

## 6.10. FRnet Communication Modules (Parallel Bus)

### Introduction

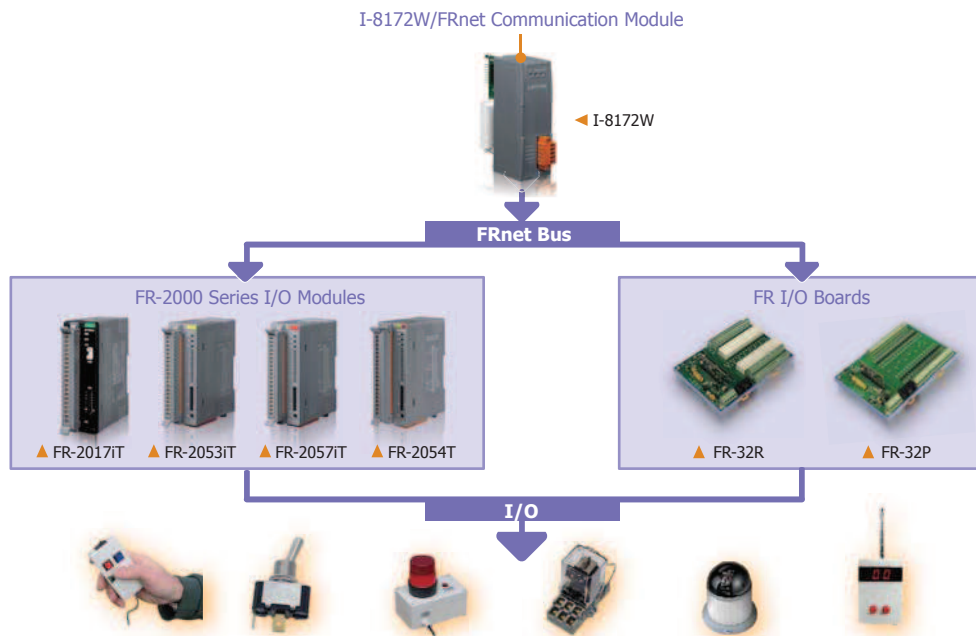
FRnet is an innovative industrial field bus. It uses twisted pair cable to be the transmission medium. Each FRnet port can link up to 128 DI and 128 DO channels. The whole I/O statuses are updated at a fixed cycle time (0.72 ms or 2.88 ms) no matter how many FRnet I/O modules are connected to the FRnet network. Further more, the update is done by hardware, there is no communication protocol is needed. Using FRnet, the user can easily and quickly implement high-speed distributed I/O control systems. Its key features are:

### Features

- Easy connection: multi-drop networking with twisted pair cable
- Easy programming: memory mapping (no communication protocol needed)
- I/O expansion ability for each port: 8 SA nodes (for DI) and 8 RA nodes (for DO), each node addresses to 16 DI or DO channels
- Normally FRnet module provides two communication speeds. OEM customer can call manufacturer to design special FRnet module for long distance communication.

Speed	Baudrate	Max. Distance	Fixed Cycle Time
High Speed	1 Mbps	100 m	0.72 ms
Low Speed (Default)	250 kbps	400 m	2.88 ms

### Applications



2-PORT FRnet module (Parallel Bus)	
Model Name	I-8172W
Pictures	
Communication	
Interface	FRnet
Port	2
Transfer distance	Max. 400 m for speed 250Kbps (Default); Max. 100 m for speed 1 Mbps
Transfer speed	2.88 ms for speed 250Kbps (Default) / 0.72 ms for speed 1 Mbps
Protocol	None (memory mapping)
I/O Expansion for Each Port	8 SA nodes (for DI) and 8 RA nodes (for DO); each node for DI or DO channels
networking	multi-drop networking with twiced paired cable
System	
Hot Swap	-
Intra-module Isolation, Field to Logic	3000 Vdc
Power Consumption	6 W
Optional Accessories	-