Explore Problem-solving
access control accessories

PRODUCT

GUIDE

CYPRESS
INTEGRATION SOLUTIONS

PROBLEM
SOLVED.

Table of Contents

Purchase Cypress products from a variety of major security distributors. See CypressIntegration.com**/where-to-buy**.

About CYPRESS
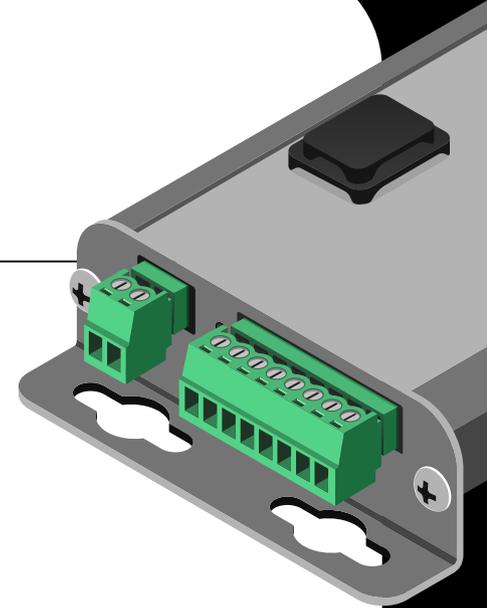
Who is Cypress?

Cypress manufactures unique access control products that solve connectivity challenges between readers and panels. Since 1983, we have specialized in wired and wireless solutions that connect virtually any access control manufacturer's hardware. Our proven expertise helps integrators overcome access control challenges with confidence.

What we do: We manufacture unique access control products that save time and labor, and equip integrators to handle last-minute changes.
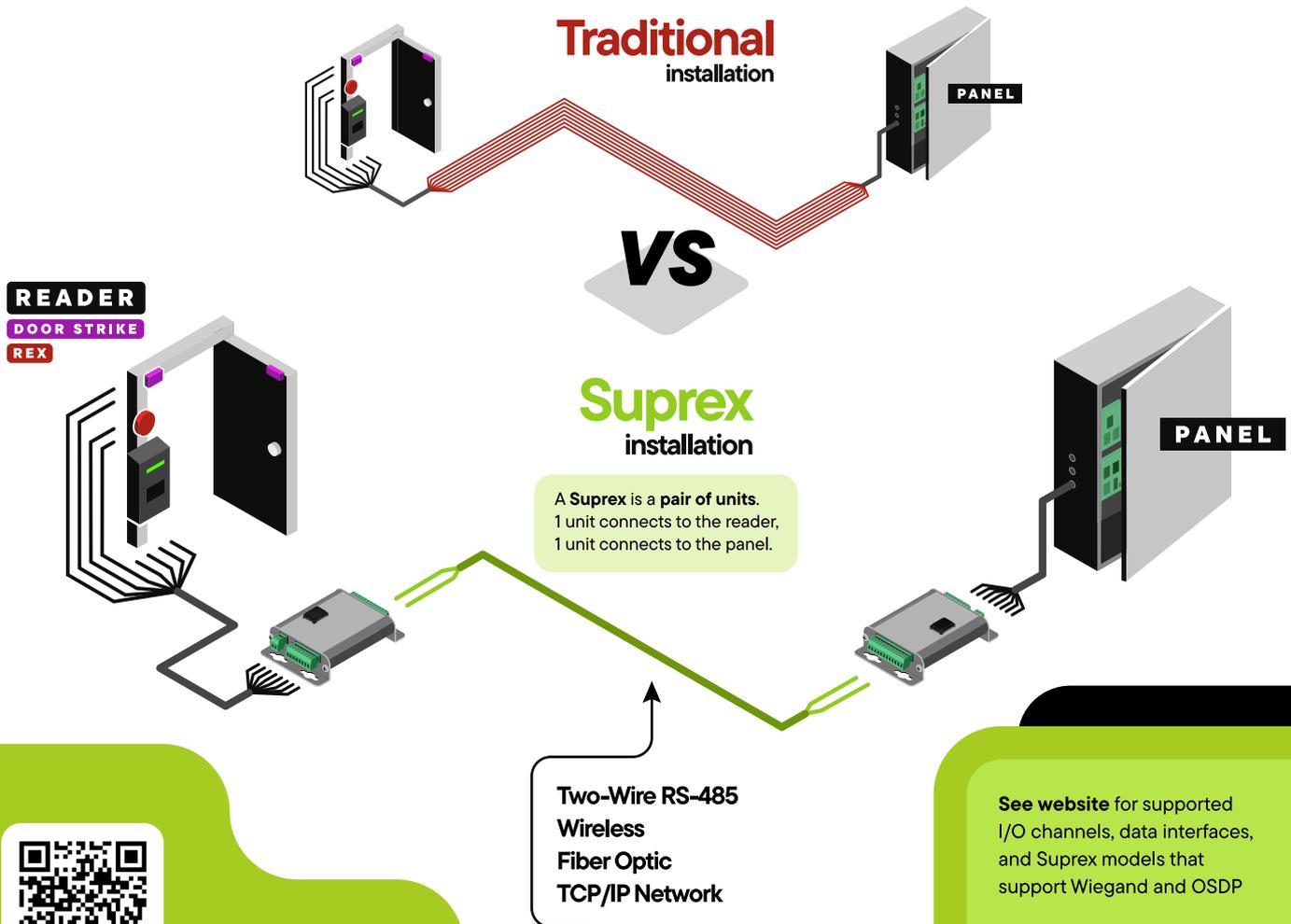
Cypress Products

