



# WAVE ID® PRODUCT GUIDE

A complete guide to the passwordless solutions from rf IDEAS.

rf IDEAS

[www.rfIDEAS.com](http://www.rfIDEAS.com)

Trust begins here.™



# Safe, trusted authentication for every endpoint.

Opportunity begins with trust. rf IDEAS delivers the world's most trusted contactless authentication solutions—powering secure print management, identity and access management, time and attendance, and other mission-critical applications.

Count on our credential readers to protect your data, streamline workflows, and keep your people productive.

## Trust begins here.™



### Endpoint Versatility

Form factors that fit your environment.

From desktops to embedded systems, rf IDEAS offers a wide range of reader form factors—desktop, surface mount, nano, and embedded—to seamlessly integrate into any endpoint environment. Whether you're securing a workstation, a medical cart, or a manufacturing terminal, our readers are designed to meet your space, design, and workflow needs.



### Credential Freedom

Support for today's credentials—and tomorrow's.

rf IDEAS readers support the broadest range of credential technologies across low and high frequencies, mobile, FIDO2/passkeys, biometrics, and more. This future-proof flexibility ensures secure, passwordless access across diverse systems and evolving security standards.



### Proven Performance

Built to last. Trusted to protect.

With over 30 years of experience, rf IDEAS is the trusted choice for Fortune 100 companies and global enterprises. Our readers are engineered for durability and consistent performance in mission-critical environments. We help organizations meet stringent regulatory requirements—including GDPR, HIPAA, and other industry standards—while our dedicated sales and support teams across North America, EMEA, and APAC ensure responsive, expert service.



### Seamless Integration

Built through partnership.

rf IDEAS solutions are designed to integrate effortlessly with leading access management platforms, business systems (ERP, HR), and OEM devices. Our expansive partner network and software utilities ensure rapid deployment, centralized management, and a frictionless user experience—so you can scale securely, without compromise.

# Credential Types Compatible with WAVE ID® Technology

Supporting the widest range of access control credentials and authentication credentials worldwide, rf IDEAS enables quick access and simplified authentication for organizations across the world. Whether you're looking to leverage your existing credential infrastructure or future-proof with more secure options, rf IDEAS works with you to develop secure logical access to end points beyond the door such as workstation login, secure print, time and attendance, visitor management and more.

## Make the Move to Secure Today

Prox and iClass cards are a data breach waiting to happen. Don't wait for the threat to grow — reduce your risk of severe financial loss and operational downtime with modern credential solutions. As a trusted leader in identity access management, rf IDEAS connects your team to solutions that protect you from account takeovers — mapping out a migration strategy that secures your organization for the future.

rf **IDEAS**

Contact rf IDEAS at  
+1 (866) 492-8231 or  
Sales@rfIDEAS.com

## Low-frequency prox card readers

If your business relies on 125 kHz proximity cards, then WAVE ID® low-frequency readers offer an affordable and straightforward solution for implementing secure access controls. These readers ensure the protection of your networked devices and data while also maintaining personnel accountability across your entire organization.

## High-frequency smart card readers

rf IDEAS WAVE ID® readers leverage high frequency smart card technology to enhance security and efficiency across your organization. Discover how our advanced readers seamlessly integrate into your existing systems, providing reliable and secure access control.

## Dual-frequency card readers

Get full use of both new and current ID badges by allowing for the simultaneous processing of 125 kHz proximity cards and 13.56 MHz contactless smart cards. WAVE ID® dual-frequency readers safeguard connected devices and information and make it easier for authorized employees and partners to gain access — today and tomorrow.

## Mobile credential readers

Modern smartphones come equipped with tools to set up an NFC or Bluetooth® digital wallet. To cater to the needs of a workforce that's constantly on the move, rf IDEAS has developed dual-frequency readers that not only read 125 kHz proximity or 13.56 MHz contactless smart cards but also integrate a Bluetooth® reader for logical access control using the most advanced mobile credentials in the market.



## Biometric fingerprint readers

The WAVE ID® Bio Reader is a useful tool for industries such as healthcare, finance, and government that require secure and private multi-factor authentication. With the ability to read fingerprints, it is an all-in-one solution that supports mobile credentials, as well as proximity and smart cards at 125/132 kHz and 13.56 MHz, along with biometrics.





