



# Product Guide

Card Readers

Presence Detectors

Converters

Proximity 125 kHz

Contactless 13.56 MHz



Trust begins here.™



# Safe, trusted authentication for any device.

Opportunity begins with trust. rf IDEAS provides the world's most trusted contactless authentication solutions for secure print management, identity and access management, time and attendance, and other critical applications. Count on our credential readers to keep your data safe and your people productive. **Trust begins here.™**





## About rf IDEAS

rf IDEAS, founded in 1995, is the innovator of WAVE ID® technology, the standard for credential-based authentication and identification solutions powered by rf IDEAS readers. rf IDEAS manufactures a complete line of card readers and products that support nearly every proximity and contactless smart card in use worldwide.

rf IDEAS readers are used in numerous applications such as single sign-on, secure printing and attendance-tracking across several vertical markets including healthcare, manufacturing, government and enterprise. rf IDEAS is a subsidiary of Roper Technologies, a constituent of the S&P 500, Fortune 1000, and the Russell 1000 indices.

## Applications:



### Secure Print

Add the ability to use the existing employee ID badge system to access and interact with printers.



### Mobile Credentials

Enable the simplicity and convenience of using mobile devices for identification and authentication throughout the workplace with readers that incorporate Bluetooth® Low Energy technology.



### Single Sign-on

Simplify the log-on and log-off process with a wave or tap of an employee badge for identification and authentication, granting users access into their desktop and other applications.



### Manufacturing

Use the existing employee ID badge system for secure access to automation, data collection, quality control and job costing.



### Attendance Tracking

Track time and attendance to increase overall workforce productivity and reduce payroll errors, giving the existing employee ID badge more versatility.



### OEM Integrations

Integrate rf IDEAS devices directly into systems such as printers, vending, mobile devices, kiosks, truck scales and much more.



### Point of Sale

Using the existing employee ID badge system, users can make cashless transactions with customized, easy-to-manage solutions throughout the facility.



### Dispensing

Provide secure, automated access to material for items requiring high levels of control and compliance.



### Biometrics

Provide identification and authorized access to areas and systems with high-level controlled security, along with monitoring and tracking user credentials.

## Form Factors



Desktop



Nano (Vertical)



Nano (Horizontal)