Cypress devices are designed to mitigate issues in access control systems, particularly where distance, compatibility, or infrastructure limitations exist. Our core solutions include extenders, handheld readers, splitters, and converters designed to work with Wiegand and OSDP systems, along with a suite of OSDP tools. We also custom-engineer solutions to meet unique challenges in the security industry and beyond.

Why Cypress?

For 40+ years, Cypress has been trusted within the security industry for producing reliable, made-in-the-USA technologies. Founded by electronics pioneers passionate about innovation and problem-solving, we have continuously evolved to meet the changing needs of security integrators and manufacturers. With our deep expertise, commitment to quality, and active role in shaping access control standards, you can depend on Cypress to solve today's connectivity challenges and supply tomorrow's innovation.

Suprex® Extenders

Suprex® **Reader-Extenders** allow access control readers to be installed much farther from the controller, addressing common distance and wiring limitations without costly trenching or rewiring.

Traditional installation

PANEL

VS

READER
DOOR STRIKE
REX

Suprex installation

A **Suprex** is a **pair of units**.
1 unit connects to the reader,
1 unit connects to the panel.

PANEL

Two-Wire RS-485
Wireless
Fiber Optic
TCP/IP Network

See website for supported I/O channels, data interfaces, and Suprex models that support Wiegand and OSDP

Scan to learn more about Suprex Extenders

CypressIntegration.com**/Suprex**

Suprex Reader-Extenders solve these issues:

- **Trenching cable** under parking lots or streets
- Sites where installing cable is difficult
- Reader sites **more than 500 ft.** from panel
- Limited conductors available
- Restoring connectivity when **conduit is damaged**
- **Electrical noise** causing Wiegand signal interference
- Lightning-prone or corrosive sites
- Installing readers in **elevator cars using existing traveler cables**
- Connecting more than 1 reader *(requires EXP Expansion Pairs)*

"We had a manufacturing facility... it didn't matter where we ran those cables, we had terrible noise. The **Suprex** (SPX-7500/SPX-1300) was literally the only product that solved the problem. We were able to use the product on 6 more doors, saved us probably a week's worth of labor."

**Andy Abbott
Associated Technical Services**

"We had an issue where insufficient wiring existed to a gate that was previously controlled remotely, it only had 4 conductors going out to the gate. The **Suprex** allowed us to utilize the existing wire and install a fully controlled access control solution on the gate without pulling new cable. Saved the customer thousands of dollars in trenching costs and made for a very quick upgrade. Using the **SPX-1300** also allowed us to utilize existing elevator traveler cables to install a new card reader, and have a stable reader connection without interference on the legacy cables."

**Jason Herrington
Rinkor Technology Solutions**

SPX-5000 Series   **SPX-7000 Series**   **EXP-2000**

6 Wireless Handheld Reader Kits

Our **Wireless Handheld Reader Kits** integrate with existing access control systems to verify credentials at sites where no reader exists.

HANDHELD READER

BASE UNIT

PANEL

Handheld readers wirelessly connect with a base unit, wired to a controller to verify credentials scanned remotely

"**I needed a temporary system** to track personnel entering our launch pad area after the physical barriers were damaged following the launch of Starship. Cypress Integration Solutions gave me a portable, quickly deployed means to monitor personnel accountability. I'm already planning to add more **(Wireless Handheld Readers)** in other locations around our Starbase location."