Trust begins here.™

# rf IDEAS WAVE ID Product Guide



WAVE ID® Plus OEM				
Reader Models	805	800	80M	30L
Secure Access Module	N/A	HID OMNIKEY	MIFARE Secure	LEGIC SM-6300
Secure Technology Type	N/A	HID SEOS iClass SE	MIFARE EV1, EV2, EV3, Classic, Ultralight	MIFARE EV1, EV2, EV3, Classic, Ultralight, LEGIC prime, LEGIC advant, LEGIC SECURE
Operating Frequency	125/132 kHz and 13.56 MHz			125/132 kHz, 13.56 MHz, 2.4GHz
Electrical/Mechanical Interface	USB-A/RS-232 Serial		USB-A	USB-A
Protocol/Operating Mode	Keystroke or rf IDEAS SDK or CCID or Virtual Com or ASCII		Keystroke or rf IDEAS SDK	Keystroke or rf IDEAS SDK
Dimensions (L x W x H)	2.3" x 1.4" x 0.3" (59mm x 36mm x 8.4mm)			
Weight without cable or SAM	0.4 oz (10 grams)			
Indicators	Quad-state LED (off, green, amber, red) and adjustable beeper (off, low, medium, high)			
Power Supply	USB self-powered; some RS-232 models require external power source			
Power Consumption	65 mA typical, 185 mA maximum			
Operating Temperature Range	-22° to 150°F (-30° to 65°C)			
Operating Humidity Range	5% to 95% relative humidity, non-condensing			
Storage Temperature Range	-40° to 185°F (-40° to 85°C)			
MTBF	7 years			
Certifications (Please contact rf IDEAS for information about other global certifications)	FCC-United States; CE Mark-Europe; RCM-Australia; IC-Industry Canada; UL Environmental: RoHS, REACH			
Compatible Operating Systems	Windows XP®, 7®, 8®, 10®, 11® and Linux (Ubuntu, Red Hat), macOS and Android			
Configuration Utilities (available on rf IDEAS <a href="#">support page</a> )	rf IDEAS Configuration Utility, Smart Card Manager, Remote Reader Management Tool			
Proximity Card Types (125/132 kHz)	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Supported Card Type Listing</p> </div> <div style="text-align: center;">  <p>Mobile Credential Access Compatibility Chart</p> </div> </div>			
Contactless Smartcard Types (13.56MHz)				
NFCx, Wallet Credentials (13.56MHz)				
Accessories				

\*SIM requires optional SIM slot



# rf IDEAS WAVE ID Product Guide

<b>WAVE ID® Plus OEM Micro</b>			
Reader Models	805	800	80M
Secure Access Module	N/A	HID OMNIKEY	MIFARE Secure
Secure Technology Type	N/A	HID SEOS iClass SE	MIFARE EV1, EV2, EV3, Classic, Ultralight
Operating Frequency	125/132 kHz and 13.56 MHz		
Electrical/Mechanical Interface	USB-A		
Protocol/Operating Mode	Keystroke or rf IDEAS SDK or CCID or Virtual Com or ASCII		Keystroke or rf IDEAS SDK
Dimensions (L x W x H)	2.7" x 1.1" x 0.3" (69mm x 27mm x 7.8mm)		
Weight without cable or SAM	0.2 oz (6.8 grams)		
Indicators	Quad-state LED (off, green, amber, red) and adjustable beeper (off, low, medium, high)		
Power Supply	USB self-powered		
Power Consumption	65 mA typical, 185 mA maximum		
Operating Temperature Range	-22° to 150°F (-30° to 65°C)		
Operating Humidity Range	5% to 95% relative humidity, non-condensing		
Storage Temperature Range	-40° to 185°F (-40° to 85°C)		
MTBF	7 years		
Certifications (Please contact rf IDEAS for information about other global certifications)	FCC-United States; CE Mark-Europe; RCM-Australia; IC-Industry Canada; UL Environmental: RoHS, REACH		
Compatible Operating Systems	Windows XP®, 7®, 8®, 10®, 11® and Linux (Ubuntu, Red Hat), macOS and Android		
Configuration Utilities (available on rf IDEAS <a href="#">support page</a> )	rf IDEAS Configuration Utility, Smart Card Manager, Remote Reader Management Tool		
Proximity Card Types (125/132 kHz)	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Supported Card Type Listing</p> </div> <div style="text-align: center;">  <p>Mobile Credential Access Compatibility Chart</p> </div> </div>		
Contactless Smartcard Types (13.56MHz)			
NFCx, Wallet Credentials (13.56MHz)			
Accessories	Cables, KT-4FF-SIM-SE-V2 or KT-4FF-SIM-AV2	Cables	Cables

# rf IDEAS WAVE ID Product Guide

<b>WAVE ID® Plus OEM Pico</b>			
Reader Models	805	800	80M
Secure Access Module	N/A	HID OMNIKEY	MIFARE Secure
Secure Technology Type	N/A	HID SEOS iClass SE	MIFARE EV1, EV2, EV3, Classic, Ultralight
Operating Frequency	125/132 kHz and 13.56 MHz		
Electrical/Mechanical Interface	USB-A		
Protocol/Operating Mode	Keystroke or rf IDEAS SDK or CCID or Virtual Com		Keystroke or rf IDEAS SDK
Dimensions (L x W x H)	2.0" x 0.6" x 0.3" (50mm x 14mm x 6.3mm)		
Reader & Antenna weight without cable or SAM	0.2 oz (4.5 grams)		
Indicators	Quad-state LED (off, green, amber, red) and adjustable beeper (off, low, medium, high)		
Power Supply	USB self-powered		
Power Consumption	65 mA typical, 185 mA maximum		
Operating Temperature Range	-22° to 150°F (-30° to 65°C)		
Operating Humidity Range	5% to 95% relative humidity, non-condensing		
Storage Temperature Range	-40° to 185°F (-40° to 85°C)		
MTBF	7 years		
Certifications (Please contact rf IDEAS for information about other global certifications)	FCC-United States; CE Mark-Europe; RCM-Australia; IC-Industry Canada; UL Environmental: RoHS, REACH		
Compatible Operating Systems	Windows XP®, 7®, 8®, 10®, 11® and Linux (Ubuntu, Red Hat), macOS and Android		
Configuration Utilities (available on rf IDEAS <a href="#">support page</a> )	rf IDEAS Configuration Utility, Smart Card Manager, Remote Reader Management Tool		
Proximity Card Types (125/132 kHz)	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Supported Card Type Listing</p> </div> <div style="text-align: center;">  <p>Mobile Credential Access Compatibility Chart</p> </div> </div>		
Contactless Smartcard Types (13.56MHz)			
NFCx, Wallet Credentials (13.56MHz)			
Accessories	Cables, KT-4FF-SIM-SE-V2 or KT-4FF-SIM-AV2	Cables	Cables

