



# TRUST IN YOUR TECHNOLOGY

Bring safety and security to all your products with the WAVE ID® Embedded OEM portfolio of flexible authentication solutions.

rf **IDEAS**

# We Help You Add Safe, Trusted Authentication to All Your Product Designs.

Today, trust is at the heart of technologies used by millions of people across every sector. As a global leader in identity authentication technologies, rf IDEAS® works with leading OEMs to embed security into a wide range of products and hardware platforms.

What sets us apart is our commitment to modular, flexible authentication solutions that complement and advance your designs. We build partnerships based on 25 years of expertise, a wide range of versatile OEM form factors and the solid support you'd expect from an industry leader.

See for yourself what our WAVE ID Embedded OEM portfolio can bring to your next design.

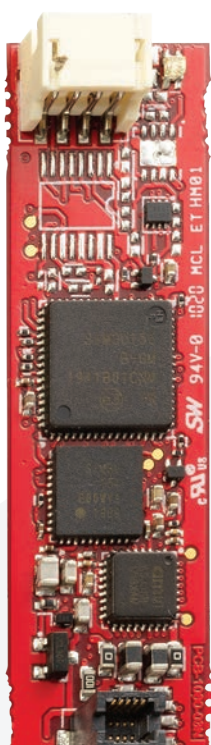
WAVE ID® Plus OEM Micro:  
69mm x 27mm (2.7" x 1.1")



WAVE ID® Plus OEM:  
59mm x 36mm (2.3" x 1.4")



WAVE ID® Plus OEM Pico:  
50mm x 14mm (2.0" x 0.6")



# A Next-Generation Portfolio of OEM Authentication Technologies.

We recently upgraded our entire OEM product line to help you better integrate a higher level of trust into every product you design. The WAVE ID Embedded OEM portfolio now offers the modularity, flexibility and authentication performance that today's users demand.

## If You Make It, We'll Make It Secure

rf IDEAS credential readers work with virtually every proximity and contactless smart card worldwide. You'll find our newest embedded OEM readers providing high-quality user authentication in a growing array of products including:

- Multi-Function Printers
- Medical Carts
- Medical Equipment
- Human-Machine Interfaces (HMI)
- Workstations
- Tool Cabinets
- Point of Sale
- Industrial Vending Machines
- All-in-One Computers
- Notebook Computers
- Kiosks
- Time & Attendance
- Keyboards
- Electronic White Boards

## Adding Value Through Partnership




The rf IDEAS team has fostered long-standing partnerships with industry leaders including HP, Lenovo, Imprivata and Ricoh, just to name a few.

The reason? We engineer and deliver OEM solutions that help your products validate authorization, streamline workflows, control costs, improve security and deliver safety to demanding users. And we've been leading the way in RFID access for more than 25 years.

As a trusted partner, we work closely and collaboratively with your engineering team to introduce authentication solutions that support your protocols and elevate your design concepts.






