Industrial I/O Module for I-8000 Series PAC and View PAC

Introduction:

There are two types of I/O communication bus, parallel bus and serial bus. The parallel bus type I/O modules (high profile I-8K series) are high speed ones used only in the PACs including XPAC, WinPAC, iPAC, ViewPAC, etc. And the serial bus type I/O modules (high profile I-87K series) are low speed ones used in both PACs including XPAC, WinPAC, iPAC, ViewPAC, etc., and I/O expansion units including RU-87Pn, ET-87Pn, USB-87Pn, etc.

Parallel I/O Modules (I-8KW Series) Includes

- High speed A/D: 100 k samples/second
- High speed D/A: 30 k (-10 ~ +10 V)
- High speed DI & DO: All Digital I/O modules provide visual
- indication of status via LED indicators
- High speed stepping/Servo motion control modules
- High speed encoder modules
- High performance Counter/Frequency modules
- High speed multi-channel RS-232/422/485 modules
- CAN bus communication modules
- FRnet communication modules

Serial I/O modules (I-87KW Series) Includes

- RTD Input modules
- Thermocouple Input modules
- Strain Gauge Input modules
- VW Input modules
- High resolution multi-channel Analog Input modules
- Isolated multi-channel D/A modules
- Digital Input and Digital Output modules with Latch and
- counter function
- Counter/Frequency modules

With a range of standard communication interfaces and a dual backplane bus permitting I/O expansion. The dual backplane bus is hybrid in nature providing the facility to connect either serial or parallel I/O modules.

The parallel bus is used for high speed data transfer. The unit can communicate using serial communications (RS- 232, RS-485), Ethernet, or CAN bus. The Ethernet version of the product supports an integrated web server permitting Internet and Intranet applications.

With different communication interface, the I/O modules can be classified to high communication speed (Parallel bus) 8K series modules and low communication speed (serial interface) 87K series modules.

Comparison Table of I-8KW Series and I-87KW Series:

Model	I-8KW Series	I-8KRW Series	I-87K Series
Communication interface	Parallel bus	Parallel bus	Serial bus
Protocol	-	-	DCON
Communication speed	Fast	Fast	Slow
DI with latched function	-	-	Y
DI with counter input	-	-	Y (100 Hz)
Power on value	-	Y	Y
Safe value	-	Y	Y
Programmable slew-rate for AO module	-	-	Y

High Profile VS Low Profile:

With different form factor, I/O modules can be classified to high profile and low profile. Basically, high profile and low profile modules that with same item number also have same I/O channel number.
For example: I-8042W and I-8742W both has 16 DI and 16 DO.
Except I/O channel number, other specifications could be different. You have to double check whether the specifications suit your application. For example:
For I-8054W, its DI logic high level is +10~+50V. But for I-8054G, it is +3.5~+30V.

The support list of MCU (Main Control Unit) and I/O expansion unit are:

I-8K Series VS I-87K Series

There are two types of I/O modules, Parallel and Serial. The I-8K series modules are high-speed modules with parallel interface and the I-87K series are serial interface modules. Both they are supported on PAC (Programmable Automation Controller) units listed in the following table.

PAC	Description	I-8K Series		I-87K Series	
		High Profile	Low Profile	High Profile	Low Profile
XPAC	WES/CE6 OS	Y	-	Y	-
WinPAC	CE5/CE7 OS	Y	-	Y	-
LinPAC	Linux OS	Y	-	Y	-
ViewPAC	PAC with Display	Y (Note)	-	Y (Note)	-
iPAC	MiniOS7 OS	Y	-	Y	-
iPPC-6731-WES7	WES PAC with 15" Touch Panel	Y	-	Y	-
I-8000	MiniOS7 OS	Y	Y	Y	Y

I-8K Series VS I-87K Series

The high-speed I-8K series are parallel interface modules and I-87K series are serial interface modules. Both they are supported on PAC-base slave I/O unit. But only I-87K series modules are supported on expansion I/O units like I-87Kn, ET-87Pn, RU-87Pn and USB-87Pn series units.

Slave I/O unit	Protocol	Interface		I-8K Series		I-87K Series	
		Ethernet	RS-485	High Profile	Low Profile	High Profile	Low Profile
I-8x10	DCON	-	Y	Y	Y	Y	Y
I-8x30 I-8KE4/8	DCON	Y	Y	Y	Y	Y	Y
I-8xxx-MTCP I-8KE4/8-MTCP	Modbus TCP	Y	Y	Y	Y	Y	Y
iP-8xxx-MTCP	Modbus TCP	Y	Y	Y	-	Y	-
iP-8xxx-MRTU	Modbus RTU	-	Y	Y	-	Y	-
ET-87P4-MTCP ET-87P8-MTCP	Modbus TCP Modbus RTU	Y	-	-	-	Y	-
ET-87P4/8	DCON	Y	-	-	-	Y	-
I-87K4/5/8/9	DCON	-	Y	-	-	Y	Y
RU-87P1/2/4/8	DCON	-	Y	-	-	Y	-
USB-87P1/2/4/8	DCON	USB		-	-	Y	-
CAN-8xx3	CANopen	CAN bus		Y	Y	Y	Y
CAN-8xx4	Device Net	CAN bus		-	Y	Y	Y