Nano USB-C



Mobile/BLE



SP/SP Plus



Bio



Surface mount



OEM



Analyze













Ethernet 241



Sonar

# Products and Specifications

	WAVE ID® Plus		WAVE ID® Solo	WAVE ID® Mobile			WAVE ID® SP Plus	WAVE ID® SP
								
DESCRIPTION	800 Series	805 Series		Safetrust Mobile Wallet	Orange Business Services PackID	HID Mobile Reader		
	Dual frequency: 125 kHz and 13.56 MHz		Single frequency: 125 kHz proximity OR 13.56 MHz contactless	Dual frequency: 125/132 kHz and 13.56 MHz	Dual frequency: 125/132 kHz and 13.56 MHz	Dual frequency: 125/132 kHz and 13.56 MHz	Dual frequency: 125 kHz and 13.56 MHz	Single frequency: 13.56 MHz only
	Supports iCLASS, SE and SEOS ID in addition to all card types supported by the 805 Series		Supports nearly all physical card types worldwide	Models that support nearly all proximity and contactless smart cards	Supports nearly all physical card types worldwide in addition to the Safetrust Wallet mobile credential	Supports nearly all physical card types worldwide in addition to the Orange Business Services Pack ID mobile credential	Supports nearly all physical card types worldwide and the HID Mobile Access® credential	Supports nearly all physical card types worldwide
	Supports nearly all physical card types worldwide		Models that support nearly all proximity and contactless smart cards	Supports nearly all physical card types worldwide in addition to the Safetrust Wallet mobile credential	Supports nearly all physical card types worldwide in addition to the Orange Business Services Pack ID mobile credential	Supports nearly all physical card types worldwide and the HID Mobile Access® credential	Supports nearly all physical card types worldwide	Supports nearly all physical card types worldwide
	<ul style="list-style-type: none"> <li>Provides error-free ID card / badge access identification</li> <li>Allows employees to use any 125 kHz or 13.56 MHz ID badge for various forms of logical access throughout the workplace</li> </ul>		<ul style="list-style-type: none"> <li>Identification and enrollment reader for proximity OR contactless smart cards</li> <li>Provides error-free ID badge access identification</li> <li>Eliminates need for manual entry</li> <li>Allows for use of existing 125 kHz OR 13.56 MHz employee ID badges for various forms of logical access throughout the workplace</li> </ul>	<ul style="list-style-type: none"> <li>Easily phased into the existing reader network for seamless integration, eliminating the need for additional badges or readers while increasing the number of applications</li> <li>Emulates a keyboard by keystroking badge information into a standard text editor</li> <li>No additional software required for integration with most common operating systems</li> <li>Compatible with USB keyboard inputs</li> </ul>	<ul style="list-style-type: none"> <li>Eliminate the need to manually enter usernames and passwords with simplified authentication</li> <li>Use existing proximity card or contactless smart card systems</li> <li>Sync with mobile devices for applications far beyond basic door access</li> <li>Eliminate errors and streamline workflows through instant identification and authentication</li> <li>As the first vendor authorized to resell the Pack ID credential, benefit from a single source to enable secure mobile access for a wide variety of applications from logical access to mobile wallet to cashless vending</li> </ul>	<ul style="list-style-type: none"> <li>HID Mobile Access incorporates the highly secure SEOS® platform as its underlying technology and is delivered through a highly reliable, easy-to-use and secure online management portal as an annual subscription service</li> <li>Easily integrates into existing credential systems</li> <li>Eliminates the need for additional credentials or readers</li> <li>Increases the number of applications that can support contactless employee authentication and identification</li> </ul>	<ul style="list-style-type: none"> <li>Small, thin form factor enables embedded and integrated applications or OEM installations in recessed compartments or external mounting configurations</li> <li>Streamlines the sign-on process, improving access control, security, and organizational workflow</li> <li>With flash memory and supporting nearly all card types, the programmable reader allows users to quickly configure the reader's output to meet their needs</li> </ul>	<ul style="list-style-type: none"> <li>Delivers card ID in formats that multiple applications recognize</li> <li>Standard four card configurations (two are preset; two are user-definable)</li> <li>User-adjustable beeper volume can be set to high, low or off as appropriate for the work environment</li> <li>13.56 MHz auto-tuning ensures optimal power transfer to avoid interference</li> </ul>