# rf IDEAS WAVE ID Product Guide

WAVE ID® Plus OEM Nano		
Reader Models	6x	75
Secure Access Module	N/A	N/A
Secure Technology Type	N/A	N/A
Operating Frequency	125/132 kHz	13.56 MHz
Electrical/Mechanical Interface	USB-A	
Protocol/Operating Mode	Keystroke or rf IDEAS SDK or CCID or ASCII	
Dimensions (L x W x H)	1.3" x 0.6" x 0.2" (34 mm x 14 mm x 4 mm)	1.6" x 0.5" x 0.2" (41 mm x 12 mm x 5 mm)
Weight without cable	0.1 oz (3 grams)	0.07 oz (2 grams)
Indicators	N/A	
Power Supply	USB self-powered	
Power Consumption	70 mA Typical, 100 mA maximum	60 mA Typical, 150 mA maximum
Operating Temperature Range	-22° to 150°F (-30° to 65°C)	
Operating Humidity Range	5% to 95% relative humidity, non-condensing	
Storage Temperature Range	-40° to 185°F (-40° to 85°C)	
MTBF	7 years	
Certifications (Please contact rf IDEAS for information about other global certifications)	FCC-United States; CE Mark-Europe; RCM-Australia; IC-Industry Canada; UL Environmental: RoHS, REACH. Contact sales@rfIDEAS.com for more country certification information.	
Compatible Operating Systems	Windows XP®, 7®, 8®, 10®, 11® and Linux (Ubuntu, Red Hat), macOS and Android	
Configuration Utilities (available on rf IDEAS <a href="#">support page</a> )	rf IDEAS Configuration Utility, Smart Card Manager, Remote Reader Management Tool	
Proximity Card Types (125/132 kHz)		N/A
Contactless Smartcard Types (13.56MHz)	N/A	


# rf IDEAS WAVE ID Product Guide

<b>WAVE ID® Bio</b>	
<b>STANDARD FEATURES</b>	
Model Series	RDF-30542AKU: WAVE ID Bio SDK Badge, BLE & Fingerprint Combo Black USB Reader
Operating Frequency	Dual Frequency
Interface	USB
SDK available for writing apps to the reader	Yes: • rf IDEAS SDK DK-PCPRX-DOWNLOAD for the card reader • Silicon Labs SDK for the BLE113 Module available at <a href="http://www.silabs.com/products/development-tools/software/bluegiga-bluetooth-smart-software-stac">http://www.silabs.com/products/development-tools/software/bluegiga-bluetooth-smart-software-stac</a> • U.are.U SDK for the Fingerprint Sensor from HID (Crossmatch)
<b>PHYSICAL CHARACTERISTICS</b>	
Dimensions	3.5 in x 2.5 in x 0.6 in (8.9 cm x 6.4 cm x 1.6 cm)
Weight	1.7 oz (48 grams) - preliminary
Housing Color	Black (gray inlay)
Cables	6ft USB-A cable
Indicators	LED indicators, beeper included
Form Factors	Fingerprint Desktop Housing
Power Supply	USB powered
Power Consumption	70 mA typical, 100 mA maximum
<b>ENVIRONMENTAL</b>	
Operating Temperature Range	-22° to 150°F (-30° to 65°C)
Operating Humidity Range	5% to 95% relative humidity, noncondensing
Storage Temperature Range	-40° to 185°F (-40° to 85°C)
<b>OTHER</b>	
Certifications (Please contact rf IDEAS for information about other global certifications)	FCC-United States; CE Mark-Europe; RCM-Australia; IC-Industry Canada. Environmental: RoHS, REACH
Compatible Operating Systems	Windows 10 (34 & 64 bit),11® (64 bit), MacOS Monterey and above, Linux Linux Ubuntu 20.04 and above (64bit) Chromium Web Browsers (WebSDK), Google Chrome (Linux, Mac, or ChromeOS), Microsoft Edge (Linux & MacOS), Opera (Linux), Android 14 and below**, Rasberry Pi 3b & Pi 4 (Debian 11 Bullseye (64 & 32 bit) ** Android - versions 10 and above require custom firmware
Card Types	All card types supported by the WAVE ID Plus reader platform For a complete list, visit <a href="https://www.rfideas.com/pcprox-plus-card-types">https://www.rfideas.com/pcprox-plus-card-types</a>

