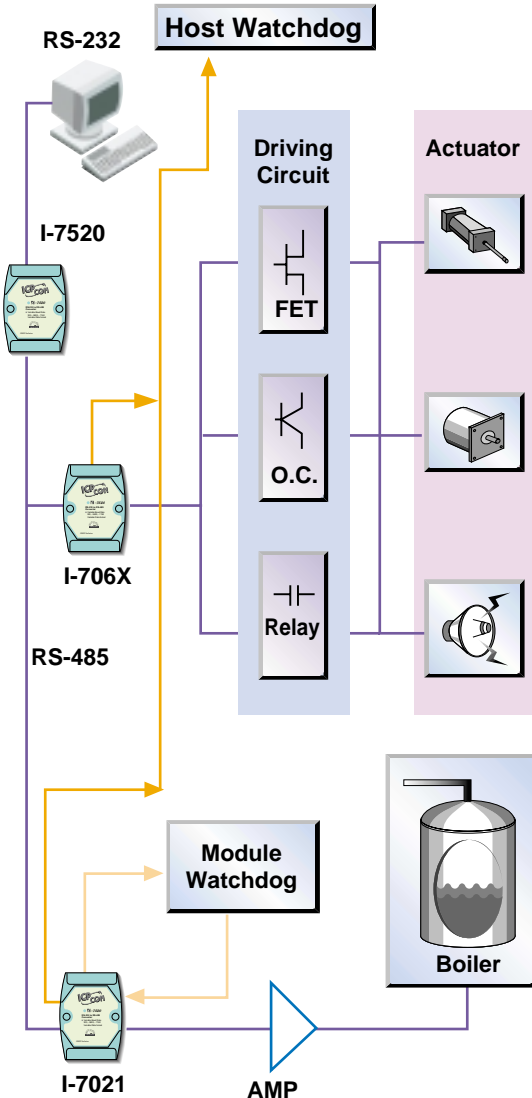


Conventional RS-485 repeater uses the DIP switch to choose the baud rate and data format for the whole RS-485 network. Our repeater contains an innovative "Self Tuner" chip. This chip auto-tune the baud rate and the data format in the whole network and make the whole network very stable. Because the superior designs, every repeater can extend the communication to another 1.2 Km at the 115K speed. If the speed is lower than 115k, the extended distance can be up to 2.1 Km or 3.4Km. Some low-end repeaters can't repeat signal well and cause the whole network unstable. Those low-end repeaters don't have isolation. The whole network could be destroyed by lightning or transient high voltage. If your RS-485 is unstable, please change the converter and repeater.

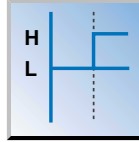


# i-7000 "Dual Watchdog" SERIES

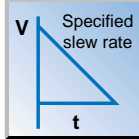
## Network Control Made Reliable



**Active host watchdog**  
Output state go to safe state: L



**Active host watchdog**  
Output state go to safe state: H



**Active host watchdog**  
D/A output go to safe state

### Why! "Dual Watchdog"

Some company's remote I/O modules doesn't have the "Dual Watchdog", it may cause unrecoverable damage to the whole control system.

### What is "Dual Watchdog"

I-7000 Provides Module and Host Watchdog. The Module Watchdog is a hardware watchdog. The Host watchdog is a software watchdog. The module watchdog is designed to automatically reset the  $\mu$ p when the module fails. The host watchdog monitors the host controller (PC or PLC). The output of module can go to the safe state, if the host fails.

### Example 1

When the host watchdog active, the output of Digital I/O should go to the safe state, logical high or low. The user can specify the logical state.

### Example 2

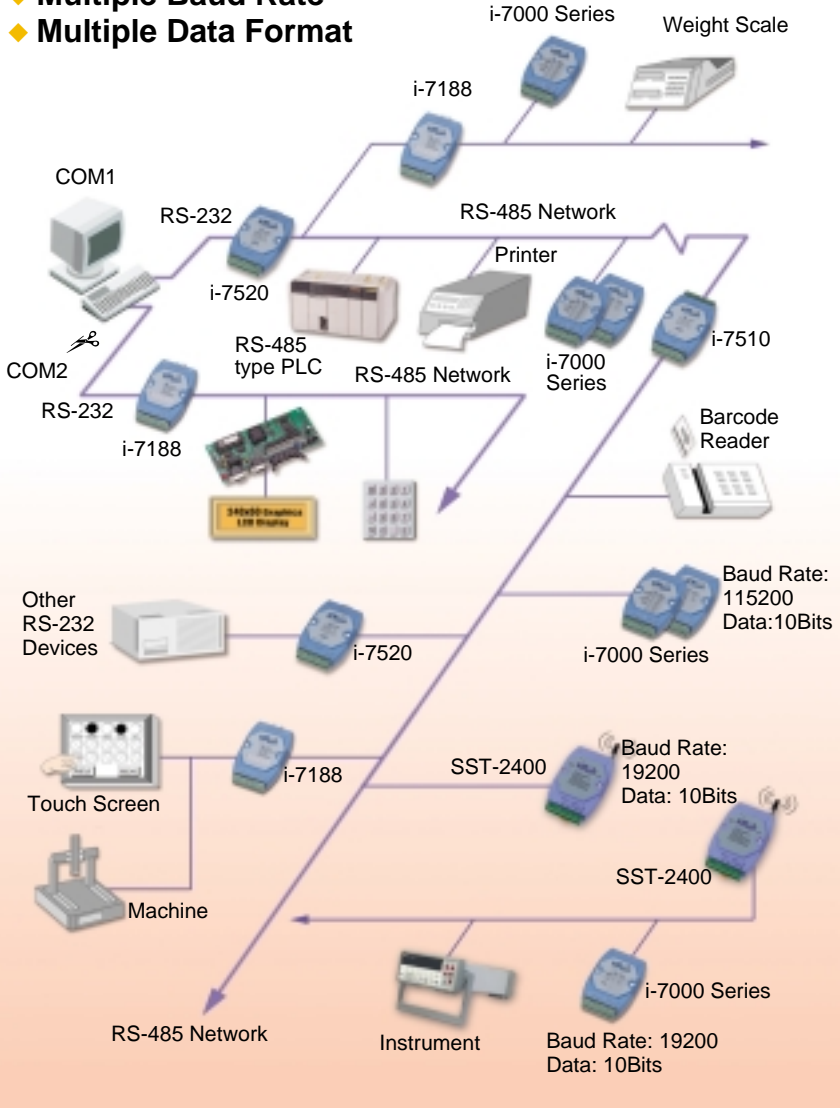
When the host watchdog active, the output of D/A is stepped until the final (safe) value is reached and a gradual controlled output slew rate is followed. The user can specify the slew rate of the output voltage.