FEATURES	<ul style="list-style-type: none"> <li>Both 125 kHz &amp; 13.56 MHz frequency</li> <li>Helps meet HIPAA regulations</li> <li>Helps meet CJIS Advanced Authentication compliance (IP67 compliant (IP67 surface mount))</li> <li>Versatile mounting options</li> </ul>		<ul style="list-style-type: none"> <li>125 kHz OR 13.56 MHz frequency</li> <li>Helps meet HIPAA regulations</li> <li>Helps meet CJIS Advanced Authentication compliance (IP67 compliant (IP67 surface mount))</li> <li>Versatile mounting options</li> </ul>	<ul style="list-style-type: none"> <li>Dual card reader and Bluetooth® Low Energy module in one device, saving a USB port for other peripherals</li> <li>Instant identification and authentication with your mobile smart device or employee ID badge</li> <li>Four credential configurations to accommodate multi-card systems and mobile credentials</li> <li>User-selectable volume control including a beeper on/off setting selection</li> </ul>	<ul style="list-style-type: none"> <li>Seamless integration with existing reader networks</li> <li>Eliminates the need for additional badges or readers while increasing the number of applications</li> <li>Emulates keyboard by keystroking badge information into a standard text editor</li> <li>No additional software required for integration with most common operating systems</li> <li>All applications are compatible with USB keyboard input</li> </ul>	<ul style="list-style-type: none"> <li>A dual card reader and Bluetooth Low Energy module in one device, saving a USB port for other peripherals</li> <li>Instant identification and authentication with mobile smart devices and employee ID cards</li> <li>Four ID credential configurations to accommodate multi-card systems</li> <li>User-selectable volume control including a beeper on/off setting</li> </ul>	<ul style="list-style-type: none"> <li>USB models connect directly to a USB port and can be configured to send data as keystroking or non-keystroking</li> <li>Compatible with a variety of purpose-built devices such as multifunction printers, time clocks, kiosks or protective enclosures</li> <li>Standard four card configurations (two are preset; two are user-definable)</li> <li>Ideal for enrollment into third-party software or for single sign-on integrators</li> <li>User-adjustable beeper volume can be set to high, low or off as appropriate for the work environment</li> <li>13.56 MHz auto-tuning ensures optimal power transfer to avoid interference</li> </ul>	<ul style="list-style-type: none"> <li>Four ID card configurations (two are preset and all four are user-definable)</li> <li>Auto-tuning for 13.56 MHz antenna to optimize performance in various environments</li> <li>User-selectable volume control including a beeper on/off setting</li> </ul>
SDK	Compatible with rf IDEAS Universal SDK		Compatible with rf IDEAS Universal SDK	Compatible with rf IDEAS Universal SDK	Compatible with rf IDEAS Universal SDK	Compatible with rf IDEAS Universal SDK	Compatible with rf IDEAS Universal SDK	Compatible with rf IDEAS Universal SDK
INTERFACE	<ul style="list-style-type: none"> <li>USB (Keyboard Wedge)</li> <li>USB DLL (82 Series)</li> <li>USB Virtual COM                             <ul style="list-style-type: none"> <li>Serial DB9</li> <li>PoE</li> </ul> </li> <li>E/IP PoE IP</li> </ul>		<ul style="list-style-type: none"> <li>USB (Keyboard Wedge)</li> <li>USB DLL (82 Series)</li> <li>USB Virtual COM                             <ul style="list-style-type: none"> <li>Serial DB9</li> <li>PoE</li> </ul> </li> <li>E/IP PoE</li> </ul>	USB (keyboard wedge)	USB (keyboard wedge)	USB (keyboard wedge)	USB (keyboard wedge)	USB (keyboard wedge)
POWER	<ul style="list-style-type: none"> <li>USB self-powered</li> <li>5V PS/2 RS232</li> <li>5V pin 9 RS232</li> <li>5V USB power tap RS232 (Some RS-232 models require external power source)</li> <li>9V pin 9 RS232</li> <li>PoE</li> </ul>		<ul style="list-style-type: none"> <li>USB self-powered</li> <li>5V PS/2 RS232</li> <li>5V pin 9 RS232</li> <li>5V USB power tap RS232 (Some RS-232 models require external power source)</li> <li>9V pin 9 RS232</li> </ul>	<ul style="list-style-type: none"> <li>USB self-powered</li> </ul>	<ul style="list-style-type: none"> <li>USB self-powered</li> </ul>	<ul style="list-style-type: none"> <li>USB self-powered</li> </ul>	<ul style="list-style-type: none"> <li>USB self-powered</li> </ul>	<ul style="list-style-type: none"> <li>USB self-powered</li> <li>Some RS-232 models require external power source</li> </ul>
FORM FACTORS	<ul style="list-style-type: none"> <li>Desktop</li> <li>Surface Mount</li> <li>OEM</li> </ul>		<ul style="list-style-type: none"> <li>Desktop</li> <li>Surface Mount</li> <li>OEM</li> </ul>	<ul style="list-style-type: none"> <li>Desktop</li> </ul>	<ul style="list-style-type: none"> <li>Desktop</li> </ul>	<ul style="list-style-type: none"> <li>Desktop</li> </ul>	<ul style="list-style-type: none"> <li>Desktop (slim profile)</li> <li>Surface Mount</li> <li>OEM</li> </ul>	<ul style="list-style-type: none"> <li>Desktop (slim profile)</li> <li>Surface mount</li> <li>OEM</li> </ul>

