ECAT-2513/ECAT-2515

EtherCAT Junction SubDevice Module

Features

- Distance between Stations up to 100 m (100BASE-TX)
- Support daisy chain and star connection
- EtherCAT conformance test tool verified
- ESD Protection 4 KV Contact for each port

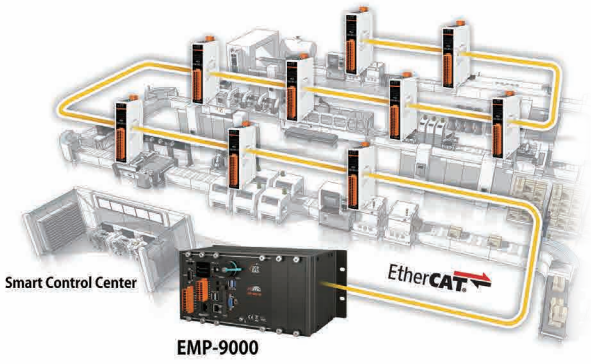
Introduction

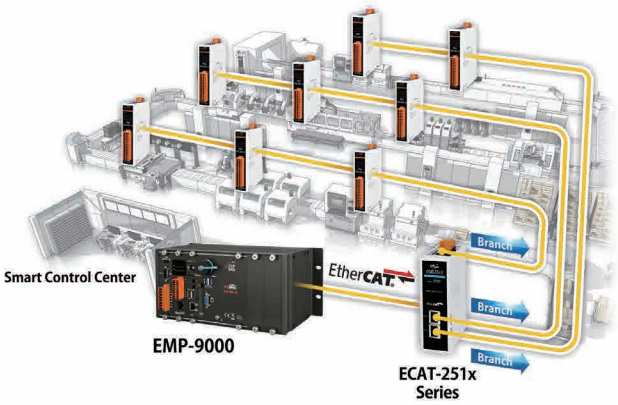
ECAT-2513/ECAT-2515 are 4-port/6-port EtherCAT junction slaves. They are designed for realizing flexible wiring by daisy chain and branch. The ECAT-2512/ECAT-2513/ECAT-2515 cannot be used as a standard Ethernet switch.

Applications

Benefit 1: Translate Daisy-chain to Branch Topology

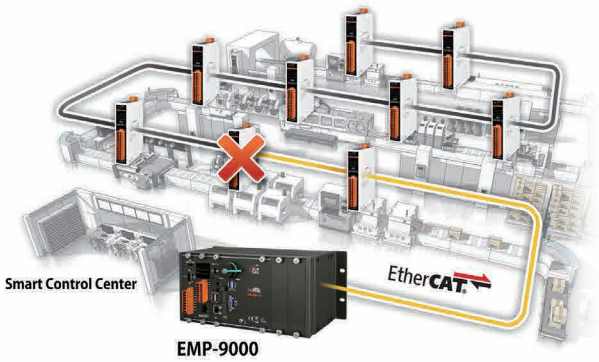
EtherCAT junction slaves can realize branch topology. This makes the cabling easier than daisy-chain topology.

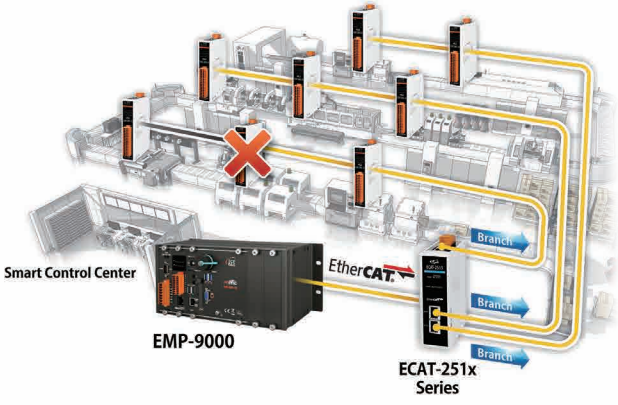




Benefit 2: Improving the Debugging Efficiency

If a slave device is not working or the cable is disconnected, the following SubDevice on the same network all not communicate with the Main Device controller. With EtherCAT junction slaves, all SubDevice can be wired as separated sections. If one SubDevice failed, only the SubDevice on the same section will be infl uenced. The EtherCAT junction SubDevice keeps the SubDevice on another section communicate with the Main Device controller. Debugging can be made separately, thus improving the debugging efficiency.