# i-7000 *The Most Flexible RS-485 Network*

## SERIES

### I-7000 Series RS-485 Network Configuration

- ◆ Multiple Baud Rate
- ◆ Multiple Data Format



# i-7000 Selection Guide

## SERIES

### Analog Input/Output Modules Selection Guide

Module		I-7011/ I-7011D/ I-7011P/ I-7011PD	I-7012/ I-7012D	I-7012F/ I-7012FD	I-7013/ I-7013D	I-7033 I-7033D
Analog Input	Resolution	16 bit	16 bit	16/12 bit	16 bit	16 bit
	Input channel	1 diff.	1 diff.	1 diff.	1 diff.	3 diff.
	Sampling rate	10Hz	10Hz	10/100Hz	10Hz	15Hz (total)
	Voltage input	+/-15mV +/-50mV +/-100mV +/-500mV +/-1V +/-2.5V	+/-150mV +/-500mV +/-1V +/-5V +/-10V	+/-150mV +/-500mV +/-1V +/-5V +/-10V	-	-
	Current input	+/-20mA*	+/-20mA*	+/-20mA*	-	-
	Sensor input	J.K.T.E.R.S. B.N.C Add L.M for I-7011P	-	-	Pt Ni-RTD	Pt Ni-RTD
	4 1/2 digit LED Display	Yes for I-7011D/ I-7011PD	Yes for I-7012D	Yes for I-7012FD	Yes for I-7013D	Yes for I-7033D
	Isolated loop power	-	-	-	-	-
	Input Linear scaling	-	-	-	-	-
	Isolation Voltage	3000V	3000V	3000V	3000V	3000V
Digital input & digital output	Digital input channels	1	1	1	-	-
	Digital output channels	2	2	2	-	-
	Event counter	Yes	Yes	Yes	-	-
	High/Low Alarm	Yes	Yes	Yes	-	-
Dual Watchdog Timer	Yes	Yes	Yes	Yes	Yes	
Availability	Yes	Yes	Yes	Yes	Yes	
* with external 125Ω resistor						

# i-7000 Selection Guide

## SERIES

### Analog Input/Output Modules Selection Guide

Module		I-7014D	I-7016/ I-7016D	I-7016P/ I-7016PD	I-7017	I-7017F	I-7018/ I-7018P	
Analog Input	Resolution	16 bit	16 bit	16 bit	16 bit	16/12 bit	16 bit	
	Input channel	1 diff.	2 diff.	1 diff.	8 diff.	8 diff.	8 diff.	
	Sampling rate	10Hz	10Hz	10Hz	10Hz	10/75Hz (total)	10Hz	
	Voltage input	+/-150mV +/-500mV +/-1V +/-5V +/-10V	+/-15mV +/-50mV +/-100mV +/-500mV +/-1V +/-2.5V	+/-15mV +/-50mV +/-100mV +/-500mV +/-1V +/-2.5V	+/-150mV +/-500mV +/-1V +/-5V +/-10V	+/-150mV +/-500mV +/-1V +/-5V +/-10V	+/-150mV +/-500mV +/-1V +/-5V +/-10V	+/-15mV +/-50mV +/-100mV +/-500mV +/-1V +/-2.5V
	Current input	+/-20mA	+/-20mA	+/-20mA	+/-20mA*	+/-20mA*	+/-20mA*	
	Sensor input	–	4 Wire	6 Wire	–	–	J.K.T.E.R.S. B.N.C Add L, M for I-7018P	
	4 1/2 digit LED Display	Yes	Yes for I-7016D	Yes for 7016PD	–	–	–	
	Isolated loop power	Yes, +15V	–	–	–	–	–	
	Input Linear scaling	Yes	Yes	Yes	–	–	–	
	Isolation Voltage	3000V	3000V	3000V	3000V	3000V	3000V	
Digital input & digital output	Digital input channels	1	1	1	–	–	–	
	Digital output channels	2	4	4	–	–	–	
	Event counter	Yes	Yes	Yes	–	–	–	
	High/Low Alarm	Yes	Yes	Yes	–	–	–	
Dual Watchdog Timer	Yes	Yes	Yes	Yes	Yes	Yes		
Availability	Yes	Yes	Yes	Yes	Yes	Yes		