## rf IDEAS WAVE ID Product Guide

The WAVE ID® 13.56MHz Configuration Card Writer	
Reader Models	RDR-7M30BKU
Secure Access Module	MIFARE
Secure Technology Type	MIFARE DESFire EV1/EV2/EV3
Operating Frequency	13.56 MHz
Electrical/Mechanical Interface	USB
Protocol/Operating Mode	Writer
Dimensions (L x W x H)	3.6" (90 mm) x 2.1" (52 mm) x Height: 0.7" (17 mm)
Weight	4.0 ounces (113.39g)
Housing Color	Black
Cable Length	6' (1.8m)
Indicators	Quad-state LED (off, green, amber, red) and adjustable beeper (off, low, medium, high)
Power Supply	USB self-powered
Power Consumption	65 mA typical, 185 mA maximum
Operating Temperature Range	-22° to 150°F (-30° to 65°C)
Operating Humidity Range	5% to 95% relative humidity, non-condensing
Storage Temperature Range	-40° to 185°F (-40° to 85°C)
MTBF	7 years
Certifications <small>(Please contact rf IDEAS for information about other global certifications)</small>	FCC-United States; CE Mark-Europe; RCM-Australia; IC-Industry Canada; UL Environmental: RoHS, REACH
Compatible Operating Systems	Windows XP®, 7®, 8®, 10®, 11®
Configuration Utilities <small>(available on rf IDEAS <a href="#">support page</a>)</small>	rf IDEAS Configuration Utility, Smart Card Manager, Config Card Manager
Contactless Card Compatibility (13.56MHz)	MIFARE DESFire EV1/EV2/EV3 1K, 2K, 4K and 8K Cards
Accessories	N/A

# rf IDEAS WAVE ID Product Guide

<b>WAVE ID Mobile Mini Reader for HID Mobile Access</b>	
Reader Models	RDR-30031EKU-MXS
Secure Access Module	HID OMNIKEY
Secure Technology Type	HID SEOS iCLASS SE
Operating Frequency	125/132 kHz, 13.56 MHz and 2.4 GHz (BLE)
Electrical/Mechanical Interface	USB-A, C
Protocol/Operating Mode	Keystroke
Dimensions (L x W x H)	Length 2.9" (74mm); Width 1.7" (42mm); Height 0.5" (13mm)
Weight	~3 ounces (86g) with a 6' cable
Housing Color	Black
Indicators	Quad-state LED (off, green, amber, red) and adjustable beeper (off, low, medium, high)
Power Supply	USB-A,C self-powered
Power Consumption	65 mA typical, 185 mA maximum
Operating Temperature Range	-22° to 150°F (-30° to 65°C)
Operating Humidity Range	5% to 95% relative humidity, non-condensing
Storage Temperature Range	-40° to 185°F (-40° to 85°C)
Certifications (Please contact rf IDEAS for information about other global certifications)	FCC-United States; CE Mark-Europe; RCM-Australia; IC-Industry Canada; UL Environmental: RoHS, REACH
Compatible Operating Systems	Windows 10 (34 & 64 bit),11® (64 bit), MacOS Monterey and above, Linux Linux Ubuntu 20.04 and above (64bit) Chromium Web Browsers (WebSDK), Google Chrome (Linux, Mac, or ChromeOS), Microsoft Edge (Linux & MacOS), Opera (Linux), Android 14 and below**, Rasberry Pi 3b & Pi 4 (Debian 11 Bullseye (64 & 32 bit)  ** Android - versions 10 and above require custom firmware
Configuration Utilities (available on <a href="#">rf IDEAS support page</a> )	rf IDEAS Configuration Utility, Smart Card Manager, Remote Reader Management Tool
Proximity Card Types (125/132 kHz) Contactless Smartcard Types (13.56MHz)	
Accessories	BKT-MINI: Mini Desktop Mounting Bracket KT-ANGLE-MINI: WAVE ID Black Angle Mini Mounting Bracket KT-ANGLE-MINI+CLIPS: WAVE ID Black Angle Mini Mounting Bracket w/Cable Clips KT-FLAT-MINI: WAVE ID Black Angle Mini Mounting Dual Lock Kit

# rf IDEAS WAVE ID Product Guide

## WAVE ID® Mobile Reader for HID Mobile Access®

### STANDARD FEATURES

Model Series	RDR-30031EKU-MXS
Operating Frequency	125 kHz (LF) and 13.56 MHz (HF); 2.4 GHz (BLE)
Interface	USB
WAVE ID Plus SDK	DK-PCPRX-DOWNLOAD
Badge Configurations	Up to 4 configurations; Standard Configuration: Config #1 - HID Prox; RDR-608x Compatible, Config #2 - RDR-758x Equivalent, Config #3 - OFF, Config #4 - OFF; user-definable