**Frazier Damon
SpaceX / Starlink**

CypressIntegration.com**/HHR**

Wireless Handheld Reader Kits solve these issues:

- Providing identity verification at **remote / temporary sites**
- **Creating muster points**, even without power / data connections
- Rapidly deploying access control when infrastructure is damaged
- **Tracking staff** or **student event attendance**, volunteer hours, meal credits, and more
- Providing overflow access points during peak hours
- **Verifying credentials** at parking lots, vehicle gates, and on shuttle buses

Available options:
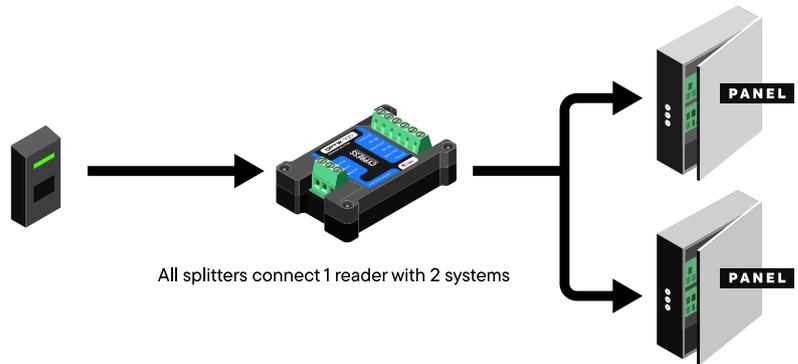- Single and dual-gate readers
- 1, 2, and 3-reader kits