\* with external 125Ω resistor

# i-7000 Selection Guide

## SERIES

### Digital I/O, Relay and Counter Selection Guide

Module		I-7050/ I-7050D	I-7052/ I-7052D	I-7053/ I-7053D	I-7041/ I-7041D
Digital input and Digital output	Digital input channels	7	8 Isolation (5000V)	16	14 Isolation (3750V)
	Digital output channels (open collector)	8	–	–	–
	Alarm Setting	–	–	–	–
Counter	Channels	7	8	16	14
	Input frequency	100Hz for I-7050D	100Hz for I-7052D	100Hz for I-7053D	100Hz for I-7041D
LED Display		Yes for I-7050D	Yes for I-7052D	Yes for I-7053D	Yes for I-7041D
Safe Value (When Host Fail or communication fail)		Yes	–	–	–
Power-on Preset Value		Yes	–	–	–
Dual Watchdog Timer		Yes	–	–	–
Availability		Yes	Yes	Yes	Yes

### Digital I/O, Relay and Counter Selection Guide

Module		I-7042/ I-7042D	I-7043/ I-7043D	I-7044/ I-7044D	I-7060/ I-7060D
Digital input and Digital output	Digital input channels	–	–	4 Isolation (3750V)	4 Isolation (3750V)
	Digital output channels (open collector)	13 Isolation (3750V)	16	8 Isolation (3750V)	4 Channel Relay Form A x 2 Form C x 2
	Alarm Setting	–	–	–	–
Counter	Channels	–	–	4	4
	Input frequency	–	–	100Hz for I-7044D	100Hz for I-7060D
LED Display		Yes for I-7042D	Yes for I-7043D	Yes for I-7044D	Yes for I-7060D
Safe Value (When Host Fail or communication fail)		Yes	Yes	Yes	Yes
Power-on Preset Value		Yes	Yes	Yes	Yes
Dual Watchdog Timer		Yes	Yes	Yes	Yes
Availability		Yes	Yes	Yes	Yes



# i-7000 Selection Guide

## SERIES

### Digital I/O, Relay and Counter Selection Guide

Module		I-7063/63D/63A/63AD/ I-7063B/63BD	I-7065/65D/65A/65AD/ I-7065B/65BD
Digital input and Digital output	Digital input channels	8 Isolation (3750V)	4 Isolation (3750V)
	Digital output channels	3 Channel Relay I-7063: Form A; AC 250V5A; DC 30V/5A I-7063A: AC type SSR I-7063B: DC type SSR	5 Channel Relay I-7065: Form A; AC 250V5A; DC 30V/5A I-7065A: AC type SSR I-7065B: DC type SSR
	Alarm Setting	–	–
Counter	Channels	8	4
	Input frequency	100Hz (*1)	100Hz (*2)
LED Display		Yes for 7063D/7063AD/7063BD	Yes for 7065D/7065AD/7065BD
Safe Value (When Host Fail or communication fail)		Yes	Yes
Power-on Preset Value		Yes	Yes
Dual Watchdog Timer		Yes	Yes
Availability		Yes	Yes

\* 1: for I-7063D, I-7063AD, I-7063BD \* 2: for I-7065D, I-7065AD, I-7065BD

### Digital I/O, Relay and Counter Selection Guide

Module		I-7066/ I-7066D	I-7067/ I-7067D	I-7080/ I-7080D
Digital input and Digital output	Digital input channels	–	–	–
	Digital output channels	7 Channel Photo Mos Relay	7 Channel Relay Form A	2 Channel
	Alarm Setting	–	–	–
Counter	Channels	–	–	–
	Input frequency	–	–	–
LED Display		Yes for I-7066D	Yes for I-7067D	Yes for I-7080D
Safe Value (When Host Fail or communication fail)		Yes	Yes	Yes
Power-on Preset Value		Yes	Yes	Yes
Dual Watchdog Timer		Yes	Yes	Yes
Availability		Yes	Yes	Yes

# i-7000 Selection Guide

## SERIES

### Analog Output Module Selection Guide

Module		I-7021	I-7021P	I-7022	I-7024
Analog Output	Resolution	12 bit	16 bit	12 bit	14 bit
	Output Channels	1	1	2 (* 1)	4
	Voltage Output	0-10V	0-10V	0-10V	+/-10V, 0-10V, +/-5V, 0-5V
	Current Output	0-20mA 4-20mA	0-20mA 4-20mA	0-20mA 4-20mA	0-20mA 4-20mA
Safe Value (When Host Fail or communication fail)		Yes	Yes	Yes	Yes
Power-on Preset Value		Yes	Yes	Yes	Yes
Dual Watchdog Timer		Yes	Yes	Yes	Yes
Availability		Yes	Yes	Yes	Yes

\* 1: channel to channel isolation

### Touch Panel Selection Guide

Module	Touch 200	Touch 250	Touch 500S/ Touch 500T
Display	5.7"	9.4"	10.4"
Resolution	320(W) x 240(W)	640(W) x 480(W)	640(W) x 480(W)
Display Type High Contrast	Blue mode LCD	Blue mode LCD	Color LCD (S: STN; T: TFT)
Backlight	CCFT	CCFT	CCFT
Interface Port	RS-232/RS-485	RS-232/RS-485	RS-232/RS-485
Touch Type	Resistive	Resistive	Resistive
Display Area	120(W) x 90(W)	196(W) x 148(W)	215(W) x 162(W)
Power Consumption	12W	12W	15W
Dimension	204 x 150 x 75mm	90 x 230 x 60mm	315 x 238 x 62mm
Weight	1.0Kg	1.8Kg	2.5Kg

**ISA-7520R**



**ISA-7520R:**

**ISA Bus RS-232 to RS-485 Card**

- ISA Bus interface
- Input: RS-232 protocol
- Output: RS-485 protocol
- "Self Tuner" inside
- Speed: 300 ~115,200 bps
- 3000 V isolation
- Multiple Baud Rate; Multiple Data Format

**PCI-7520AR**



**PCI-7520AR:**

**PCI Bus RS-232 to RS-422/485 card**

- PCI Bus interface
- Input: RS-232 protocol
- Output: RS-422/485 protocol
- Other spec. same as ISA-7520R