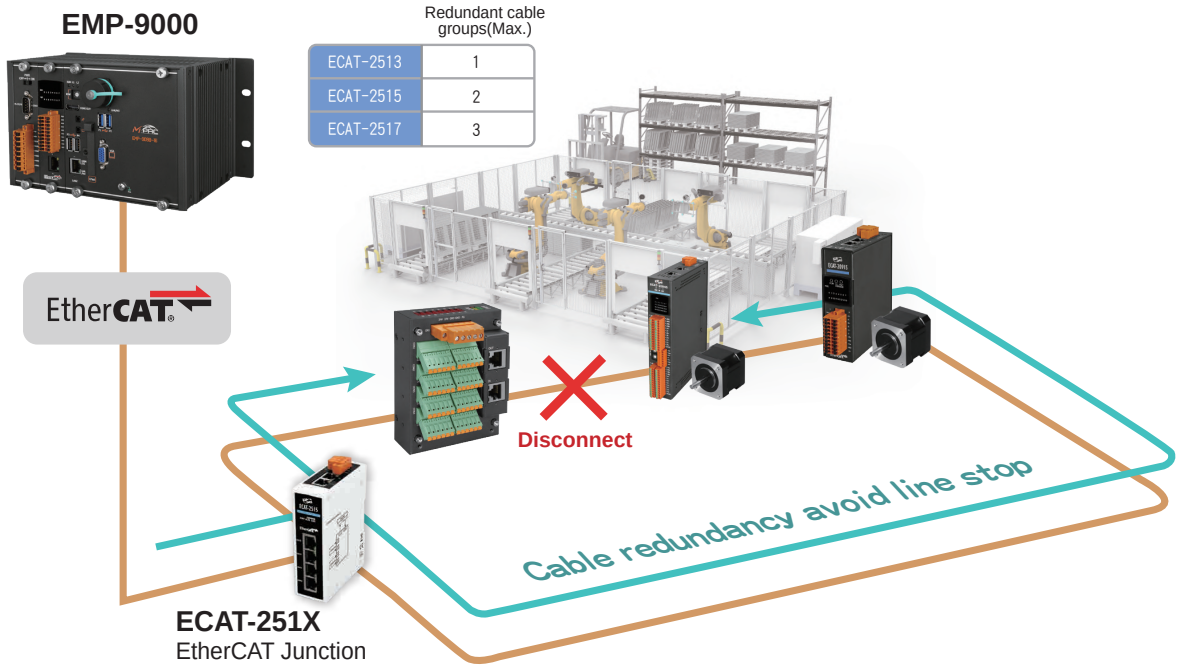




Applications

Cable Redundancy

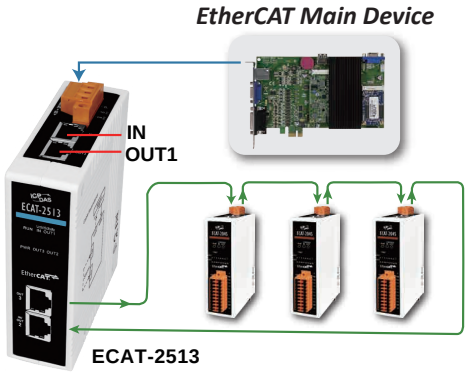
Cable redundancy is a ring topology. When the communication cable on one side is disconnected, it can also communicate through the cable on the other side to ensure the stable operation of the control system. The structure is as follows.

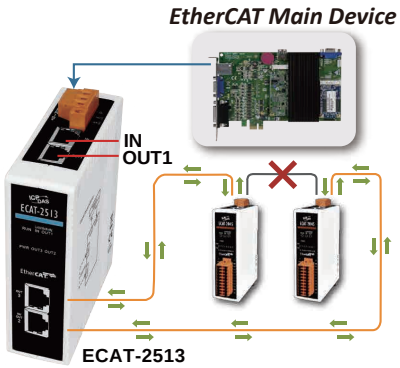


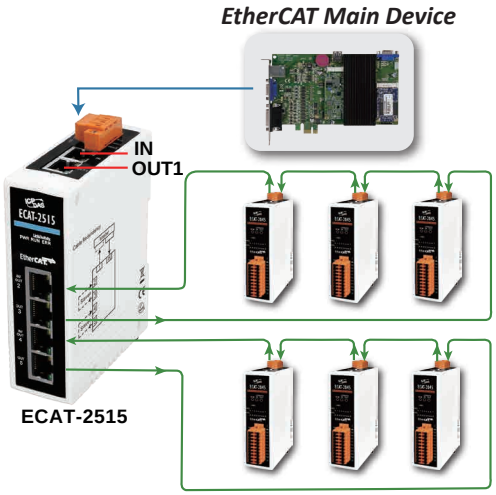
Precautions for Configuring Cable Redundancy