# rf IDEAS Embedded OEM Portfolio

	WAVE ID® Solo 125 kHz Nano OEM Module	WAVE ID® Solo 13.56 MHz Nano OEM Module	WAVE ID® Solo Non-Housed 125 kHz
WAVE ID® Solo and WAVE ID® Plus OEM and Non-Housed Modules			
<b>Standard Features</b>	<b>Single Frequency</b>	<b>Single Frequency</b>	<b>Single Frequency</b>
<b>Model Series</b>	125 kHz Proximity	13.56 MHz Contactless Smart Card	125 kHz Proximity
USB Keystroke	OEM-6x21AXU	OEM-7521AXU	RDR-60N1AKU-C06
USB SDK – raw data	OEM-6x22AXU	OEM-7522AXU	RDR-60N2AKU-C06
Serial	N/A	N/A	RDR-60N1AK5 5V Pin 9 RDR-60N1AK9 + 5V USB RDR-60N1AK7 9V Ext PS
<b>Number of Configurations</b>	1	4	1
<b>Interface(s)</b> *Contact rf IDEAS for more models	USB	USB	USB, Serial
<b>Physical Characteristics</b>			
<b>Dimensions</b>	34 mm x 14 mm x 4 mm (1.3" x 0.6" x 0.2")	41 mm x 12 mm x 5 mm (1.6" x 0.5" x 0.2")	77 mm x 47 mm x 14 mm (3.0" x 1.9" x 0.6")
<b>Weight</b>	3 grams (0.1 ounces)	2 grams (0.07 ounces)	28 grams (1 ounce)
<b>Connector Type</b>	4 pin, 2 mm pitch	USB	USB, Ethernet or RS232 DB9
<b>Mechanical Installation Type</b>	3M double-faced adhesive tape 10 mm x 10 mm	3M double-faced adhesive tape 10 mm x 10 mm	N/A
<b>Audio Prompts (Beep)</b>	No	No	Yes
<b>Visual Prompts (LED)</b>	No	No	Tri-state LED
<b>Power Supply</b>	USB self-powered	USB self-powered	USB self-powered; PoE; external 5V or 9V power supply
<b>Power Consumption</b>	USB: 70 mA Typical, 100 mA maximum	USB: 60 mA Typical, 150 mA maximum	USB: 70 mA Typical, 100 mA maximum
<b>Environmental</b>			
<b>Operating Temperature Range</b>	-22° to 150°F (-30° to 65°C)		
<b>Operating Humidity Range</b>	5% to 95% relative humidity, non-condensing		
<b>Storage Temperature Range</b>	-40° to 185°F (-40° to 85°C)		
<b>Other</b>			
<b>Certifications</b>	FCC, Industry Canada, CE Mark, RCM, RoHS, Reach. Contact sales@rfIDEAS.com for more country certification information.		
<b>Compatible Operating Systems</b>	Windows XP®/7®/8®/10® and above; Linux; Dell Wyse ThinOS		
<b>Supported Card Types</b>	<a href="https://www.rfideas.com/support/tools/supported-card-types">https://www.rfideas.com/support/tools/supported-card-types</a>		



# rf IDEAS Embedded OEM Portfolio

	<b>WAVE ID® Solo Non-Housed 13.56 MHz</b>	<b>WAVE ID® Plus Non-Housed</b>	<b>WAVE ID® Plus SP Embedded/Integrated/OEM</b>
<b>WAVE ID Solo and WAVE ID Plus OEM and Non-Housed Modules</b>			
<b>Standard Features</b>	<b>Single Frequency</b>	<b>Dual Frequency</b>	<b>Dual Frequency</b>
<b>Model Series</b>	13.56 MHz Contactless Smart Card	125/132 kHz and 13.56 MHz	125/132 kHz and 13.56 MHz
<b>USB Keystroke</b>	RDR-75N1AKU	RDR-80xN1AKU RDR-80xN1AKU-WM (Connectorized)	RDR-805H1AKU RDR-805H1AKU-X RDR-805H1AKU-X-C72 RDR-805H1AKU-X2 RDR-80MH1AKU RDR-80MH1AKU-LF RDR-80LH1AKU RDR-80LH1AKU-X
<b>USB SDK – raw data</b>	N/A	RDR-80xN2AKU RDR-80xN2AKU-WM (Connectorized)	RDR-805H2AKU
<b>Serial/UART (Contact rf IDEAS for more options)</b>	RDR-75N1AK5 5V Pin 9	RDR-80xN1-2 No cable RDR-80xN1-2-WM No cable (Connectorized) RDR-80xN1AK2 5V PS/2 RDR-80xN1AK5 5V Pin 9 RDR-80xN1AK6 9V Pin 9 RDR-80xN1AK7 9V Ext PS RDR-80xN1AK8 5V Ext PS RDR-80xN1AK9 5V USB Pwr	N/A
<b>Number of Configurations</b>	1	4	4
<b>Interface(s) (Contact rf IDEAS for more models)</b>	USB, Serial	USB, Serial	USB
<b>Physical Characteristics</b>			
<b>Dimensions</b>	76 mm x 47 mm x 14 mm (3.0" x 1.9" x 0.6")	76 mm x 47 mm x 16 mm (3.0" x 1.9" x 0.6")	66 mm x 44 mm x 11 mm (2.6" x 1.7" x 0.4")
<b>Weight</b>	28 grams (1 ounce)	28 grams (1 ounce)	15 grams (.52 ounces)
<b>Connector Type</b>	USB, Ethernet or RS232 DB9	USB, RS232 DB9	USB
<b>Mechanical Installation Type</b>	N/A	N/A	Embedded or external reader with double-face tape
<b>Audio Prompts (Beep)</b>	Yes	Adjustable beeper volume	Adjustable beeper volume
<b>Visual Prompts (LED)</b>	Tri-state LED	Tri-state LED	Tri-state LED
<b>Power Supply</b>	USB self-powered; PoE	USB self-powered; PoE, external 5V or 9V power supply	USB self-powered
<b>Power Consumption</b>	USB: 70 mA Typical, 100 mA maximum	USB: 70 mA Typical, 125 mA maximum Serial units: 60 mA Typical, maximum 90 mA	70 mA Typical, maximum 100 mA
<b>Environmental</b>			
<b>Operating Temperature Range</b>	-22° to 150°F (-30° to 65°C).		
<b>Operating Humidity Range</b>	5% to 95% relative humidity, non-condensing		
<b>Storage Temperature Range</b>	40° to 185°F (-40° to 85°C)		
<b>Other</b>			
<b>Certifications</b>	FCC, Industry Canada, CE Mark, RCM, RoHS, Reach. Contact sales@rfIdeas.com for more country certification information.		
<b>Compatible Operating Systems</b>	Windows XP®/7®/8®/10® and above; Linux; Dell Wyse ThinOS		
<b>Supported Card Types</b>	<a href="https://www.rfideas.com/support/tools/supported-card-types">https://www.rfideas.com/support/tools/supported-card-types</a>		