**I-7520**



**I-7520:**

**RS-232 to RS-485 Converter**

**I-7520R:**

**RS-232 to RS-485 Converter**

- Input: RS-232 protocol
- Output: RS-485 protocol
- "Self Tuner" inside
- Speed: 300 ~115,200 bps
- 250 modules in one RS-485 network without Repeater
- 3000 V isolation
- Multiple Baud Rate; Multiple Data Format
- Communication distance:
  - 2.1Km/9600 Bps
  - 2.7Km/4800 Bps
  - 3.6Km/2400 Bps
- 7520R is the best choice for PLC user

**I-7520A**



**I-7520A:**

**RS-232 to RS-422/RS-485 converter**

- Input: RS-232 protocol
- Output: RS-422/485 protocol
- Other spec. is the same as I-7520

**I-7520AR:**

**RS-232 to RS-422/RS-485 converter**

- Same as I-7520A, except the power side is different

# i-7000 *Isolated RS-422/485 Repeater*

## SERIES

I-7510



### **I-7510:**

#### **RS-485 Repeater**

- "Self-tuner" inside
- Multiple Baud Rate:  
300,...9600,...115, 200 BPS
- Multiple Data Format
- Automatically adjust Baud Rate and Data Format

### **I-7510A:**

#### **RS-422/RS-485 Repeater**

- Same as I-7510
- Plus RS-422 repeater

## **Analog I/O Modules**

I-7011



### **I-7011:**

#### **Thermocouple Input Module**

### **I-7011D:**

#### **I-7011 with LED Display**

- Analog input type: thermocouple, mV, V or mA
- Input Range: +/-15mV, +/-50mV, +/-100mV, +/-500mV, +/-1V, +/-2.5V, +/-20mA
- Thermocouple type: J, K, T, E, R, S, B, N, C
- Sampling rate: 10 samples/sec
- Programmable Hi/Low alarm

I-7011P



### **I-7011P**

### **I-7011PD:**

#### **I-7011P with LED Display**

- Analog input type: thermocouple, mV, V or mA
- Input Range: +/-15mV, +/-50mV, +/-100mV, +/-500mV, +/-1V, +/-2.5V, +/-20mA
- Thermocouple type: J, K, T, E, R, S, B, N, C, L, M
- Sampling rate: 10 samples/sec
- Programmable Hi/Low alarm

I-7012



### **I-7012:**

#### **Analog Input Module**

### **I-7012D:**

#### **I-7012 with LED Display**

- Analog input type: mV, mA
- Input Range: +/-150mV, +/-500mV, +/-1V +/-5V, +/-10V, +/-20mA
- Sampling rate: 10 samples/sec.
- LED indicator: 4 1/2 digit readout

# i-7000 Analog I/O Modules

## SERIES

I-7012F



### I-7012F I-7012FD

- High speed version of I-7012
- Can be configured as 12-bit resolution and 100Hz sampling rate
- Other spec. is the same as I-7012

I-7013



### I-7013: RTD Input Module

#### I-7013D:

#### I-7013 with LED Display

- Analog input type: Pt or Ni RTD
- Sampling rate: 10 samples/sec.
- Input connection: 2, 3, or 4 wires
- Pt 100 input range:  
+/-100°C, 0-100°C, 0-200°C, 0-600°C
- Ni input range: -80-100°C, 0-100°C

I-7033



### I-7033:3-channel RTD Input Module

#### I-7033D: I-7033 with LED Display

- Sampling rate: 15Hz (Total)
- Other Spec. is the same as I-7013

I-7014D



### I-7014D: Analog/Transmitter Input with LED Display

- Analog input type: V, mV, mA
- Input Range: +/-150mV, +/-500mV, +/-1V  
+/-5V, +/-10V, +/-20mA
- Sampling rate: 10 samples/sec.
- Isolated loop power: +15Vdc
- Input Linear Scaling
- LED indicator: 4 1/2 digit readout

I-7016



### I-7016/7016D/7016P/7016PD:

#### Strain Gauge Input Module

- Resolution: 16 bit
- Channel: 2 channel (I-7016/I-7016D)
- Channel: 1 channel (I-7016P/I-7016PD)
- Input type: mV and mA
- Input range: +/-15mV, +/-50mV, +/-100mV,  
+/-500mV, +/-20mA
- Isolation: 3000V
- Sampling rate: 10Hz
- I-7016/I-7016D for 4 wire
- I-7016P/I-7016PD for 6 wire

# i-7000 Analog I/O Modules

## SERIES

I-7017



### I-7017:

#### 8-channel Analog Input Module

- Input Range: same as I-7012
- Channels:
  - 6 differential, 2 single-ended or
  - 8 differential (jumper selectable)
- Sampling rate: 10 samples/sec total

I-7017F



### I-7017F:

#### 8-channel Analog Input Module

- High speed version of I-7017
- Can be configured as 12-bit resolution and 60Hz sampling rate
- Other spec. is the same as I-7017

I-7018



### I-7018:

#### 8-channel Thermocouple Input Module

- Input type: same as I-7011
- Input Range: same as I-7011
- Channels:
  - 6 differential, 2 single-ended or
  - 8 differential (jumper selectable)
- Sampling rate: 10 samples/sec total

I-7018P



### I-7018P:

#### 8-channel Thermocouple Input Module

- same as 7018
- Add two thermocouple input type: L, M

I-7021



### I-7021:

#### Analog Output Module

- Analog output type: mA, V
- Output Range: 0-20mA, 4-20mA, 0-10V
- Accuracy:
  - +/-0.1% or FSR for current output
  - +/-0.2% or FSR for voltage output
- Programmable output slew rate:
  - 0.0625 to 64V/sec.
  - 0.125 to 128mA/sec.

