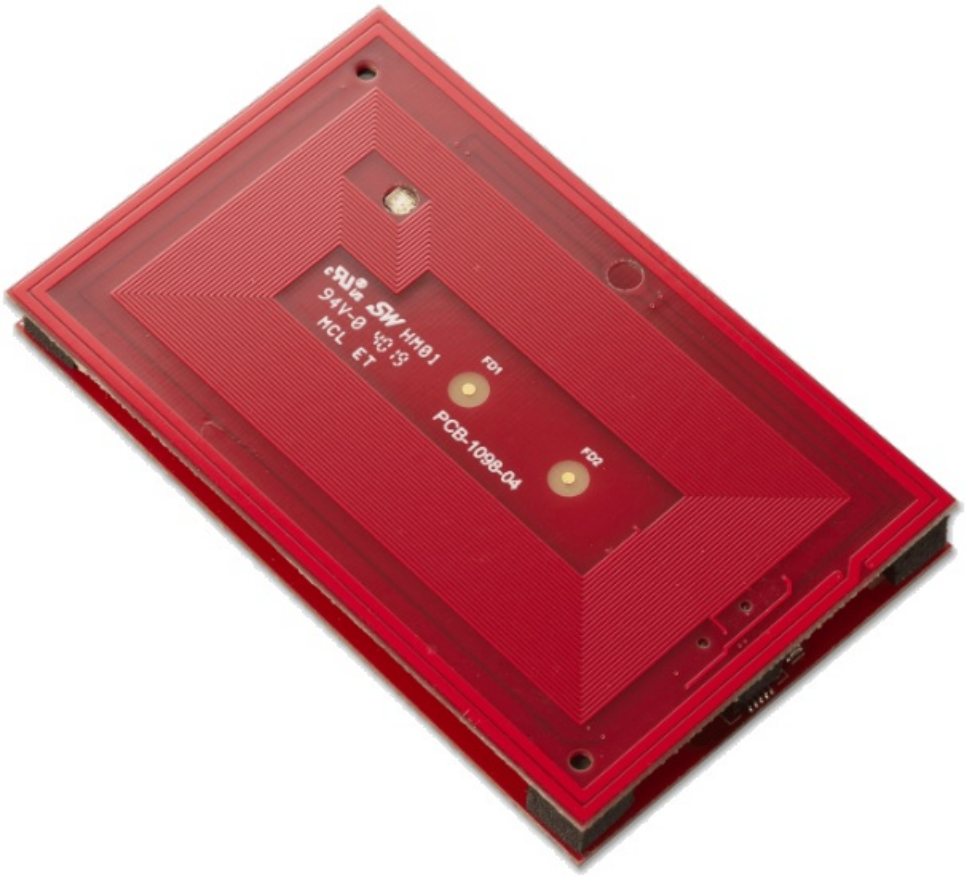

# rf IDEAS B801-B WAVE ID Embedded OEM Portfolio User Guide



Contents



## rf IDEAS B801-B WAVE ID Embedded OEM Portfolio




## Product Usage Instructions

**Connection and Setup**
To use the OEM product, connect it to your device using the appropriate interface (USB-A/Virtual Com/RS-232 Serial/Ethernet).

**Powering On**
If the model requires external power, ensure it is connected. The product can be self-powered through USB in most cases.

**Authentication Process**
Follow the authentication process based on the mode selected (Keystroke or using rf IDEAS SDK or CCID or ASCII).

**Indicators**
Pay attention to the LED indicators which show the status of the authentication process.

**Compatibility**
Ensure that the product is compatible with the operating system of your device and configure utilities if needed from the rf IDEAS support page.

**Frequently Asked Questions (FAQ)**

- **Q: What types of cards are supported by the OEM product?**
  A: The OEM product supports various card types including MIFARE EV1, EV2, EV3, Classic, Ultralight, LEGIC prime, LEGIC Ultralight, HID SEOS iClass SE, and more.
- **Q: How can I check the compatibility of my mobile credentials with the OEM product?**
  A: Refer to the Mobile Credential Access Compatibility Chart provided by rf IDEAS to check the compatibility of