BASE UNIT
2-READER KITS

HHR READER
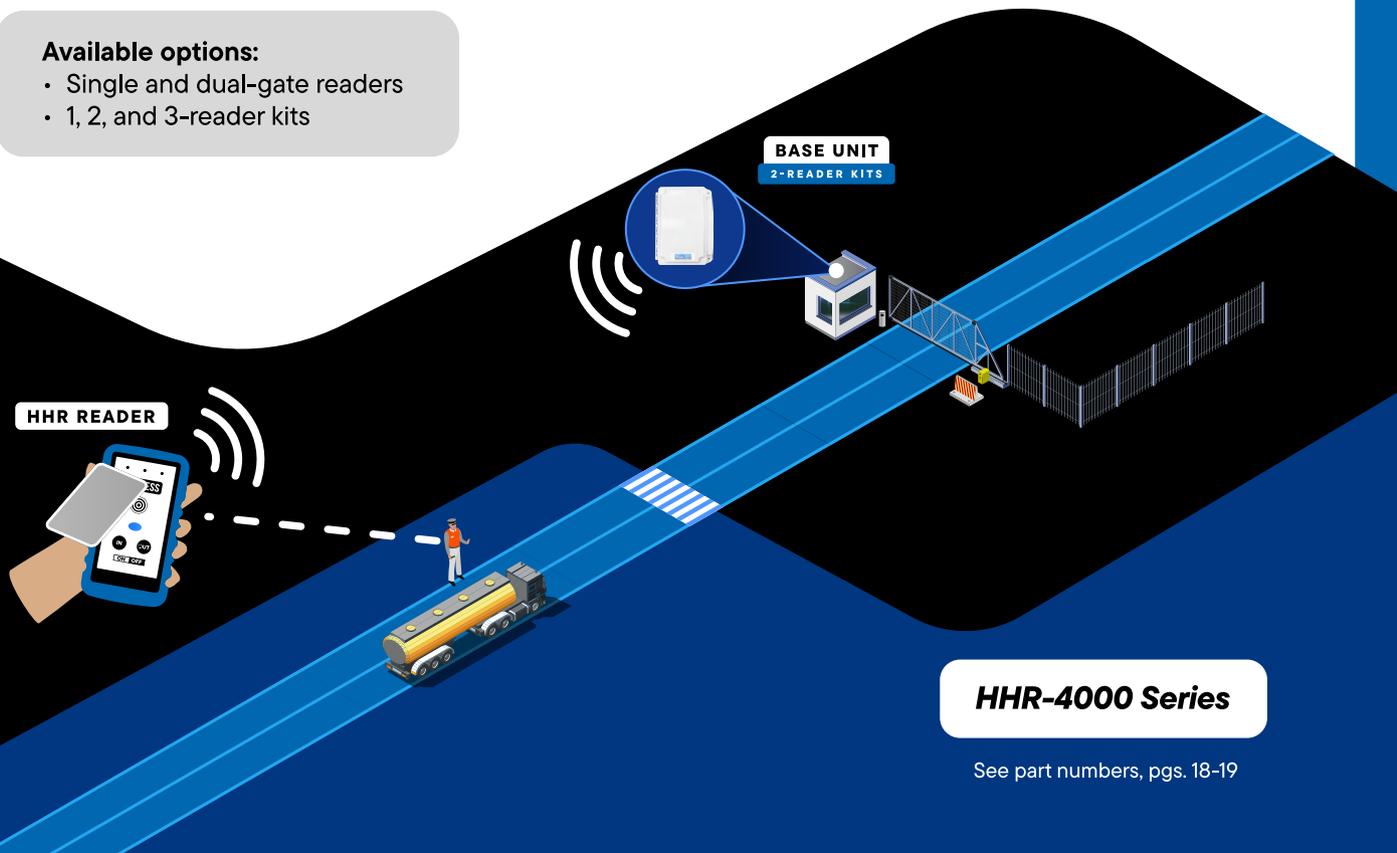
HHR-4000 Series

See part numbers, pgs. 18-19

Data Splitters
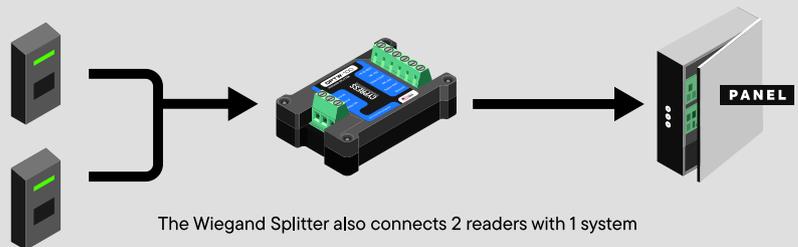
Our **Wiegand and OSDP Splitters** let you connect 1 reader with 2 panels. Wiegand models also let you connect 2 readers with 1 panel.

All splitters connect 1 reader with 2 systems

> **"The Wiegand Splitter (OPTW-100)** allowed us to have 2 controllers implemented at a client's site with 1 reader, without having multiple readers or PIN code pads. This has been an excellent product for us."
>
> **Jonathan Rowell**
> **JR Technology Services**

The Wiegand Splitter also connects 2 readers with 1 system

Wiegand and OSDP Splitters solve these issues:

- **Connecting 1 reader with 2 panels** in multi-tenant buildings
- Connecting 1 reader to 1 panel plus 1 non-access control system, such as an alarm, key cabinet, elevator, or time & attendance system
- **Sharing 1 reader with 2 panels** without sending all data to both panels ⚙ *custom engineering required*

Wiegand Splitters solve these issues:

- **Connecting 2 readers with 1 panel**
- **Minimizing the number of Wiegand** ports used at in-out doors or high-low gates
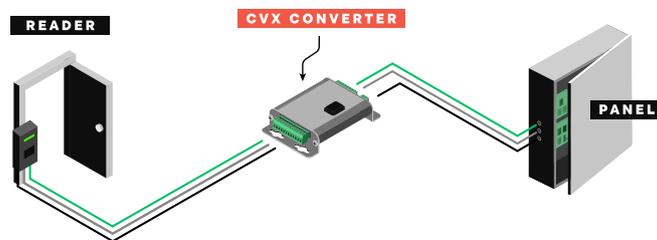
OPTW-100 **ODM-2010**

Data Converters

Instead of replacing equipment, use our Wiegand Data Converters to integrate incompatible access control devices.

Data Converters enable dozens of field-selectable conversions including Wiegand-to-Wiegand, RS-232 serial to Wiegand, and more.
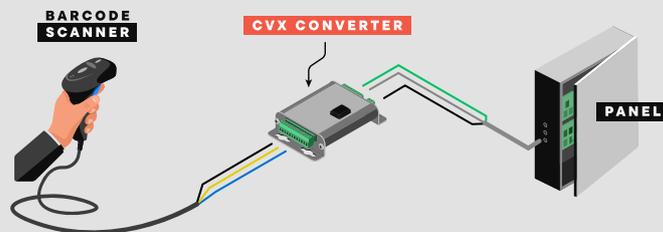
Wiegand Data Converters solve these issues

- Preventing replacement of entire access control systems when replacing a single device
- **Avoiding re-issuing credentials** when connecting readers to incompatible controllers
- Adding RS-232 readers or barcode scanners to Wiegand access control systems
- **Integrating custom equipment**

Wiegand to Wiegand

READER   CVX CONVERTER   PANEL

RS-232 to Wiegand

BARCODE SCANNER   CVX CONVERTER   PANEL

CVX-1300   **CVX-1400**

Ask about custom converters to solve your unique integration concerns.