# i-7000 Analog I/O Modules

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SERIES

I-7021P



**I-7021P:**  
**Analog Output Module**

- High precision version of I-7021
- Current output 0-20mA, 4-20mA
- Voltage output 0-10V

I-7022



**I-7022:**  
**2-channel Analog Output Module**

- Analog output channel: 2
- Current output: 0-20mA, 4-20mA
- Voltage output: 0-10V
- Channel to channel isolated

I-7024



**I-7024:**  
**4-channel analog output Module**

- Current output 0-20mA, 4-20mA
- Voltage output: +/-10V, 0-10V, +/-5V, 0-5V
- Programmable output slew rate

## Digital I/O Modules

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I-7050



**I-7050: Digital I/O Module**

**I-7050D: I-7050 with LED Display**

- Digital input channels: 7  
Level: TTL,  
Logic level 0: +1V max.  
Logic level1: +2.4 min.
- Digital output channels: 8  
Open collector to 30V, 30mA max. load  
Power dissipation: 300mW

I-7052



**I-7052: Isolated Digital Input Module**

**I-7052D: I-7052 with LED Display**

- Input: 6 differential and 2 single-ended  
high level: 3.5V to 30V.  
Low level: 0 to 1V.
- Isolation voltage: 5000V rms
- Input resistance: 3K $\Omega$

# i-7000 Digital I/O Modules

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I-7053

**I-7053:**  
**Digital Input Module**

**I-7053D:**  
**I-7053 with Display**

- Input: 16 single-ended  
high level: 4V to 30V.  
Low level: 0 to 1V.



I-7041

**I-7041:**  
**Isolated Digital Input Module**

**I-7041D:**  
**I-7041 with LED Display**

- Input: 14 single-ended  
high level: 3.5V to 30V.  
Low level: 0 to 1V.
- Isolation voltage: 3750V rms
- Input resistance: 3K $\Omega$



I-7042

**I-7042:**  
**Isolated O.C. Output Module**

**I-7042D:**  
**I-7042 with LED**

- Digital Output channels: 13  
Open collector to 30V, 100mA max load
- Isolation voltage: 3750V rms
- Direct drive power relay module



I-7043

**I-7043:**  
**Nonisolated O.C. Output Module**

**I-7043D:**  
**I-7043 with LED**

- Digital Output channels: 16  
Open collector or 30V. 100mA max load
- Direct drive power relay module



I-7044

**I-7044:** **Isolated Digital Input & Output Module**  
**I-7044D:** **I-7044 with LED Display**

- Input: 4 single-ended  
high level: 3.5V to 30V.  
Low level: 0 to 1V.
- Input isolation voltage: 3750V rms
- Digital Output channels: 8  
Open collector to 30V.  
375mA max per channel



# i-7000 Digital I/O Modules

SERIES



## **I-7060:**

**Relay Output & Isolated Digital Input Module**

**I-7060D: I-7060 with LED Display**

- Input: 4 single-ended  
high level: 3.5V to 30V.  
Low level: 0 to 1V.
- Isolation voltage: 5000V rms
- Input resistance: 3K $\Omega$
- Output: 4-channel relay



**I-7063: Power Relay & Isolated Digital Input Module**

**I-7063D : I-7063 with LED Display**

- Input : 8 single-ended  
high level: 3.5V to 30V.  
Low level: 0 to 1V.  
Input resistance: 3K ohm
- Output: 3 Form A power relay  
Contact rating: 5A@250VAC / 5A@30VDC
- Isolation voltage: 3750Vrms



**I-7063A: AC-SSR & Isolated Digital Input Module**

**I-7063AD: I-7063A with LED Display**

- Digital input spec. is the same as I-7063
- Output: 3 AC-SSR , Normal open  
Contact rating: Load voltage: AC 24 to 265Vrms  
Leakage current: 1.5mArms  
Max load current: 1.0Arms
- Isolation voltage:3750Vrms



**I-7063B: DC-SSR & Isolated Digital Input Module**

**I-7063BD: I-7063B with LED Display**

- Digital input spec. is the same as I-7063
- Output: 3 DC-SSR , Normal open  
Contact rating: Load voltage: DC 3 to 30V  
Leakage current: 1.0mA  
Max load current: 1.0A
- Isolation voltage:3750Vrms



**I-7065: Power Relay & Isolated Digital Input Module**

**I-7065D: I-7065 with LED Display**

- Input : 4 single-ended  
high level: 3.5V to 30V.  
Low level: 0 to 1V.  
Input resistance: 3K ohm
- Output: 5 Form A power relay  
Contact rating: 5A@250VAC  
5A@30VDC
- Isolation voltage: 3750Vrms

# i-7000 Digital I/O Modules

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**I-7065A**



**I-7065A: AC-SSR & Isolated Digital Input Module**

**I-7065AD: I-7065A with LED Display**

- Digital input spec. is the same as I-7065
- Output: 5 AC-SSR , Normal open  
Contact rating:  
Load voltage: AC 24 to 265Vrms  
Leakage current: 1.5mArms  
Max load current: 1.0Arms
- Isolation voltage:3750Vrms

**I-7065B**



**I-7065B: DC-SSR & Isolated Digital Input Module**

**I-7065BD: I-7065B with LED Display**

- Digital input spec. is the same as I-7065
- Output: 5 DC-SSR , Normal open  
Contact rating:  
Load voltage: DC 3 to 30V  
Leakage current: 1.0mA  
Max load current: 1.0A
- Isolation voltage:3750Vrms

**I-7066**



**I-7066: Photo Mos Relay Output Module**

**I-7066D: I-7066 with Display**

- 7 form A Photo Mos Relays
- Switch up to Max. 0.13A at Max. 350 VAC
- 5,000V Optional Isolation