### PHYSICAL CHARACTERISTICS

Dimensions (inches)	Length 2.9" (74mm); Width 1.7" (42mm); Height 0.5" (13mm)
Weight	~3 ounces (86g) with a 6' cable
Form Factors	Desktop
Cable Length	6' (152.4mm) standard; Contact rf IDEAS for other options
Indicators	LED indicator (green, amber, red)
Volume Control	User-selectable beeper volume (off, low, medium, high)
Power Supply	USB powered
Power Consumption	65 mA typical, 225 mA maximum

### ENVIRONMENTAL

Operating Temperature Range	-13° to 150°F (-25° to 65°C)
Operating Humidity Range	5% to 95% relative humidity, non-condensing
Storage Temperature Range	-40° to 185°F (-40° to 85°C)


### OTHER

Certifications (Please contact rf IDEAS for information about other global certifications)	FCC-United States; CE Mark-Europe; RCM-Australia; IC-Industry Canada; UL Environmental: RoHS, REACH
Compatible Operating Systems	Windows XP®, 7®, 8®, 10® and Linux®
Card Types	Supports nearly all physical card types worldwide; contact rf IDEAS for specific card type questions or view our list here: <a href="https://www.rfideas.com/support/tools/supported-card-types">https://www.rfideas.com/support/tools/supported-card-types</a>
Software Tools	WAVE ID Mobile Configurator: <a href="https://www.rfideas.com/support/tools/downloads">https://www.rfideas.com/support/tools/downloads</a> WAVE ID Mobile App: <a href="https://apps.apple.com/us/app/wave-id-mobile/id1498224533">https://apps.apple.com/us/app/wave-id-mobile/id1498224533</a> (for iOS) <a href="https://play.google.com/store/apps/details?id=com.rfideas.waveid">https://play.google.com/store/apps/details?id=com.rfideas.waveid</a> (for Android)



### BLUETOOTH FEATURES

Mobile Credentials Supported	Orange PACK ID®; WAVE ID® Mobile; PSIA PKOC
BLE Beacons	Configurable for Eddystone, Alt Beacon and iBeacon (requires the WAVE ID Mobile Configurator utility)
Supported Protocols	Bluetooth 5.3

# rf IDEAS WAVE ID Product Guide



WAVE ID® Nano Reader			
Reader Models	RDR-6012AKU-V2, RDR-60U2AKU, RDR-6021AKU RDR-60U1AKU, RDR-6022AKU, RDR-6011AKU-V2 RDR-7011AKU, RDR-7012AKU, RDR-7L11BKU, RDR-7L12BKU	RDR-70U1BKU, RDR-70U2BKU, RDR-70U2BKU-AN, RDR-70U6BKU	RDR-7MU1BKU, RDR-7MU2BKU, RDR-7MU6BKU
Secure Technology Type	HID SEOS, LEGIC Secure		HID SEOS      MIFARE Secure
Operating Frequency	125 kHz or 13.56 MHz		13.56 MHz
Protocol/Operating Mode	Keystroke, SDK, CCID		Keystroke, SDK, CCID
Dimensions (L x W x H)	Vertical: Height 0.88" x Width 0.62" x Length 0.76" (22.4 mm x 15.7 mm x 19.3 mm) Horizontal: Height 0.36" x Width 0.62" x Length 1.14" (9.1 mm x 15.7 mm x 29 mm)	Height 0.83" (21.1mm) x Width 0.41" (10.5mm) x Length 0.51" (13.0mm) (not including the USB-C connector)	
Weight	Vertical: 0.20 ounces (5.67g)	Horizontal: 0.14 ounces (4g)	0.14 ounces (4g)
Housing Color	Black		
Indicators	LED		
Power Supply	USB-A or C self-powered		USB-C self-powered
Power Consumption	70 mA typical, 100 mA maximum		60 mA typical, 170 mA maximum
Operating Temperature Range	-22° to 150°F (-30° to 65°C)		-22° to 150°F (-30° to 65°C) for non-SEOS models only; 32° to 150°F (0° to 65°C) for SEOS models
Operating Humidity Range	5% to 95% relative humidity, non-condensing		
Storage Temperature Range	-40° to 185°F (-40° to 85°C)		
Certifications (Please contact rf IDEAS for information about other global certifications)	FCC-United States; CE Mark-Europe; RCM-Australia; IC-Industry Canada; UL Environmental: RoHS, REACH		
Compatible Operating Systems	Windows 10 (34 & 64 bit),11® (64 bit), MacOS Monterey and above, Linux Linux Ubuntu 20.04 and above (64bit) Chromium Web Browsers (WebSDK), Google Chrome (Linux, Mac, or ChromeOS), Microsoft Edge (Linux & MacOS), Opera (Linux), Android 14 and below**, Raspberry Pi 3b & Pi 4 (Debian 11 Bullseye (64 & 32 bit) ** Android - versions 10 and above require custom firmware		
Configuration Utilities (available on rf IDEAS <a href="#">support page</a> )			
Proximity Card Types (125/132 kHz)			
Contactless Smartcard Types (13.56MHz)			
NFC, Mobile Credentials (13.56MHz)			