# rf IDEAS Embedded OEM Portfolio

## WAVE ID® Plus OEM



WAVE ID Solo and WAVE ID Plus OEM and Non-Housed Modules		Dual Frequency	
<b>Standard Features</b>	Dual Frequency		
<b>Model Series</b>	125/132 kHz and 13.56 MHz	BLE , 125/132kHz and 13.56MHz	
USB Keystroke	WAVE ID® Plus OEM V2 USB	WAVE ID® Plus OEM Mobile	
	OEM-80xN11KU OEM-80xN11KU-X OEM-80xN11KU-S OEM-80xN11KU-S-X	OEM-300N11KU, OEM-300N11KU-X, OEM-305N11KU, OEM-305N11KU-X (BLE113 module, RDR-30xxxAKU-equivalent) OEM-300N11KU-BGM, OEM-300N11KU-BGM-X, OEM-305N11KU-BGM, OEM-305N11KU-BGM-X (Pack ID or WAVE ID Mobile credentials, RDR-30xxxBKU-equivalent)	
	WAVE ID® Plus OEM Micro USB	WAVE ID® Plus OEM Micro Mobile	
	OEM-80xN13KU OEM-80xN13KU-X	OEM-300N13KU, OEM-300N13KU-X, OEM-305N13KU, OEM-305N13KU-X (BLE113 module, RDR-30xxxAKU-equivalent) OEM-300N13KU-BGM, OEM-300N13KU-BGM-X, OEM-305N13KU-BGM, OEM-305N13KU-BGM-X (Pack ID or WAVE ID Mobile credentials, RDR-30xxxBKU-equivalent)	
	WAVE ID® Plus EM Pico USB		
OEM-80xN14KU OEM-80xN14KU-X			
SDK/Non-keystroke – raw data	WAVE ID® Plus OEM V2 USB	WAVE ID® Plus OEM Mobile	
	OEM-80xN21KU OEM-80xN21KU-X OEM-80xN21KU-S OEM-80xN21KU-S-X	OEM-300N21KU, OEM-300N21KU-X, OEM-305N21KU, OEM-305N21KU-X (BLE113 module, RDR-30xxxAKU-equivalent) OEM-300N21KU-BGM, OEM-300N21KU-BGM-X, OEM-305N21KU-BGM, OEM-305N21KU-BGM-X (Pack ID or WAVE ID Mobile credentials, RDR-30xxxBKU-equivalent)	
	WAVE ID® Plus OEM Micro USB	WAVE ID® Plus OEM Micro Mobile	
	OEM-80xN23KU OEM-80xN23KU-X	OEM-300N23KU, OEM-300N23KU-X, OEM-305N23KU, OEM-305N23KU-X (BLE113 module, RDR-30xxxAKU-equivalent) OEM-300N23KU-BGM, OEM-300N23KU-BGM-X, OEM-305N23KU-BGM, OEM-305N23KU-BGM-X (Pack ID or WAVE ID Mobile credentials, RDR-30xxxBKU-equivalent)	
	WAVE ID® Plus OEM Pico USB		
OEM-80xN24KU OEM-80xN24KU-X			
Serial/UART (Contact rf IDEAS for more options)	WAVE ID® Plus OEM V2 Serial Keystroke	N/A	
	OEM-80xN11K5 OEM-80xN11K5-X OEM-80xN11KV-X		
	WAVE ID® Plus OEM Micro Serial Keystroke		
	OEM-80xN13K5 OEM-80xN13K5-X OEM-80xN13KV-X		
	WAVE ID® Plus OEM Pico Serial Keystroke		
	OEM-80xN14K5 OEM-80xN14K5-X OEM-80xN14KV-X		
	WAVE ID® Plus OEM V2 Serial SDK		
	OEM-80xN21K5 OEM-80xN21K5-X OEM-80xN21KV-X		
	WAVE ID® Plus OEM Micro Serial SDK		
	OEM-80xN23K5 OEM-80xN23K5-X OEM-80xN23KV-X		
WAVE ID® Plus OEM Pico Serial SDK			
OEM-80xN24K5 OEM-80xN24K5-X OEM-80xN24KV-X			
<b>Number of Configurations</b>	4		
<b>Interface(s)</b> (Contact rf IDEAS for more models)	USB, UART, Serial, Ethernet, BLE (select models)	USB	