**I-7067**



**I-7067: Relay Output Module**

**I-7067D: I-7067 with Display**

- Relay output: 7 Form A  
Ratingf: AC: 125V @0.5A  
DC: 24V @2A

## Counter Modules

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**I-7080**



**I-7080: Counter/Frequency Input Module**

**I-7080D: I-7080 with LEC Display**

- Counter input: 2 independent 32 bit counter
- Frequency input: 100K Hz max
- Input: 3750V isolated or non-isolated
- Non-isolated programmable threshold value  
Programmable digital noise filter
- LED indicator: 5 digit readout (I-7080D)

# i-7000 **Relay Module**

## SERIES



## Relay Modules

### RM-10X Series Relay Module

- 16A, 1 form C Relay
- RM-104/RM-108/RM-116

### RM-20X Series Relay Module

- 5A, 2 form C Relay
- RM-204/RM-208/RM-216

### DN-PR4:

- Channels: 4
- Relay Type: Form A
- Load Voltage: 50~250VAC/5A

### DN-SSR4:

- Channels: 4
- Relay Type: Form A
- Load Voltage: 50~250VAC/4A

## Power Supply

### ACE-540A/DIN-540A:

- Input Voltage: 85~264VAC
- Input Frequency: 47~63Hz
- Output Voltage: +24VDC
- Output Current: 2Amps
- Output power Range: 48 Watts

### KA-52F/DIN-KA52F

- Input Voltage: 100~250VAC
- Output Voltage:  $\pm 24$ VDC/1.05Amps

### PWR-24/110

- Input Voltage: 110VAC
- Input Frequency: 60Hz

### PWR-24/220

- Input Voltage: 220VAC
- Input Frequency: 50Hz
- Output Voltage: +24VDC

### PWR-24/230

- Input Voltage: 230VAC
- Input Frequency: 50Hz
- Output Voltage: +24VDC



## Man-Machine Interface

### MMICON

- Man-Machine interface Control Board
- 240x64 dots Graphics LCD interface
- LCD display area: 107.97x77mm
- 4x4 keyboard interface
- RS-232/RS-485 interface



# i-7000 *Man Machine Interface*

## SERIES

### Touch 200



- Touch panel: resistive type
- 5.7" high contrast blue mode LCD
- Resolution: 320(W) x 240(H) dots
- Display area: 120(W) x 90(W)
- Backlight: CCFT (MTBF, 10,000hr)
- RS-232/RS-485 Interface
- Connect to I-7188, PC or other embedded controller
- Power Consumption: 12W
- Dimensions: 240x150x75mm
- Weight: 1.0Kg

### Touch 250



- Touch panel: resistive type
- 9.4" high contrast blue mode LCD
- Resolution: 640(W) x 480(H) dots
- Display area: 196(W) x 148(W)
- Backlight: CCFT (MTBF, 10,000hr)
- RS-232/RS-485 Interface
- Connect to I-7188, PC or other embedded controller
- Power Consumption: 12W
- Dimensions: 290x230x60mm
- Weight: 1.8Kg

### Touch 500



- Touch panel: resistive type
- 10.4" high contrast color LCD
- Resolution: 640(W) x 480(H) dots
- Display area: 215(W) x 162(W)
- Backlight: CCFT (MTBF, 10,000hr)
- RS-232/RS-485 Interface
- Connect to I-7188, PC or other embedded controller
- Power Consumption: 15W
- Dimensions: 315x238x62mm
- Weight: 2.5Kg

### Iview 100



- Handset Controller
- CPU: Am188ES, 20M Hz
- SRAM: 256K bytes
- Flash: 512K bytes
- Display: LCD 128 x 64 dots STN, YellowGreen, Backlight
- COM port:
  - Com1: RS-232
  - Com2: RS-485
- Built-in EEPROM: 2048 bytes
- Support I/O, Expansion Bus
- Program download with COM1

# i-7000 *Wireless Modem and Antenna*

## SERIES



### **SST-2400EXT:**

- Based on Direct Sequence Spread Spectrum and RF technology
- Operating in 2.45GHz
- Number of channel: 8
- Transmit Power: 0.1W

### **SST-900EXT:**

- Based on Direct Sequence Spread Spectrum and RF technology
- Operating in 902~928MHz, ISM band
- Number of channel: 8
- Transmit Power: 0.1W
- Communication distance: 200M



### **SST-2400A-3:**

**1Km external antenna for SST-2400EXT**

### **SST-2400A-12:**

**5Km external antenna for SST-2400EXT**

### **SST-900A:**

**5Km external antenna for SST-900EXT**



## **Accessory**

### **I-950-ENC Industrial Enclosure**

- IP66 Industrial enclosure
- Built-in DIN-Rail for easy mounition
- Seal design provides anti-leak protection
- Dimensions: 247x180x90mm

### **I-3625-ENC**

- Dimension: 360 x 254 x 165

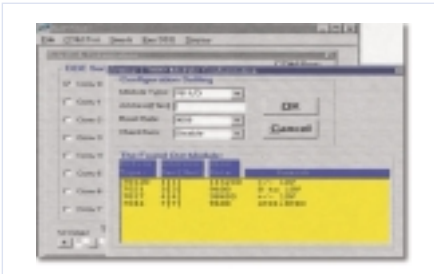
# i-7000 Software for I-7000 & I-8000 SERIES