# rf IDEAS WAVE ID Product Guide


WAVE ID® Plus Mini LEGIC SM-6300 Reader		
Reader Models	RDR-3L31EKU, RDR-3L32EKU, RDR-3L31EKU-C16	RDR-30L31EKU, RDR-30L31EKU-C06, RDR-30L31EKU-C16, RDR-30L32EKU, RDR-30L31EKU-H, RDR-30L32EKU-H
Secure Access Module	LEGIC SM6300 on board	HID*, LEGIC SM6300 on board
Secure Technology Type	LEGIC and MIFARE Secure	HID*, LEGIC and MIFARE Secure
Operating Frequency	13.56 MHz	125/132 kHz, 13.56 MHz and 2.4 GHz
Electrical/Mechanical Interface	USB	
Protocol/Operating Mode	Keystroke or rf IDEAS SDK	
Dimensions (L x W x H)	Length 2.9" (74mm); Width 1.7" (42mm); Height 0.5" (13mm)	
Weight	4.0 ounces (113.39g)	
Housing Color	Black	
Cable Length	6' standard; 6" and 16" lengths available	
Indicators	Quad-state LED (off, green, amber, red) and adjustable beeper (off, low, medium, high)	
Power Supply	USB self-powered	
Power Consumption	65 mA typical, 185 mA maximum	
Operating Temperature Range	-25° to 150°F (-30° to 65°C)	
Operating Humidity Range	5% to 95% relative humidity, non-condensing	
Storage Temperature Range	-40° to 185°F (-40° to 85°C)	
Certifications (Please contact rf IDEAS for information about other global certifications)	FCC-United States; CE Mark-Europe; RCM-Australia; IC-Industry Canada; UL Environmental: RoHS, REACH	
Compatible Operating Systems	Windows 10 (32 & 64 bit), 11 (64 bit), MacOS Monterey and above, Linux	
Configuration Utilities (available on <a href="#">rf IDEAS support page</a> )	rf IDEAS Configuration Utility, Smart Card Manager, Remote Reader Management Tool	
Contactless Smartcard Types (13.56 MHz, 125/132kHz)*		
NFCx, Mobile Credentials (13.56 MHz)*		
Accessories	BKT-MINI: Mini Desktop Mounting Bracket KT-ANGLE-MINI: WAVE ID Black Angle Mini Mounting Bracket KT-ANGLE-MINI+CLIPS: WAVE ID Black Angle Mini Mounting Bracket w/Cable Clips KT-FLAT-MINI: WAVE ID Black Angle Mini Mounting Dual Lock Kit	

\*For HID SEOS, iCLASS and Custom/Elite key, a Secure Access Module (SAM) is required

# rf IDEAS WAVE ID Product Guide

<b>WAVE ID® Plus Mini Desktop</b>			
Reader Models	RDR-80531BKU, RDR-80531BKU-C06, RDR-80531BKU-C16	RDR-80031BKU-V2, RDR-80032BKU-V2, RDR-80031BK5, RDR-80031BKU, RDR-80031BKU-V2-C06, RDR-80031BKU-V2-C16, RDR-80031BK9, RDR-80031BK0	RDR-80M31BKU, RDR-80M32BKU
Secure Access Module	N/A	HID OMNIKEY	MIFARE Secure
Secure Technology Type	N/A	HID SEOS iClass SE	DESFire EV1/EV2/EV3; Classic; Plus; Ultralight/Ultralight-C
Operating Frequency	125/132 kHz and 13.56 MHz		
Electrical/Mechanical Interface	USB/Virtual Com/RS-232 Serial/Ethernet		USB
Protocol/Operating Mode	Keystroke or rf IDEAS SDK or CCID or ASCII		Keystroke
Dimensions (L x W x H)	Length 2.9" (74mm); Width 1.7" (42mm); Height 0.5" (13mm)		
Weight	4.0 ounces (113.39g)		
Housing Color	Black		
Cable Length	6' standard; 6" and 16" lengths available		
Indicators	Quad-state LED (off, green, amber, red) and adjustable beeper (off, low, medium, high)		
Power Supply	USB self-powered; some RS-232 models require external power source		USB self-powered
Power Consumption	65 mA typical, 185 mA maximum		
Operating Temperature Range	-22° to 150°F (-30° to 65°C)		
Operating Humidity Range	5% to 95% relative humidity, non-condensing		
Storage Temperature Range	-40° to 185°F (-40° to 85°C)		
Certifications (Please contact rf IDEAS for information about other global certifications)	FCC-United States; CE Mark-Europe; RCM-Australia; IC-Industry Canada; UL Environmental: RoHS, REACH		
Compatible Operating Systems	Windows 10 (34 & 64 bit),11® (64 bit), MacOS Monterey and above, Linux Linux Ubuntu 20.04 and above (64bit) Chromium Web Browsers (WebSDK), Google Chrome (Linux, Mac, or ChromeOS), Microsoft Edge (Linux & MacOS), Opera (Linux), Android 14 and below**, Raspberry Pi 3b & Pi 4 (Debian 11 Bullseye (64 & 32 bit)  ** Android - versions 10 and above require custom firmware		
Configuration Utilities (available on rf IDEAS <a href="#">support page</a> )	rf IDEAS Configuration Utility, Smart Card Manager, Remote Reader Management Tool		
Proximity Card Types (125/132 kHz) Contactless Smartcard Types (13.56MHz)			
NFCx, Mobile Credentials (13.56MHz)			
Accessories	BKT-MINI: Mini Desktop Mounting Bracket KT-ANGLE-MINI: WAVE ID Black Angle Mini Mounting Bracket KT-ANGLE-MINI+CLIPS: WAVE ID Black Angle Mini Mounting Bracket w/Cable Clips KT-FLAT-MINI: WAVE ID Black Angle Mini Mounting Dual Lock Kit		