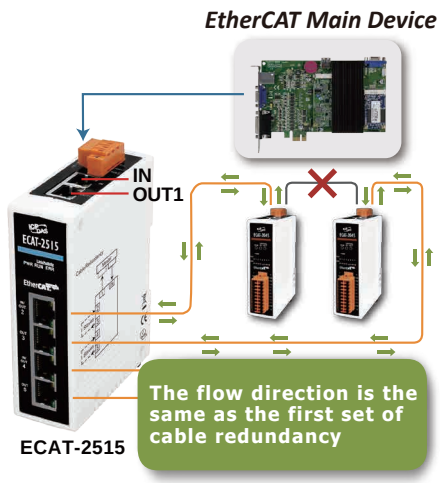
1. Regardless of whether a single or multiple ECAT-251x modules are used in the system, the cable redundancy mechanism only supports a single link disconnection. In the event of multiple cable failures, redundancy protection is not covered, and depending on the failure location, it may be necessary to restart and rescan the entire EtherCAT system.

2. Even though the ECAT-251x features cable redundancy, its proper operation still depends on whether the Main Device supports the EtherCAT Cable Redundancy mechanism.





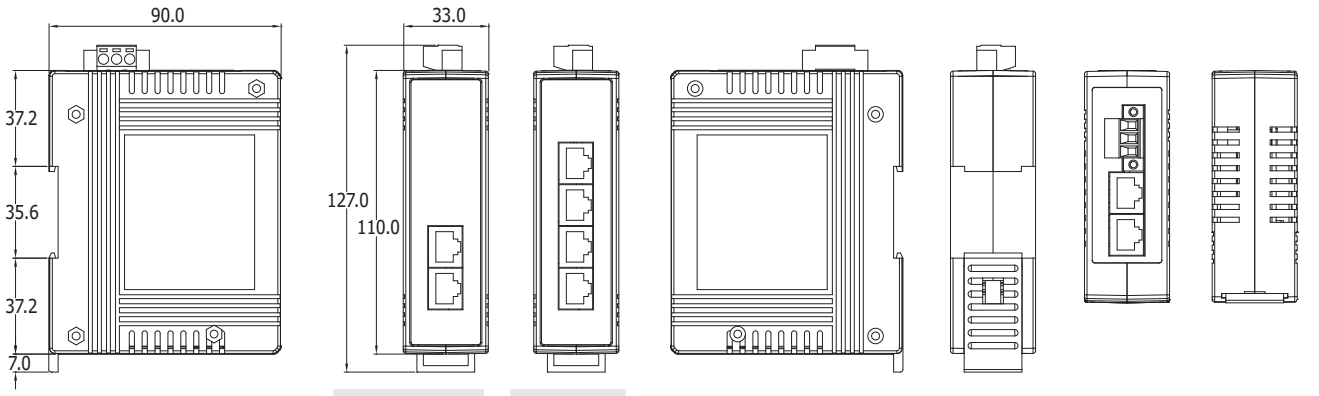




Hardware Specifications

Model	ECAT-2513	ECAT-2515
EtherCAT		
RJ-45 Port	4 x RJ-45 (1 IN; 3-OUT)	6 x RJ-45 (1 IN; 5-OUT)
No. of Nodes	2	4
Distance Between Stations	Max. 100 m (100BASE-TX)	
Power		
Reverse Polarity Protection	Yes	
Input Voltage Range	+10 ~ +30 VDC	
Power Consumption	0.06 A @ 24 VDC	
Mechanical		
Casing	Plastic	
Dimensions (W x L x H)	33 mm x 127 mm x 90 mm	
Installation	DIN-Rail Mounting	
Environment		
Operating Temperature	-25 ~ +75°C	
Storage Temperature	-30 ~ +80°C	
Relative Humidity	10 ~ 90% RH, Non-condensing	

Dimensions (Units: mm)



Ordering Information

ECAT-2513 CR	4-port EtherCAT Junction SubDevice Module (RoHS)
ECAT-2515 CR	6-port EtherCAT Junction SubDevice Module (RoHS)