Scan to learn more about Data Converters

See part numbers, pgs. 18-19

CypressIntegration.com**/DataConverters**

OSDP-Wiegand Converters let you connect OSDP readers with Wiegand panels or connect Wiegand readers with OSDP panels.

OSDP-Wiegand Converters
solve these issues

- **Upgrading systems to OSDP** while keeping bids competitive
- Connecting OSDP readers to Wiegand panels in **phased migrations**
- Connecting existing or specialty Wiegand readers to OSDP panels when upgrading systems to OSDP
- **Embedding OSDP in Wiegand readers** (for reader manufacturers only)
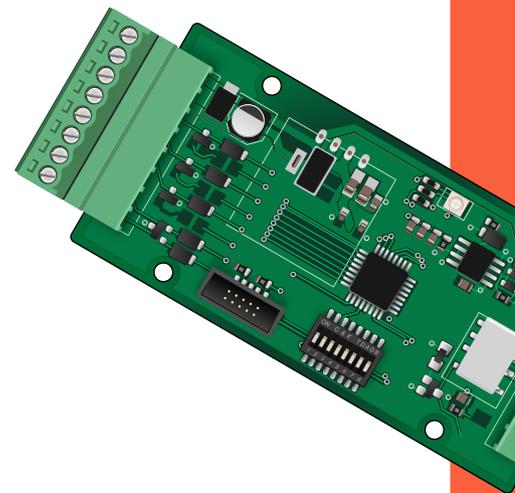
OSDP-Wiegand Converters
(OSM-CPI, OSM-2400)

OSDP READER → → OSDP CONVERTER → WIEGAND PANEL

Wiegand-to-OSDP Converters
(OSM-RCI, OSM-2400)

WIEGAND READER → OSDP CONVERTER → → OSDP PANEL

OSM Series

See part numbers, pgs. 18-19
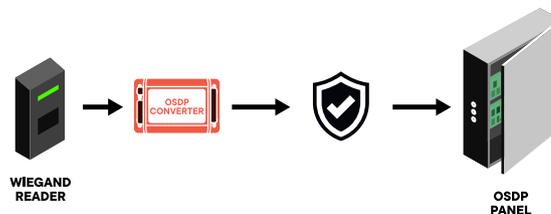
Scan to learn more about OSDP Converters

CypressIntegration.com/**OSDP**

OSDP Tools

A new protocol requires new tools to test cable, to bench-test, visualize, and troubleshoot OSDP communication or credential data, and to manage OSDP reader settings. Purchase tools individually or as a kit.

OSDP Trace Tool Pro Interface

- **Troubleshoot OSDP** communication challenges
- Perform in-depth **OSDP system diagnostics**
- **Bench-test systems** before deployment

OSDP Hub

- **Easily connect and disconnect OSDP equipment** for testing and troubleshooting systems

OSDP v2
Open Supervised Device Protocol

Encrypted, authenticated, 2-way communication protocol.
1024 credential data bits, biometric support, I/O messages instead of wires. Up to 4,000-ft. reader-panel distance, multi-drop installations, remote updates from panel. Interoperability with OSDP Verified devices.

SIA

OSDP™

Scan to learn more about OSDP Tools

CypressIntegration.com/**OSDP**

OSDP Cable Test Tool

- Test cable before installing OSDP components to **ensure cable supports OSDP**

- Verify whether newly pulled cable has been installed correctly

- Perform **quick tests** or **in-depth tests**

- Set device addresses and reader baud rates in the field

"One of the biggest questions we always face for customers looking to move from Wiegand to OSDP, is 'can I use my existing reader cabling?' To which we'd have to answer 'it depends' or 'maybe' because we didn't have a way to test the cables prior to making the change and then hope it worked. The mad scientists at Cypress Integration have solved this problem for us by creating the **OTT- 2100-2** test set that can now perform cable testing for OSDP support. This can be used pre-install to validate cable, or as a troubleshooting tool post-install if you're having problems. It's quick, easy to use and produces solid results. Every integrator office should have at least one to help with install and troubleshooting."

Mark Schweitzer
Convergint

Cypress is a longtime proponent of SIA's **OSDP standard.**

OTT Tool Series

Data Wedge

Plug the `Data Wedge` into a computer's USB port and connect to a reader to view credential data in a spreadsheet or an application of your choice.