**NAP7000 Utility**  
(Windows Utility)



**NAP7000S**  
DOS Software



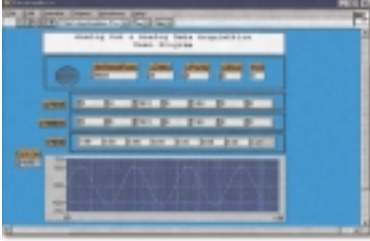
**NAP7000D**  
DDE Server



**NAP7000P**  
DLL Driver

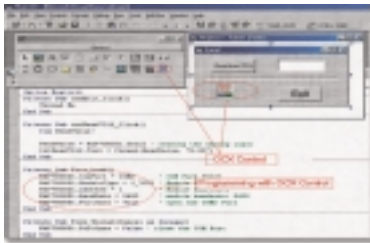
# i-7000 *Software for I-7000 & I-8000*

## SERIES



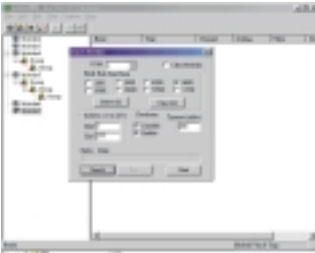
**NAP7000V**  
LabView Driver

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**NAP7000X**  
Active X (OCX)

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**NAP7000OPC**  
OPC Server

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**NAP7000Linux**  
Linux Software

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# i-7000 Learning Kit

## SERIES



### **IKIT-01:** **Digital Control Learning Kit**

#### **Purpose:**

To use the RS-485 network to control digital I/O module

**Including:** I-7520x1  
I-7060Dx1



### **IKIT-02:** **Analog Learning Kit**

#### **Purpose:**

To use the RS-485 network to acquire analog signal

**Including:** I-7520x1  
I-7012Dx1



### **IKIT-03:** **RS-485 Network Learning Kit**

#### **Purpose:**

To use the RS-485 network to link PC and PLC via I-7520  
RS-232 to RS-485 converter

**Including:** I-7520x3



### **IKIT-04: High Speed High Number Digital Control Kit**

#### **Purpose:**

To use the RS-485 network to control high number DI/O in high speed mode (16,000 channels per second)

**Including:** I-7520x1 I-7053x1  
I-7043Dx1



### **IKIT-05: High Speed High Number Data Acquisition Kit**

#### **Purpose:**

To use the RS-485 network to acquire high number analog input channel in high speed mode.  
(I-7017: 1704 channels/sec.  
I-7018: 1100 channels/sec.)

**Including:** I-7520x1 I-7017x1  
I-7018x1



# i-7000 Learning Kit

## SERIES



### IKIT-06: Professional Kit

#### Purpose:

This kit is designed for engineer to learn the implementation of network data acquisition and control system.

**Including:** I-7520x1 I-7060Dx1  
I-7012Dx1 I-7021x1



### IKIT-07: Embedded Controller Kit

#### Purpose:

Using I-7188 embedded controller to develop a digital control system

**Including:** I-7188D/DOS;I-7060D; Download cable; Power Supply; I-7188 manual; 7188 Demo Programs, utility disk of ROM-DOS; NAPDOS Disk 14



### IKIT-08: Touch Panel Learning Kit

#### Purpose:

Using I-7188 embedded controller and the touch Panel to develop a digital control system

**Including:** I-7188D/DOS;I-7060D; Touch 200; Download cable; Power Supply; I-7188 manual; 7188 Demo Programs, utility disk of ROM-DOS; NAPDOS Disk 14

**Note 1:** Each kit includes NAP7000 Driver Pack, NAP7000S Manual, DB-9 to DB-9 cable, Power adapter.

**Note 2:** There are 8 different learning kits for the user to learn the basic skill of network data acquisition and control modules. The user can use I-7000 modules to replace some PLC application system. It is also very easy to use analog modules to implement network data logger.

**Note 3:** NAP7000 Driver Pack includes NAP7000S, NAP7000V, NAP7000D, NAP7000P, NAP7000X. The user can use NAP7000 Driver Pack to develop his own application program for the learning kit.

## Training Box

### Application:

Internal Training of Company, Sales tool, Exhibition Demo

Includes: I-7188D, 7013D, 7017, 7021, 7060D, 7000 Driver Pack.

Note: Touch 200 (for Training Box II only)



### Application:

Exhibition Demo, Product Display

Demo Board I: Includes: I-7520, I-7060D, I-7012D, 7013D, 7044D, 7000 Driver Pack

Demo Board II: Includes: I-7188, I-7060D, I-7012D, 7013D, 7044D, 7000 Driver pack



*More 8000 Series Training Bos will be available*

# Ordering INFORMATION

<b>I-8000 Main Control Unit</b>		I-8024	P1-22
I-8410	P1-7	I-8080	P1-22
I-8810	P1-7	I-8081	P1-22
I-8411	P1-7	I-8083	P1-22
I-8811	P1-7	I-8090	P1-23
I-8417/I-8817	P1-11	I-8091	P1-23
I-8418/I-8818	P1-13	I-8072	P1-23
I-8420	P1-9	I-8210	P1-23
I-8820	P1-9	I-87051	P1-28
I-8421	P1-9	I-87052	P1-28
I-8821	P1-9	I-87053	P1-28
I-8430	P1-8	I-87054	P1-28
I-8830	P1-8	I-87055	P1-28
I-8431	P1-8	I-87057	P1-29
I-8831	P1-8	I-87063	P1-29
I-8437 / I-8837	P1-11	I-87064	P1-29
I-8438 / I-8838	P1-13	I-87065	P1-29
<b>I/O Expansion unit</b>		I-87066	P1-29
87K4	P1-15	I-87068	P1-29
87K5	P1-15	I-87013	P1-31
87K8	P1-15	I-87016	P1-31
87K9	P1-15	I-87017	P1-31
<b>I/O Module</b>		I-87018	P1-31
I-8040	P1-18	I-87022	P1-30
I-8041	P1-18	I-87024	P1-30
I-8042	P1-18	I-87026	P1-30
I-8050	P1-18	I-87082	P1-30
I-8051	P1-18	I-8112	P1-25
I-8052	P1-19	I-8114	P1-25
I-8053	P1-19	I-8142	P1-25
I-8054	P1-19	I-8142I	P1-25
I-8055	P1-19	I-8144	P1-25
I-8056	P1-19	<b>2-port serial card</b>	
I-8057	P1-20	VXI-182I	P1-26
I-8058	P1-20	VXC-142	P1-26
I-8060	P1-20	<b>Embedded Controller</b>	
I-8063	P1-20	I-7188/512; I-7188D/512	P2-3
I-8064	P1-20	I-7188XA; I-7188XAD	P2-4
I-8065	P1-21	I-7188XB; I-7188XBD	P2-5
I-8066	P1-21	I-7188XC; I-7188XCD	P2-6
I-8068	P1-21		
I-8069	P1-21		
I-8017H	P1-22		

