CYPRESS
INTEGRATION SOLUTIONS

Wireless Handheld Reader
with OSDP™ Secure Channel
HHR-3156SC

Product Sheet

Encrypted Wireless Reader with OSDP™ v2 Secure Channel

Data security and authentication: Uses Secure Channel with AES-128 encryption

Only open, secure protection: Protects against the hacking and playback attack vulnerabilities of the Wiegand protocol

Secure, wireless convenience: Cypress encrypted Wireless Handheld Readers verify credentials by wirelessly communicating with a live database through the reader's base unit; select models also control a relay function such as opening a door or gate, or triggering a duress alarm.

Application Protocol Integrity and Confidentiality Controls: OSDP Secure Channel-compliant handheld units and base stations protect the integrity, confidentiality, and authenticity controls of all messages transmitted across the network.

Protocol Replay Protection: Resilient against replay attacks, using a rolling Message Authentication Code to ensure no two messages appear the same as transmitted over the network, and no two identically received messages are accepted.

Handheld Reader Authentication State Linked to Authentication Attempt: No message from the base station (or from an attacker) can cause the user interface to signal authorization without first having transmitted card data to the base station.

Protocol Does Not Leak Sensitive Data: The OSDP specification relies upon an inherently secure connection to perform initial key exchange, using a default key defined in the specification; key transfer is performed with out-of-band communication by storing key in RFID card's secure sector and presenting the card to the handheld reader. Encryption keys are managed by the end user.

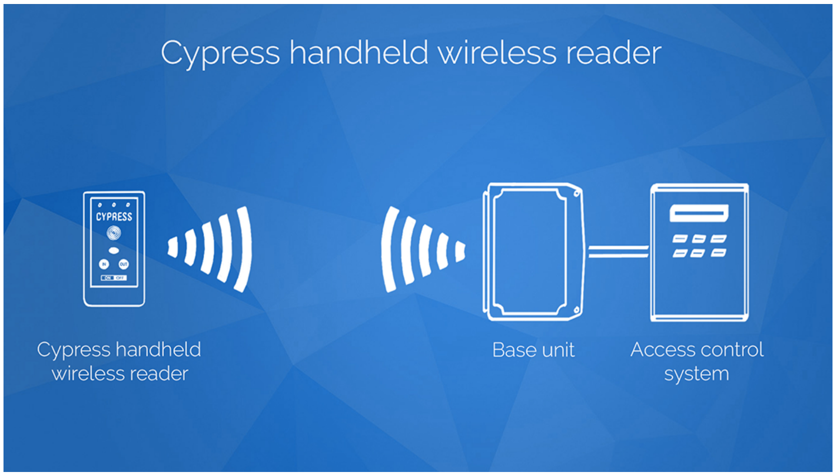
Authentication Method Diminishes Efficacy of Brute-Force Attack: The authentication method implements rate limiting, allowing one attempt per 2 seconds to diminish the efficacy of a brute-force attack while maintaining system responsiveness during normal use. The base station and handheld unit firmware do not accept repetitive badge presentations to prevent rogue hardware from searching badge space for authorized IDs.

Communication Security Does Not Rely on Protocol Secrecy: Implementation of the Security Industry Association's Open Supervised Device Protocol (OSDP) eliminates the system's reliance on protocol secrecy. This protocol is well known and widely accepted in the access control industry as the solution to data security in physical access control.

MADE IN USA RoHS CE

The Cypress Wireless Handheld Reader verifies credentials by wirelessly communicating with a live database through the reader’s base unit.

The Wireless Handheld Reader is used for rapid disaster deployment, random screening, mustering, in-vehicle credential checks, staff enrollment, and security officer empowerment.


Cypress handheld wireless reader

Specifications

Ordering information	(Gray) HHR-4156-GY	UPC: 816684001970
	(White) HHR-4156-WH	UPC: 816684001987
OSDP version	Open Supervised Device Protocol (OSDP™) v2.1.7	
Physical	Handheld Reader	6.81” x 3.63” x 1.58” / 1.2 lbs
	Charging Dock	4.76” x 4.10” x 2.20” / 0.35 lbs
	Base Unit	9.25” x 7.00” x 2.25” / 1.3 lbs
Environmental	Temperature Range	-17 to 54 C
	Base Unit	Weatherproof Enclosure - ABS - IP65
Electrical	Base Unit Supply Voltage	8-16Vdc Current 600mA
	Handheld Reader Internal LiPo Battery Pack	7.4V 3800mAh Rechargeable (not field-serviceable)
	Charging Dock AC/DC Adapter	100-240Vac ~ 1.0A 50/60 Hz Max Wall Plug
Radio	Frequency	2.4 GHz ISM band
	Type	Direct Sequence Spread Spectrum (DSSS)
	Transmit Power	15 dBm
	Receiver Sensitivity	-103 dBm (1% PER, 250Kbps)
	Modulation	O-QPSK
	Agency Approvals	FCC Part 15.247: FCC ID: U90-SM220, Industry Canada (IC): 7084A-SM220, CE Certified: Certified to EN300 328 Version 1.8.1
HID SE Reader Module	Credential Technologies	HID Prox, EM4102, AWID Prox; ISO14443A/B ISO15693, FeliCa™ (IDm); MIFARE Classic®, MIFARE DESFire® 0.6, MIFARE DESFire® EV1, HID: iCLASS® Standard/SE/SR/Seos; PIV II, Secure Identity Object® (SIO®)
	Global Certifications	UL Recognition (Recognized Component) to UL294 for the USA and CSA C22.2 No. 205 for Canada. CE, FCC 47 Part 15 modular approval, RoHS, WEEE
Wireless Range	Indoor	Maximum of 150 feet*
	Outdoor	Maximum of 500 feet*
	**Note: Distances are typical line-of-sight. Actual distance may vary depending upon terrain, RF environment, building materials, and height of antenna.*	
Additional Features	Vend button controls a relay for functions such as operating gates or possible duress notification	
	Handheld Reader’s gate selection feature can be used for ingress and egress lanes or gates	
	Device Communication Parameters, such as channel and encryption keys, is set using programming cards and configuration software	
	Diagnostic indicator on base unit for determining operational status of unit	
	Optional Repeaters extend distance and bypass line-of-sight issues	