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Fundamental Course, BioStar 2, OSDP

# What is OSDP?

OSDP(Open Supervised Device Protocol)?

The AC industry has been using Wiegand interface to communicate between two different manufacturer's readers and control panels for years now. However, due to its limitation on maximum data size and only one way communication direction, only simple card serial numbers can be used, and it's necessary to run two different systems at the same time. With this background, OSDP was created to make an access control system industry to use RS485 standard protocol which is capable of handling larger data size in bidirectional two way communication. Especially, as OSDP enables to transmit biometric data, it's possible to connect Suprema devices to 3rd party controller panels which supports OSDP and biometric data management and create one single system.

Category	Wiegand	OSDP
Reader to Controller	O	O
Controller to Reader	X	O
Beep Control	X	O
LED Control	X	O
Max Data Size	Up to 32 bytes	Up to 1024 bytes
Biometric Data Transfer	X	O
Communication Encryption	X	O
Daisy Chain Cabling	X	O

*One fingerprint template size is about 384 bytes

How OSDP handles fingerprint?

Through OSDP, it's possible to transmit fingerprint templates from a 3rd party controller to a Suprema device (BioStar 2 compatible devices only). Normally, 3rd party system does not have fingerprint matching feature in the controller, and it's configurable to use 1:1 matching. So, if the controller can store and use OSDP, it can send a fingerprint template for a specific user which is verified by a card input and let a Suprema device make a 1:1 fingerprint matching and transmit its matching result to the controller.
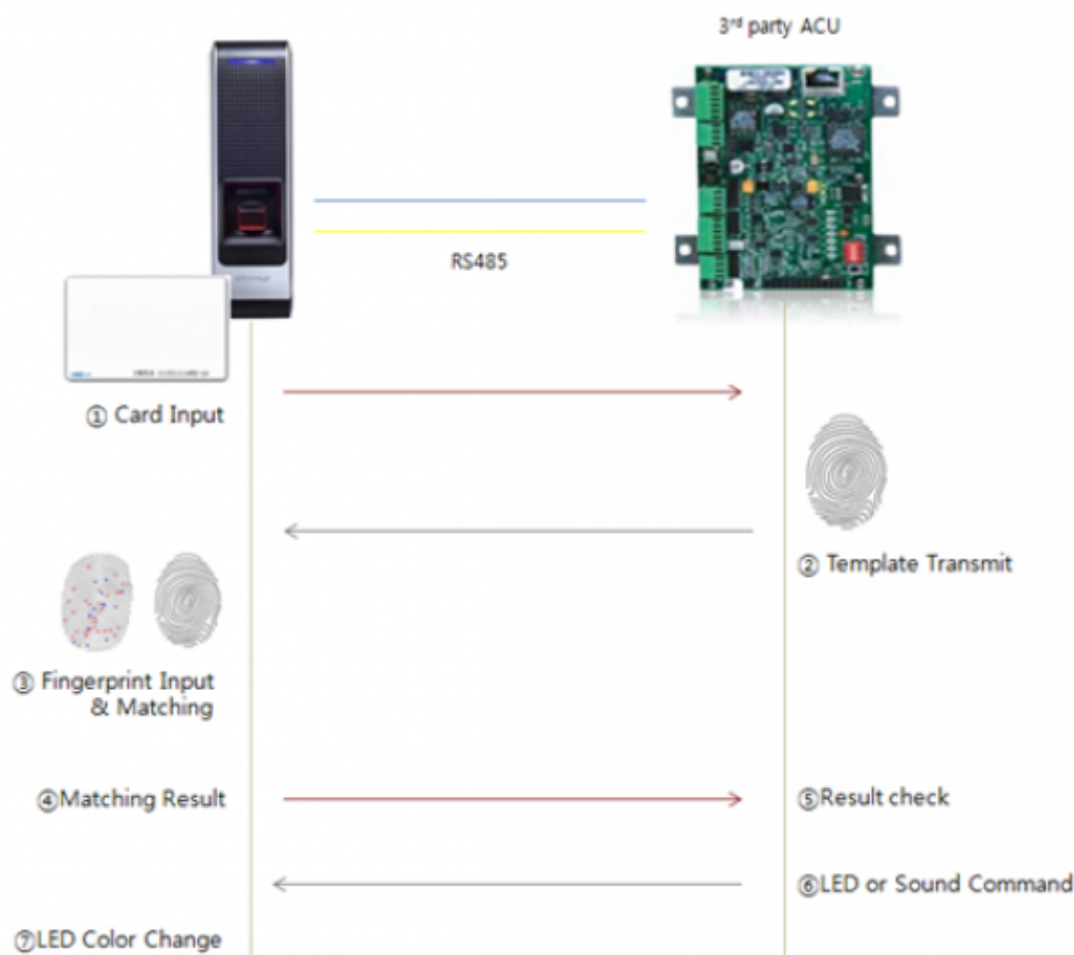
As OSDP specification has been updated several times and it can be interpreted different ways according to each system manufacturer, it's strongly recommended to check the compatibility with Suprema TS team before deploying the system. (Suprema adopted OSDP 2.1.5v.) Also, it's required to set the device to be slave mode to send out HID card data without checking and verifying as bypass. With a Mifare card, it's necessary to configure Wiegand setting to send out card data correctly through RS485 OSDP protocol. This is because HID cards contains their card format data, but Mifare cards don't store such.

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