A Data Wedge solves these issues:

- Creating **enrollment solutions**
- **Troubleshooting credentials in the field**
- Setting up credential databases in site takeovers
- **Serving as a simple controller** when testing readers

Use with a Wiegand reader

Use with an OSDP reader
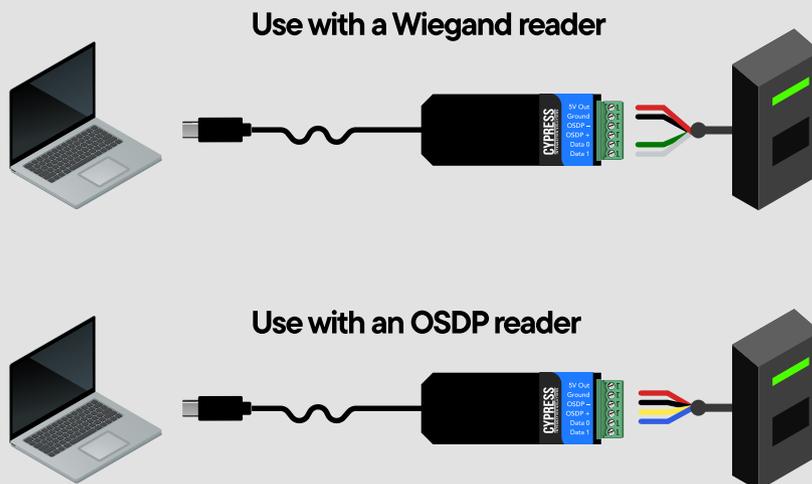
WDG-6112

Scan to learn more about the Data Wedge
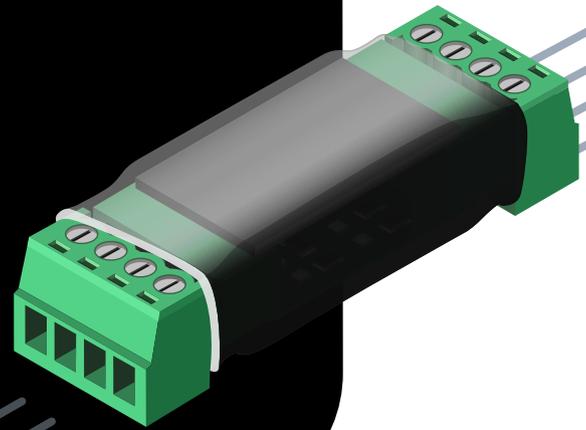
CypressIntegration.com/**WDG-6112**

Wiegand Signal Standardizer

Use our **Wiegand Signal Standardizer** to convert hybrid Wiegand / OSDP interfaces into standard Wiegand.

A Wiegand Signal Standardizer solves these issues:

- Paralleling non-standard **high / low** Wiegand readers at vehicle gates

- Paralleling non-standard Wiegand **in / out** readers at building entrances

- A Wiegand reader with a non-standard interface not properly communicating with the Wiegand access controller

Scan to learn more about the Standardizer

CypressIntegration.com/**OPTW-200**

OPTW-200

See part numbers, pgs. 18-19

Custom Solutions

Cypress **custom-engineers** a range of integration solutions for your unique applications. We solve challenges for the security industry and beyond.

Your Idea, Our Expertise:
Share your custom solution idea with us at sales@cypressintegration.com.

Accelerated Engineering:
Simple projects, such as customized Converters or Splitters, usually ship within 2 weeks of confirmation, while more complex projects are carefully managed to meet your deadlines.

Tailor-Made Software and Hardware:
We custom-build the firmware, circuit board, and enclosure to your exact specifications.
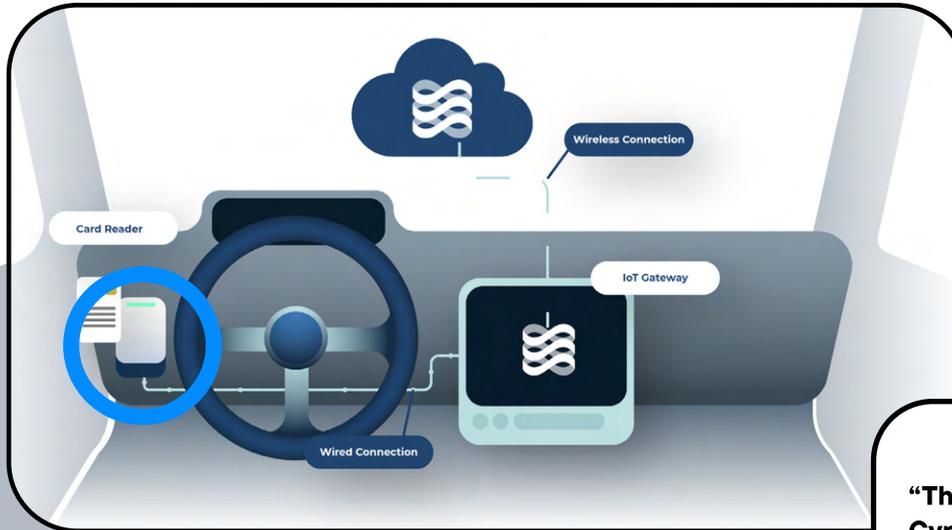
Deliver Your Solution:
Install your product, solve your customer's challenge, and become their hero.

