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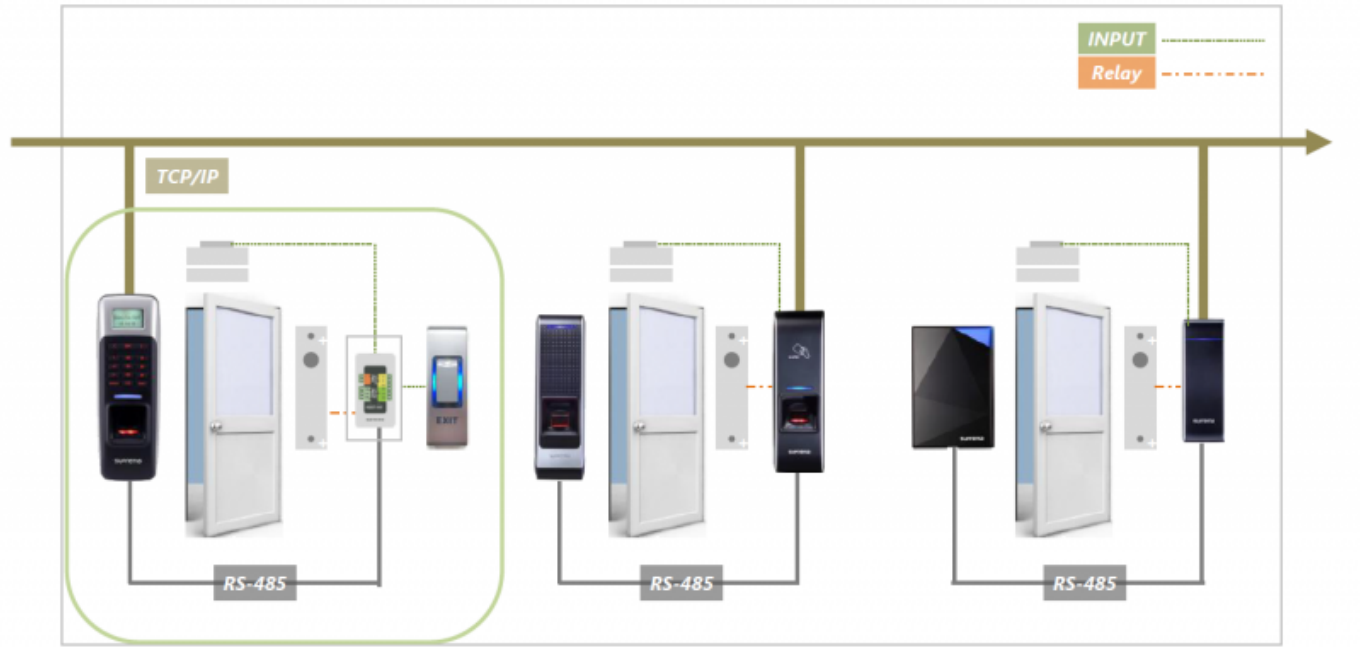
Fundamental Course, BioStar 2

BioStar 2 Distributed System

What is distributed system?

BioStar 2 adopted a distributed access control system which gives a device an intelligence to make a logical decision with user credential data that is stored in the device. With this system topology, devices are communicated through TCP/IP to their local server, and RS485 serial communication is used in the lower level communication between a master and a slave device.

The benefit of this system topology allows Suprema bio-metric devices (an intelligent reader/controller called as an edge devices) to communicate with a server rapidly without delay which is often found with RS485 serial interface in bio-metric data transmission. This is because a bio-metric data size is much larger than a simple card serial number, and it's necessary to send more than thousands of byte data size when many number of users are transferred to devices at the same time. So, it's more efficient and effective to use TCP/IP based distributed access control system for biometric data management and system operation.



Distributed vs Centralized System

Distributed access control system has the below pros and cons comparing its counterpart, centralized system. However, as IP related system technologies have been improved radically, distributed access control system also overcame its limitation and was established as a main stream, especially in the small-to-medium business market. Also, the distributed system provides alternative solutions to make up pointed weaknesses.

Category	Description	Solution
Pros	Less Wiring & Installation Cost	
	System failure Minimizing	
	No waste of surplus control power	
	Easy installation through an existing network infrastructure	
	No additional power by using PoE(Power-over-Ethernet)	
Cons	Exposed wiring to ouside*	Tamper & Secure IO option to protect a relay circuit
	Less longer communcation distance with TCP/IP	Repeater for data communication extension
	Less stable interface than RS485 serial communication	Powerful logic to support fail proof system operation