# rf IDEAS WAVE ID Product Guide

WAVE ID® Plus Surface Mount			
Reader Models	RDR-805W2BKU, RDR-805W1BKB-P, RDR-805W1BKU-C72, RDR-805W1BK6, RDR-805W1BK0, RDR-805W1BKE-P, RDR-805W1BK5, RDR-805W1BKU-C36, RDR-805W1BK5, RDR-805W1BK5, RDR-805W6BKU, RDR-805W1BK0, RDR-805W1BK8, RDR-805W1BK9, RDR-805W1BK0-C	RDR-800W1BKU, RDR-800W1BKU-C72, RDR-800W1BKB-P, RDR-800W1BK5, RDR-800W1BKE-P, RDR-800W1BKB, RDR-800W1BK8, RDR-800W1BKU-C36, RDR-800W1BK7, RDR-800W1BKB-P, RDR-800W2BKU, RDR-800W1BK0-C	RDR-80MW1BKU
Secure Access Module	N/A	HID OMNIKEY	MIFARE Secure
Secure Technology Type	N/A	HID SEOS iClass SE	DESFire EV1/EV2/EV3; Classic; Plus; Ultralight/Ultralight-C
Operating Frequency	125/132 kHz and 13.56 MHz		
Electrical/Mechanical Interface	USB-A, C/Virtual Com/RS-232 Serial/Ethernet		USB-A
Protocol/Operating Mode	Keystroke or rf IDEAS SDK	Keystroke or rf IDEAS SDK	Keystroke
Dimensions (L x W x H)	4.5" x 2.75" x 0.62" (114.3 mm x 69.8 mm x 15.6 mm)		
Weight	2.5 ounces (71 g)		
Housing Color	Black		
Indicators	Quad-state LED (off, green, amber, red) and adjustable beeper (off, low, medium, high)		
Power Supply	USB self-powered; some RS-232 and Ethernet models require external power source		
Power Consumption	70 mA typical, 150 mA maximum		
Operating Temperature Range	-22° to 150°F (-30° to 65°C)		
Operating Humidity Range	5% to 95% relative humidity, non-condensing		
Storage Temperature Range	-40° to 185°F (-40° to 85°C)		
Certifications	FCC-United States; CE Mark-Europe; RCM-Australia; IC-Industry Canada; UL Environmental: RoHS, REACH		
Compatible Operating Systems	Keystroke: USB HID keyboards compliant with USB protocol SDK: Windows 10 (32 & 64 bit), 11 (64 bit), MacOS Monterey and above, Linux Ubuntu 20.04 and above (64bit) Chromium Web Browsers (WebSDK), Google Chrome (Linux, Mac, or ChromeOS), Microsoft Edge (Linux & MacOS), Opera (Linux), Android 14 and below**, Rasberry Pi 3b & Pi 4 (Debian 11 Bullseye (64 & 32 bit) ** Android - versions 10 and above require custom firmware		
Configuration Utilities	Windows 10 (32 & 64 bit), 11 (64 bit), MacOS Monterey and above, Linux		
Proximity Card Types (125/132 kHz)			
Contactless Smartcard Types (13.56MHz)			
Accessories	KT-IP67 - IP67 rated housing kit		

# rf IDEAS WAVE ID Product Guide


## WAVE ID® Solo

### Reader Models

RDR-6082AKU, RDR-6081AKU, RDR-6382AKU, RDR-6081AK0, RDR-6282AKU, RDR-6081AKU-C06, RDR-6982AKU, RDR-6082AKU-C16, RDR-6N82AKU