	WAVE ID® Nano	WAVE ID® Bio	WAVE ID® Embedded OEM	WAVE ID® Sonar	Ethernet 241™	WAVE ID® Analyze
						
<b>DESCRIPTION</b>	<p><b>USB-A</b></p> <p>Single frequency: 125 kHz proximity OR 13.56 MHz contactless</p> <p>Visit <a href="http://rfIDEAS.com/cardcompatibility">rfIDEAS.com/cardcompatibility</a> for the full list of supported card types.</p>	<p><b>USB-C</b></p> <p>Single frequency: 125 kHz proximity OR 13.56 MHz contactless</p> <p>Visit <a href="http://rfIDEAS.com/cardcompatibility">rfIDEAS.com/cardcompatibility</a> for the full list of supported card types.</p>	<p>Dual frequency: 125 kHz and 13.56 MHz</p> <p>• Supports nearly all physical card types worldwide</p> <p>• Supports prime™ smart cards</p>	<p>Dual frequency: 125 kHz and 13.56 MHz</p> <p>N/A</p> <p>N/A</p>	<p>N/A</p> <p>N/A</p>	<p>Single frequency: 13.56 MHz contactless</p> <p>The WAVE ID Analyze can identify the most number of card types in use worldwide.</p>
<b>FEATURES</b>	<ul style="list-style-type: none"> <li>• Compact solution perfect for single sign-on, time and attendance, training, POS, secure print</li> <li>• Small size avoids longer dongle style reader breakage</li> <li>• Easy integration</li> <li>• Reduces hardware needed when embedded within housings, control panels or keyboards</li> <li>• Portability for access on the go</li> </ul>	<ul style="list-style-type: none"> <li>• Ultra-compact and highly resistant USB form factor</li> <li>• Easily integrates into existing 125 kHz proximity or 13.56 MHz contactless smart card systems</li> <li>• Complies with select MIL-STD-810 requirements that address "hostile environment" usage</li> <li>• Compact solution perfect for single sign-on, time and attendance, training, POS, secure print</li> </ul>	<ul style="list-style-type: none"> <li>• All-in-one biometric and physical credential reader</li> <li>• Compliant with upcoming Electronic Prescribing of Controlled Substances (EPCS) as well as the Healthcare Insurance Portability and Accountability Act (HIPAA)</li> <li>• Provides a higher level of identity access than conventional readers, delivering a secure, future-focused technology investment</li> <li>• Capable of reading most proximity and contactless credentials, along with biometric data</li> </ul>	<ul style="list-style-type: none"> <li>• Proven and secure authentication solutions from world-leading producers</li> <li>• OEM readers available in device-specific forms for internal integration</li> <li>• rf IDEAS expertise simplifies the go-to-market process, delivering cost-savings</li> <li>• Progressive design development anticipates market trends and needs</li> </ul>	<ul style="list-style-type: none"> <li>• Plug-and-play, hands-free presence detector</li> <li>• Enables automatic secure logon session when user is present</li> <li>• Automatically locks a computer when a user steps away</li> <li>• Emulates a keyboard device, allowing for individual keystrokes to be defined by users</li> <li>• Offers definable delay and trigger distance settings to detect user presence</li> </ul>	<ul style="list-style-type: none"> <li>• Leverages existing employee ID badge systems with both multifunction and desktop printers</li> <li>• Provides one serial port and one USB port for use with WAVE ID credential readers and one mini USB 5 VDC power port</li> <li>• Serial/USB to Ethernet device that enables secure print via employee ID badge identification for any network printer</li> </ul>
<b>SDK</b>	Compatible with rf IDEAS Universal SDK	Compatible with rf IDEAS Universal SDK	<ul style="list-style-type: none"> <li>• Meets EPCS and HIPAA compliance</li> <li>• Four ID card configurations (two are preset and all four are user definable)</li> <li>• Auto-tuning for 13.56 MHz antenna to optimize performance in various environments</li> <li>• User-selectable volume control including a beeper on/off setting</li> <li>• Bluetooth functionality enabled through the Bluegiga BLE113 Bluetooth Smart Module</li> <li>• TouchChip® TCE FIPS201 certified silicon fingerprint module from HID</li> </ul>	Compatible with rf IDEAS Universal SDK	N/A	N/A
<b>INTERFACE</b>	<ul style="list-style-type: none"> <li>• USB (keyboard wedge)</li> <li>• USB DLL (82 series)</li> </ul>	<ul style="list-style-type: none"> <li>• USB (keyboard wedge)</li> <li>• USB DLL (82 series)</li> </ul>	<ul style="list-style-type: none"> <li>• USB (keyboard wedge)</li> <li>• USB DLL (82 series)</li> </ul>	USB, Serial RS-232, UART	USB (keyboard wedge)	N/A
<b>POWER</b>	USB self-powered	USB self-powered	USB self-powered	<ul style="list-style-type: none"> <li>• USB self-powered</li> <li>• 5V PS/2 RS232</li> <li>• 5V pin 9 RS232</li> <li>• 5V USB power tap RS232</li> <li>• 9V pin 9 RS232</li> <li>• PoE</li> </ul>	USB	5 VDC power via mini USB port
<b>FORM FACTORS</b>	<ul style="list-style-type: none"> <li>• Vertical nano reader</li> <li>• Horizontal nano reader</li> </ul>	Vertical nano reader	Fingerprint desktop	OEM	Sonar	N/A