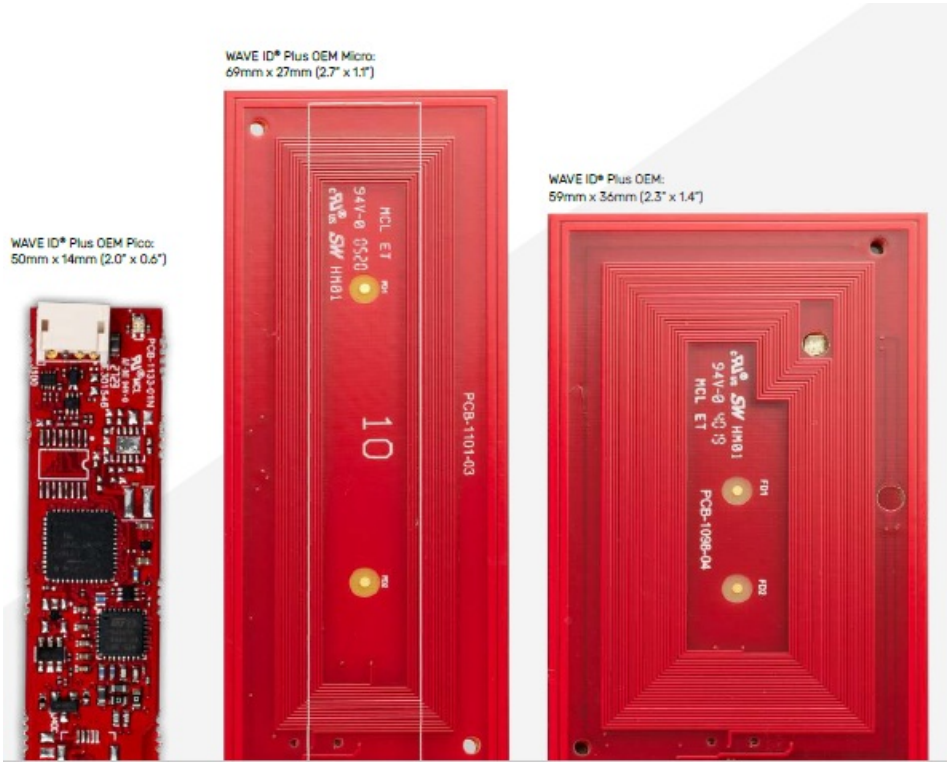
your mobile credentials with the OEM product.

- **Q: Are there any specific accessories recommended for use with the OEM product?**
  A: Yes, cables like KT-SIM-SE-V2 or KT-SIM-AV2 are recommended accessories that can be used with the OEM product.

**EMBEDDING TRUST INTO YOUR TECHNOLOGY**
From manufacturing to healthcare, we bring safety and security to your end products with the flexible authentication solutions within our WAVE ID® Embedded OEM Portfolio.

**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 30 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.




**A Next-Generation Portfolio of OEM Authentication Technologies.**

- We developed our OEM product line to help you better navigate a higher level of trust into every product you design. Whether you are looking
- for built-in authentication to meet evolving regulations or seeking a competitive-edge for an integration ready product for your end customer – rf IDEAS is go-to authentication partner.

## Benefits of OEM Readers

OEM embedded readers ensure only intended users have access to specialized equipment or devices. When your end customers' ecosystem relies on devices that contain sensitive patient data, or can only be used by safety-certified personal, providing a reliable, secure authentication solution built-in directly to your product can be a critical factor in securing workflows, data and processes.

Our readers offer unprecedented compatibility with built-in security – that brings confidence to you and your end customer. rf IDEAS's team of experts has intimate knowledge of your customer base, so we can collaborate to find the best RFID solution that adds the value of built-in security that elevates your product and secures the end customer. For your end customers, they get a product that seamlessly integrates into their existing infrastructure – leveraging their existing credentials and unlocking access to key end points that were not possible before.

### Built-Ready for Secure Access

rf IDEAS credential readers work with virtually every proximity and contactless smart card worldwide, and are now compatible with some of the leading digital wallet providers like Apple, Google and Samsung. We continue to grow our compatibility of credential providers; our readers support the power of HID employee badge and LEGIC employee badge in Wallet. Our portfolio of embedded OEM readers provides high-quality user authentication across critical industries like healthcare and manufacturing. Some of our successful OEM deployments include:

- Multi-Function Printers
- Monitors and Laptops
- Human-Machine Interfaces (HMI)
- Programmable Logic Controllers (PLC)
- SCADA (Supervisory Control and Data Acquisition) Systems
- Time Clocks
- Forklifts
- Tool Cribs
- Dispensing/Vending Machines
- EV Chargers
- Ultrasound Machines
- C-Arms
- Portable X-Rays
- Medical Carts / Workstations
- Patient Monitors
- Picture Archiving & Communication System (PACS)

