

What is OSDP?

Open Supervised Device Protocol

OSDP is best explained in contrast to the Wiegand interface protocol that it is quickly replacing. A wiring standard which arose from the popularity of the Wiegand effect card readers of the 1980s. In short, a specially developed wire within a plastic card is used to transfer an electronic signal via magnetic field switching.

The main objective of the Wiegand protocol was to connect card readers to entry systems using a specific encoded protocol. The Wiegand-based access card quickly replaced magnetic stripe cards as being more secure.

Today, Wiegand cards are still widely in use globally and based on an over 40-year old technology, a bit scary. These card systems are vulnerable to hacks while they're not encrypted. Additionally, the Wiegand protocol is unsupervised, uni-directional and readers cannot be daisy-chained to each other, each must wire back to the controller with limited distances using the homerun wire methodology.

Enter OSDP

With no common standards in place and proximity card protocols all being proprietary, it was evident no interoperability existed between brands. Open Supervised Device Protocol (OSDP) was developed, a non-proprietary interface specification that can be implemented without restriction.

The advantages are everything the Wiegand protocol is not. OSDP protects readers against hacking using AES-128 encryption. OSDP uses just 2 data wires for the card reader, door strike, alarm contact, and Request to Exit functions instead of 12 or more. It allows for multi-drop installation (bi-directional), either method: homerun cable pulls or daisy-chain. OSDP supervises

connections to indicate reader malfunctions, and it is scalable to connect additional field devices.

OSDP outpaces Wiegand-based systems that are known to be too slow and insufficient for the 200 bit or more data transfer needed by the U.S. Federal Personal Identity Verification (PIV) data requirement.

OSDP allows for advanced encryption, support of biometrics, communications over TCP/IP, smart card interface, FIPS compliance and interactive terminal capabilities. The low cost of implementation in an embedded device is a primary advantage of OSDP.

Above all, OSDP enables communication among different manufacturers' devices. It was adopted by the Security Industry Association (SIA) as a standard in 2011. OSDP, and the heightened security it brings to the market is on track to become the new standard for new and retrofit installations.

Benefits of OSDP:

- Increased security and encryption, suitable for high security applications
- Supervised connections, monitoring, TCP/IP communications
- Interoperability / Standardization — Communications among different manufacturers' devices
- Easier and more cost effective installation (bi-directional, utilizes less wiring)
- Quickly becoming the new industry standard, forward thinking