# Ordering INFORMATION

<b>Intelligent Communication Controller</b>		X505	P2-22
I-7521; I-7521D	P2-7	X506	P2-22
I-7522; I-7522D	P2-7	X507	P2-22
I-7523; I-7523D	P2-7	X600	P2-22
I-7524; I-7524D	P2-7	X601	P2-22
I-7527; I-7527D	P2-7	X602	P2-22
<b>Embedded Ethernet/Internet Controller</b>		X603	P2-22
I-7188EX; I-7188EXD	P2-10	X607	P2-22
I-7188EA; I-7188EAD	P2-13	X608	P2-22
<b>Internet Communication Controller</b>		<b>Converter &amp; Repeater</b>	
I-7188E1; I-7188E1D	P2-14	ISA-7520R	P3-11
I-7188E2; I-7188E2D	P2-14	PCI-7520AR	P3-11
I-7188E3; I-7188E3D	P2-14	I-7520	P3-11
I-7188E4; I-7188E4D	P2-14	I-7520R	P3-11
I-7188E5; I-7188E5D	P2-14	I-7520A	P3-11
I-7188E8; I-7188E8D	P2-14	I-7520AR	P3-11
<b>I/O Expansion Board</b>		I-7510	P3-12
X000	P2-20	I-7510A	P3-12
X001	P2-20	<b>Analog Module</b>	
X002	P2-20	I-7011 / I-7011D	P3-12
X003	P2-20	I-7011P / I-7011PD	P3-12
X004	P2-20	I-7012 / I-7012D	P3-12
X005	P2-20	I-7012F / I-7012FD	P3-13
X006	P2-20	I-7013 / I-7013D	P3-13
X100	P2-20	I-7033 / I-7033D	P3-13
X101	P2-20	I-7014D	P3-13
X102	P2-20	I-7016 / I-7016D	P3-13
X103	P2-20	I-7016P / I-7016PD	P3-13
X104	P2-20	I-7017	P3-14
X105	P2-21	I-7017F	P3-14
X106	P2-21	I-7018	P3-14
X107	P2-21	I-7018P	P3-14
X400	P2-21	I-7021	P3-14
X200	P2-21	I-7021P	P3-15
X300	P2-21	I-7022	P3-15
X301	P2-21	I-7024	P3-15
X302	P2-21	<b>Digital &amp; Counter Module</b>	
X303	P2-21	I-7050 / I-7050D	P3-15
X500	P2-21	I-7052 / I-7052D	P3-15
X501	P2-21	I-7053 / I-7053D	P3-16
X502	P2-21	I-7041 / I-7041D	P3-16
X503	P2-22	I-7042 / I-7042D	P3-16
X504	P2-22	I-7043 / I-7043D	P3-16

# Ordering INFORMATION

I-7044 / I-7044D	P3-16	<b>Software</b>	
I-7060 / I-7060D	P3-17	NAP7000 Utility	P3-22
I-7065 / I-7065D / I-7065A /	P3-17	NAP7000S	P3-22
I-7065AD / I-7065B /	P3-18	NAP7000D	P3-22
I-7065BD	P3-18	NAP7000P	P3-22
I-7066 / I-7066D	P3-17	NAP7000V	P3-23
I-7067 / I-7067D	P3-17	NAP7000X	P3-23
I-7063 / I-7063D / I-7063A /	P3-17	NAP7000OPC	P3-23
I-7063AD / I-7063B/	P3-17	NAP7000Linux	P3-23
I-7063BD	P3-17		
<b>Counter Module</b>			
I-7080 / I-7080D	P3-18		
<b>Relay Module</b>			
RM-104 / 108 / 116	P3-19		
RM-204 / 208 / 216	P3-19		
DN-PR4	P3-19		
DN-SSR4	P3-19		
<b>Man Machine Interface</b>			
MMICON / LCD	P3-19		
MMICON Starter Kit	P3-19		
Touch 200	P3-20		
Touch 250	P3-20		
Touch 500	P3-20		
Iview 100	P3-20		
<b>Power Supply</b>			
ACE-540A / DIN-540A	P3-19		
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PWR-24 / 230	P3-19		
<b>Wireless Modem</b>			
SST-2400ext	P3-21		
SST-900ext	P3-21		
SST-2400A-3	P3-21		
SST-2400A-12	P3-21		
SST-900A	P3-21		
<b>Accessory</b>			
I-950-ENC Enclosure	P3-21		
I-3625-ENC Enclosure	P3-21		
<b>Learning Kit</b>			
IKIT-01/IKIT-02/IKIT-03	P3-24		
IKIT-04/IKIT-05	P3-24		
IKIT-06/IKIT-07/IKIT-08	P3-25		
Training Box	P3-25		