Model Series	RDR-6x81AKU Keystroke RDR-6x82AKU SDK Note: x = Card Type
Operating Frequency	125/132 kHz
Interface	USB, Ethernet, RS-232 or other
WAVE ID Plus SDK available for writing apps to the reader	Yes
<b>PHYSICAL CHARACTERISTICS</b>	
Dimensions	Height 0.6" (1.52cm) x Width 2.0" (5.08cm) x Length 3 3/8" (8.57cm)
Weight	4.0 ounces (113.39g)
Housing Color	Black
Cable Length	6' standard; 6" and 16" lengths available
Indicators	LED indicator; Adjustable beeper volume (off, low, medium, high)
Form Factors	Desktop, surface mount, non-housed
Minimum Voltage	5V
Power Supply	USB powered; some RS-232 models require external power source
Power Consumption	70 mA typical, 100 mA maximum
<b>ENVIRONMENTAL</b>	
Operating Temperature Range	-22° to 150°F (-30° to 65°C)
Operating Humidity Range	5% to 95% relative humidity, noncondensing
Storage Temperature Range	-40° to 185°F (-40° to 85°C)
<b>OTHER</b>	
Certifications (Please contact rf IDEAS for information about other global certifications)	FCC-United States; CE Mark-Europe; RCM-Australia; IC-Industry Canada. Environmental: RoHS, REACH
Compatible Operating Systems	Windows XP®, 7®, 8®, 10® and Linux Ubuntu
Card Types	For a complete list, visit <a href="https://www.rfideas.com/support/tools/supported-card-types">https://www.rfideas.com/support/tools/supported-card-types</a>

## rf IDEAS WAVE ID Product Guide

<b>WAVE ID® SP Plus LEGIC</b>	
Reader Models	RDR-30LH1EKU KT-30LH1EKU-H
Secure Access Module	LEGIC 6300
Secure Technology Type	LEGIC and MIFARE Secure
Operating Frequency	125/132 kHz, 13.56 MHz, and 2.4 GHz
Protocol/Operating Mode	Keystroke
Dimensions (L x W x H)	Height 0.6" (1.52cm) x Width 2.0" (5.08cm) x Length 3.0" (7.62cm)
Weight	SP reader 0.78 oz. (22gm)
Housing Color	Black
Indicators	Quad-state LED (off, green, amber, red) and adjustable beeper (off, low, medium, high)
Power Supply	USB self-powered
Power Consumption	70 mA typical, 100 mA maximum
Operating Temperature Range	-22° to 150°F (-30° to 65°C)
Operating Humidity Range	5% to 95% relative humidity, non-condensing
Storage Temperature Range	-40° to 185°F (-40° to 85°C)
Certifications (Please contact rf IDEAS for information about other global certifications)	FCC-United States; CE Mark-Europe; RCM-Australia; IC-Industry Canada; UL Environmental: RoHS, REACH. Contact rf IDEAS for additional global country certification details.
Compatible Operating Systems	Windows XP®, 7®, 8.1®, 10® and Linux
Configuration Utilities (available on rf IDEAS <a href="#">support page</a> )	
Proximity Card Types (125/132 kHz)	
Contactless Smartcard Types (13.56MHz)	
NFCx Mobile Credentials 13.56 MHz and 2.4 GHz	
Accessories	Cables, KT-SIM-SE-V2: HID Omnikey SAM*

\*For HID SEOS, iCLASS and Custom/Elite key, a Secure Access Module (SAM) is required

# rf IDEAS WAVE ID Product Guide

WAVE ID® SP Plus						
Reader Models	WAVE ID SP Plus			WAVE ID Mobile SP Plus		
Secure Technology Type	N/A	HID	MIFARE Secure	HID	MIFARE	LEGIC and MIFARE Secure
Model	RDR-805H1BKU	KT-800H1BKU	KT-80MH1BKU	KT-300H1EKU	KT-30MH1EKU	RDR-30LH1EKU and KT-30LH1EKU-H
Operating Frequency	125/132 kHz and 13.56 MHz			125/132 kHz, 13.56 MHz, and 2.4 GHz		
Protocol/Operating Mode	Keystroke					
Dimensions (L x W x H)	Height 0.6" (1.52cm) x Width 2.0" (5.08cm) x Length 3.0" (7.62cm)					
Weight	0.78 oz. (22gm)					
Housing Color	Black					
Indicators	Quad-state LED (off, green, amber, red) and adjustable beeper (off, low, medium, high)					
Power Supply	USB self-powered					
Power Consumption	70 mA typical, 100 mA maximum					
Operating Temperature Range	-22° to 150°F (-30° to 65°C)					
Operating Humidity Range	5% to 95% relative humidity, non-condensing					
Storage Temperature Range	-40° to 185°F (-40° to 85°C)					
Certifications (Please contact rf IDEAS for information about other global certifications)	FCC-United States; CE Mark-Europe; RCM-Australia; IC-Industry Canada; UL Environmental: RoHS, REACH. Contact rf IDEAS for additional global country certification details.					
Compatible Operating Systems	Windows XP®, 7®, 8.1®, 10® and Linux					
Configuration Utilities (available on rf IDEAS <a href="#">support page</a> )						
Proximity Card Types (125/132 kHz)						
Contactless Smartcard Types (13.56MHz)						
NFC, Mobile Credentials (13.56MHz)						
Accessories	Cables, KT-SIM-SE-V2: HID Omnikey SAM*, KT-SIM-AV3: MIFARE SAM AV3	Cables	Cables	Cables	Cables	Cables, KT-SIM-SE-V2: HID Omnikey SAM*