Scan to learn more about Custom Solutions

Custom Collaboration:
A Case Study

IntelliShift
+
CYPRESS
INTEGRATION SOLUTIONS

Labels in image: Wireless Connection, Card Reader, IoT Gateway, Wired Connection

Custom Cypress solution enables energy provider to use existing credentials for fleet operations

The need: A large US energy company of 12,000+ employees needed to cost-effectively implement a fleet and safety management platform.

The result: Vehicle operators authenticated using different existing IDs with fleet insights gained on mileage, fuel consumption, usage, and location history.

Read more: bit.ly/Cypress-IntelliShift

Scan to learn more about this project

"**Through collaboration with Cypress,** IntelliShift successfully implemented a **custom hardware solution** that empowers our clients with secure and efficient RFID authentication for their drivers. This not only streamlines operations but also enhances security by enabling the identification of authorized operators within the trucks ...
Not only did this partnership drive success for both organizations but the collaborative approach of Cypress was top notch."

Patrick Quiery
IntelliShift

Part Numbers

Suprex Reader Extenders

Part	Description
SPX-1300	**RS-485 2-Wire Reader Extender**, single door: Connect 1 reader and door I/O over RS-485 2-wire *(typical range 2 miles)*
SPX-1400	**OSDP I/O Extender**: Connect door I/O over same OSDP 2-wire data connection when installing an OSDP reader
SPX-5631	**Wireless Reader Extende**r: Wirelessly connect Wiegand or OSDP readers and door I/O *(typical range 1 mile with line of sight)*
SPX-5632	**DUAL Wireless Reader EXTENDER**: Wirelessly connect 2 Wiegand readers + door I/O *(typical range 1 mile with line of sight)*
SPX-5641	**Suprex Wireless Extender**, long-range: Wirelessly connect Wiegand or OSDP readers and door I/O *(typical range 2 miles with line of sight)*
RPT-5651	**Wireless Repeater:** Use with Wireless Suprex to extend distance or bypass obstacles *(typical extends range 1 mile with line of sight)*
SPX-5641	**Suprex Wireless Extender**, long-range: Wirelessly connect Wiegand or OSDP readers and door I/O *(typical range 2 miles with line of sight)*
SPX-7200	**TCP/IP Reader Extender**: Connect readers and door I/O over TCP/IP networks
SPX-7400	**Fiber Reader Extender**, multi-mode with ST connector: Connect readers and door I/O over multi-mode fiber cable *(typical range: 2.4 miles)*
SPX-7410	**Fiber Reader Extender,** single-mode with ST connector: Connect readers and door I/O over single-mode fiber cable *(typical range: 24 miles)*
SPX-7420	**Fiber Reader Extende**r, single or multi-mode with ST connector and LT adapter: Connect readers and door I/O over fiber cable. *Typical range: 2.4 miles (multi-mode), 24 miles (single-mode).*
SPX-7500	**RS-485 2-Wire Reader Extender**: Connect readers and door I/O over RS-485 2-wire *(typical range: 4000 ft)*
EXP-2000	**Expansion Pair**: Add more readers to most Wiegand Reader connections *(add up to 7 more readers with 7 EXP-2000 Pairs)*

Handheld

Part	Description	
HHR-4166B	**Handheld Reader Kit**: 1 wireless single-lane reader, protective boot, charging dock/cable, and base unit	typ. outdoor range. 500 ft. line of sight
HHR-4266B	**Handheld Reader Kit**: 2 wireless single lane readers, protective boots, charging docks/cables, and base unit	
HHR-4156B	**Handheld Reader Kit**: 1 wireless dual-lane reader, protective boot, charging dock/cable, and base unit	
HHR-4256B	**Handheld Reader Kit**: 2 wireless dual-lane readers, protective boots, charging docks/cables, and base unit	