### rf IDEAS Embedded OEM Portfolio

| **WAVE ID® Plus OEM** | | | | |
|---|---|---|---|---|
| Reader Models | 805 | 800 | 80M | 30L |
| Secure Access Module | N/A | HID OMNIKEY | MIFARE DESFire | 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/Virtual Com/RS-232 Serial/Ethernet | USB-A | USB-A |
| Protocol/Operating Mode | Keystroke or rf IDEAS SDK or CCID 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 support page) | rf IDEAS Configuration Utility, Smart Card Manager, Remote Reader Management Tool | | |
| Proximity Card Types (125/132 kHz) | | | |
| Contactless Smartcard Types (13.56MHz) | | | |
| NFCx, Wallet Credentials (13.56MHz) | | | |

Supported Card Type Listing

Mobile Credential Access Compatibility Chart

| | | | | |
|---|---|---|---|---|
| Accessories | Cables, KT-SIM-SE-V2 or KT-SIM-AV2 | Cables, KT-SIM-AV2 | Cables, KT-SIM-SE-V2 | Cables, KT-SIM-SE-V2 or KT- SIM-AV2 |

| **WAVE ID® Plus OEM Micro** | | | |
|---|---|---|---|
| Reader Models | 805 | 800 | 80M |
| Secure Access Module | N/A | HID OMNIKEY | MIFARE DESFire |
| 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/Virtual Com/RS-232 Serial/Ethernet | | USB-A |
| Protocol/Operating Mode | Keystroke or rf IDEAS SDK or CCID 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; 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 support page) | rf IDEAS Configuration Utility, Smart Card Manager, Remote Reader Management Tool | | |
| Proximity Card Types (125/132 kHz) | Supported Card Type Listing | | |
| Contactless Smartcard Types (13.56MHz) | | | |

| | | | |
|---|---|---|---|
| NFCx, Wallet Credentials (13.56MHz) | Mobile Credential Access Compatibility Chart | | |
| Accessories | Cables, KT-SIM-SE-V2 or KT-SIM- AV2 | Cables, KT-SIM-AV2 | Cables, KT-SIM-SE-V2 |

| **WAVE ID® Plus OEM Pico** | | | |
|---|---|---|---|
| Reader Models | 805 | 800 | 80M |
| Secure Access Module | N/A | HID OMNIKEY | MIFARE DESFire |
| 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/Virtual Com/RS-232 Serial/Ethernet | | USB-A |
| Protocol/Operating Mode | Keystroke or rf IDEAS SDK or CCID or ASCII | | 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; 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 | | |

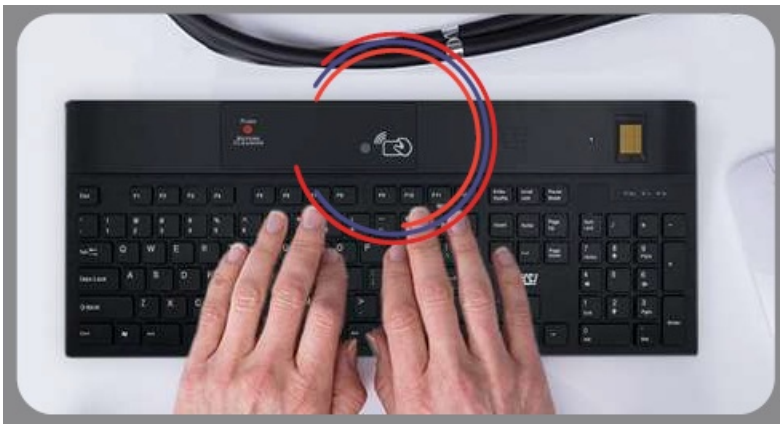
| | | | |
|---|---|---|---|
| MTBF | 7 years | | |
| Certifications (Please contact rf IDEAS for information about other global certifications) | FCC-United States; CE Mark-Europe; RCM-Australia; IC-Industry Canada; UL Environmental: RoHS, REACH | | |
| Compatible Operating Systems | Windows XP®, 7®, 8®, 10®, 11® and Linux (Ubuntu, Red Hat), mac OS and Android | | |
| Configuration Utilities (available on rf IDEAS support page) | rf IDEAS Configuration Utility, Smart Card Manager, Remote Reader Management Tool | | |
| Proximity Card Types (125/132 kHz) | Supported Card Type Listing  Mobile Credential Access Compatibility Chart  | | |
| Contactless Smartcard Types (13.56MHz) | | | |
| NFCx, Wallet Credentials (13.56MHz) | | | |
| Accessories | Cables, KT-SIM-SE-V2 or KT-SIM-AV2 | Cables, KT-SIM-AV2 | Cables, KT-SIM-SE-V2 |

| **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 support page) | 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 |  |