(\*-X": no cable; \*-S": with 4FF SIM socket)

# rf IDEAS Embedded OEM Portfolio

(continued)

## WAVE ID® Plus OEM

**WAVE ID Solo and  
WAVE ID Plus OEM and  
Non-Housed Modules**



<b>Physical Characteristics</b>		
<b>Dimensions</b>	WAVE ID® Plus OEM	WAVE ID® Plus OEM Mobile
	59mm x 36mm (2.3" x 1.4")	
	WAVE ID® Plus OEM Micro	WAVE ID® Plus OEM Micro Mobile
	69mm x 27mm (2.7" x 1.1")	
	WAVE ID® Plus OEM Pico	
	50mm x 14mm (2.0" x 0.6")	
<b>Weight</b>	10 grams (0.4 ounces)	
<b>Connector Type</b>	USB	
<b>Mechanical Installation Type</b>	N/A	
<b>Audio Prompts (Beep)</b>	Adjustable beeper volume (off, low, medium, high)	Yes
<b>Visual Prompts (LED)</b>	LED indicator (green, amber, red)	Yes
<b>Power Supply</b>	USB powered	
<b>Power Consumption</b>	65 mA typical, 100 mA maximum	Reader only: 70 mA typical, 100 mA maximum Reader and Bluetooth on: 85mA typical, 120 mA maximum
<b>Environmental</b>		
<b>Operating Temperature Range</b>	-22° to 150°F (-30° to 65°C).	
<b>Operating Humidity Range</b>	5% to 95% relative humidity, non-condensing	
<b>Storage Temperature Range</b>	-40° to 185°F (-40° to 85°C)	
<b>Other</b>		
<b>Certifications</b>	FCC, Industry Canada, CE Mark, RCM, RoHS, Reach, and more than 50 countries worldwide. Contact sales@rfIdeas.com for more country certification information.	
<b>Compatible Operating Systems</b>	Windows XP®/7®/8®/10® and above; Linux; Dell Wyse ThinOS	Windows XP®, 7®, 8.1®, 10® and Linux
<b>Supported Card Types</b>	<a href="https://www.rfideas.com/support/tools/supported-card-types">https://www.rfideas.com/support/tools/supported-card-types</a>	

WAVE ID Plus OEM Pico does not come with an integrated antenna. Please contact rf IDEAS for antenna options.



## 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.



### 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.

Trust begins here.™



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