Splitters

Part	Description
OPTW-100	**Wiegand Splitter**: Connects 2 Wiegand readers to 1 Wiegand panel (reader data sent to both panels), or 1 Wiegand reader to 2 different Wiegand panels
CVX-OPTS	**Intelligent Wiegand Splitter** *(customized)*: Connects 1 Wiegand reader to 2 Wiegand panels. Directs reader data to appropriate panel. ✿*Custom engineering required.*
ODM-2010	**OSDP Splitter**: Connects 1 OSDP reader to 2 OSDP panels. Shares same reader data with both panels.
ODM-2015	**OSDP Splitter**: Connects 1 OSDP reader to 1 OSDP panel + 1 Wiegand panel. Shares same reader data with both panels.
ODM-2020	**OSDP Splitter** *(customized)*: Connects 1 OSDP reader to 2 OSDP panels. Directs reader data to appropriate panel. ✿ *Custom engineering required.*
ODM-2030	**OSDP Splitter** *(customized)*: Connects 1 OSDP reader to 1 OSDP panel + 1 Wiegand panel. Directs reader data to appropriate panel. ✿*Custom engineering required.*

Converters

CVX-1300	**Multi-Format Data Converter**: Makes access control hardware devices compatible.
CVX-1400	**Custom Data Converter**: supports RS-485, RS-232, Wiegand, Strobed, and F/2F interfaces, and custom I/O logic (relay outputs and digital I/O). ⚙ *Custom engineering required.*
OSM-2400	**OSDP-Wiegand Converter**: Connect an OSDP reader and Wiegand panel or a Wiegand reader and OSDP panel.
OSM-CPI	**OSDP-Wiegand Interface**: Connect an OSDP reader and Wiegand panel.
OSM-RCI	**Wiegand-OSDP Interface**: Connect a Wiegand reader and OSDP panel.
OEM-OSDP-2200	*(OEM device for manufacturers)* **Embedded OSDP Module** for Wiegand RFID readers

OSDP

OTT-KIT1	**OSDP Tool Kit**: Includes OSDP Cable Test Tool, OSDP Trace Tool Pro Interface, OSDP/ Wiegand Data Wedge, and OSDP Hub with Pluggable Terminal Blocks. Includes hard case.
OTT-2100-2	**OSDP Cable Test Tool**: Use to test new cable or existing Wiegand cabling for use with OSDP readers, and configure OSDP reader address and baud rate.
OTT-1100	**OSDP Trace Tool Pro Interface**: Troubleshoot OSDP communication. Use with free Cypress Trace Tool software *(free download from Cypress website)*, enables PRO features.
OSM-HUB	**OSDP Cross-point Switch**: Easily connect OSDP readers, access controllers, and other tools/devices for troubleshooting or prototyping OSDP systems.

More

WDG-6112	**USB Data Wedge**: connect Wiegand or OSDP reader to a computer, credential data is output in any text field *(Notepad, Word, Excel)*.
OPTW-200	**Wiegand Signal Standardizer**: Standardize Wiegand signals from hybrid Wiegand/OSDP readers when Wiegand readers must be paralleled *(example: in/out or high/low readers)*.
TSP-2104	**2D Optical Barcode Scanner Kit**: Honeywell optical scanner, Cypress Data Converter, custom wire harness, and power supply.
TSP-2105	**2D Optical Barcode Scanner Kit**: Code optical scanner, Cypress Data Converter, custom wire harness, and power supply.
TSP-3100	**1D Laser Barcode Scanner Kit**: OMRON laser scanner, Cypress Data Converter, custom wire harness, and power supply.
SIO-7300	**Edge Device**: Connect a single Wiegand reader to network software on a TCP/IP network. Also supports outputting Wiegand data to a panel from the network. *Customer is responsible for writing software to interface with Cypress SIO Protocol.*

See more Cypress products at CypressIntegration.com

Scan for
Email Updates

CYPRESS
INTEGRATION SOLUTIONS

Problem-solving access control accessories, made in the USA

CYPRESS
INTEGRATION SOLUTIONS

MADE IN USA

WARRANTY

IN-HOUSE TECH SUPPORT

We take care of our customers.

"You can get ahold of tech support, and that's always a main priority. Sometimes you don't have hours to wait."

John Bell
Terion Consulting

"We still have many of their data converters in place we installed in the late 90s. I wish my hips would've lasted as long as their hardware. It just doesn't get any better than these guys."

Pete Bongard
InterAccess Systems

Scan to save **Contact Info**

PROBLEM SOLVED.

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