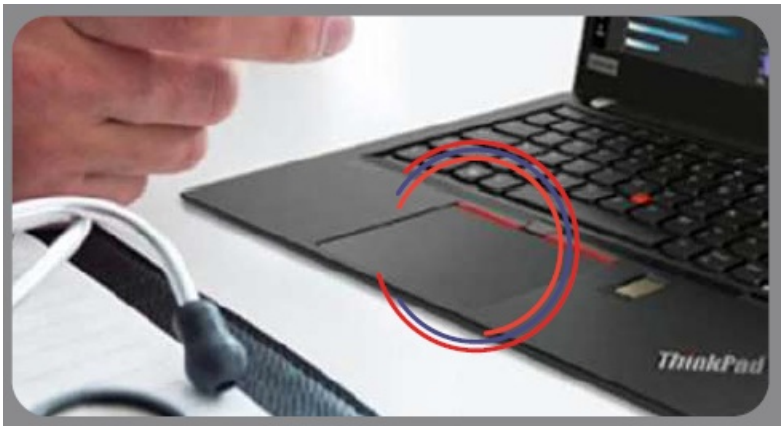
### Adding Value Through Partnership

The rf IDEAS team has fostered long-standing partnerships with industry leaders including, Rockwell Automation, LG Electronics, GE Healthcare, HP, Lenovo, Imprivata, Ricoh and more.
reason? We engineer and deliver OEM solutions that help your products validate authorization, streamline workflows, control costs, improve security and deliver safety to deliver reliable security to the end customer. And we've been leading the way in RFID access for more than 30 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.

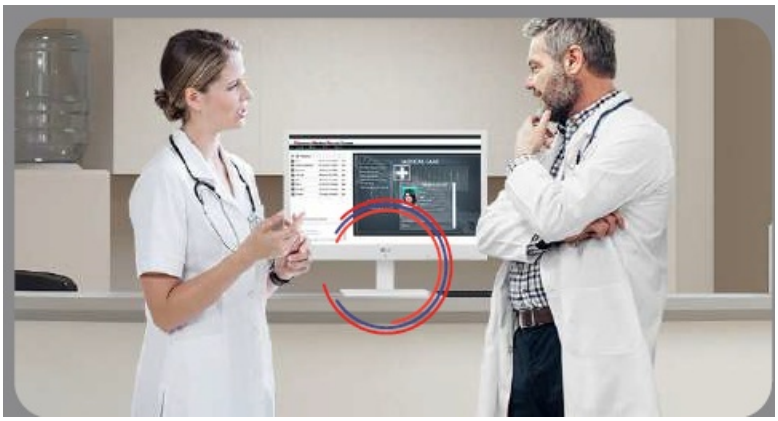
**Embedding infection control into KSI keyboards**
In healthcare settings, shared keyboards are prime vectors for germs to spread. By embedding Wave ID readers into its easy-clean keyboards, Key Source International (KSI) reduced the need for clinicians to make contact with the devices, empowering its healthcare end customers to strengthen infection control.1 Eliminating the need for an external badge reader also cleared space on cluttered carts and reduced the number of surfaces to sanitize.



**Embedding efficiency into Lenovo laptops**
With healthcare employees logging into workstations an average of 70 times a day, building passwordless authentication into devices dramatically boosts efficiency.
Lenovo partnered with rf IDEAS to create the ThinkPad T14 Gen 2 Healthcare Edition, enabling tap-and-go login for a major educational healthcare institution with 1,800 providers deployed across multiple locations.2 A built-in biometric capability enables multi-factor authentication where needed for added security.




**Embedding streamlined design into LG All-in- One workstations**
With their slim, sleek displays, LG's All-in-One Thin Client computers are designed to take up minimal space at crowded clinical workstations. LG partnered with rf IDEAS to embed WAVE ID readers in their devices, enabling secure access control without sacrificing streamlined design or taking up much-needed ports.



**Learn more at**
**rfideas.com/EmbeddedOEM**

- Toll-free: +1 **866-439-4884**
- Non-toll-free: +1 **847-870-1723**
- **sales@rfIDEAS.com**

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## Documents / Resources

| | |
|---|---|
|   | **rf IDEAS B801-B WAVE ID Embedded OEM Portfolio** [pdf] User Guide<br>B801-B WAVE ID Embedded OEM Portfolio, B801-B, Embedded OEM Portfolio, OEM Portfolio, Portfolio |

## References

- **User Manual**