

multiCLASS™ OEMI50 Module

13.56 MHz Contactless and 125 kHz Proximity Embedded Module

• Read Only • Wiegand/Clock-and-Data • 3121

- ▶ **Decrease Integration Costs** - Integrate one module, receive double the card compatibility
- ▶ **Increase Serviceable Market** - Multi-technology module provides compatibility with the most popular 125 kHz proximity and 13.56 MHz smart cards
- ▶ **FIPS 201 Compliant** - PIV II compliant reader module (end-point solution)



ACCESS flexibility.

Designed for embedding into third-party products, the multiCLASS™ OEMI50 Dual-Technology Module is a combined 13.56 MHz and 125 kHz read-only contactless smart and proximity card reader in a printed circuit board form factor. The multiCLASS OEMI50 allows developers integrating HID Global reader technology the ability to embed one reader module while obtaining two times the card capabilities, significantly increasing the serviceable area and reducing time-to-market.

The module includes hardware (expansion module) and firmware that can be easily configured to enable a multitude of 13.56 MHz and 125 kHz cards and applications. The multiCLASS OEMI50 also provides developers with a cost savings when they install products that only use 13.56 MHz hardware with applications that only require 13.56 MHz capability. Developers can also choose from two 125 kHz configuration add-ons that support HID Prox and AWID or Indala Proximity, when working within a 125 kHz card population or dual 13.56 MHz and 125 kHz card populations.

Whether embedding for flexible card support or to join multiCLASS readers migrating customers from 125 kHz to iCLASS® cards, the multiCLASS OEMI50 provides a versatile and dynamic reader solution in an embeddable form.

- ▶ Flexible product design allows the developer to take advantage of either read-only, 13.56 MHz or 125 kHz application processing or read/write 13.56 MHz only applications
- ▶ Hardware add-on (proximity or communications expansion module); simply plug-in and configure accordingly
- ▶ 13.56 MHz portion of the module is configured for compatibility with the popular iCLASS® cards and access control applications
- ▶ Module is compatible with ISO 15693, ISO 14443A/B CSN, FeliCa® IDm and ISO 14443 U.S. Government FIPS 201 application.
- ▶ Increased read/write capabilities offer developers an additional way to implement the application by distributing data onto a 13.56 MHz iCLASS card to save end-users on the wiring costs of disconnected system. (NOTE: read/write cannot be achieved simultaneously with proximity card support. Only one expansion module, proximity or communication, can be installed at one time.)

For more information on read/write features, see OEMI50 single-technology datasheet please visit: http://www.hidglobal.com/documents/OEMI50_ds_en.pdf

Specifications

* Model Number	3121BNH iCLASS® (13.56 MHz) and HID Prox and AWID (125 kHz) 3121BND iCLASS (13.56 MHz) and Indala® Proximity 3126BNM HID Prox and AWID (125 kHz) Expansion Module* 3127ANM Indala Proximity Expansion Module* 3135BA 13.56 MHz Air-Tuned Antenna (R10 reader size) 3136BA 13.56 MHz Air-Tuned Antenna (R40 reader size) 6500-101-03 125KHz Proximity Antenna - 2.56" x 1.10" (6.50 x 2.79 cm) 40-0032-03 125KHz Proximity Antenna - 2.22" x 1.43" (5.64 x 3.63 cm)
Read Range	Dependent upon enclosure design, materials used, and proximity of metal components.
Developer Materials	HID Connect™ (partner application program) offers an OEM150 Embedded Developers Kit. Containing all hardware configuration variants possible, the OEM150 Embedded Developers kit includes 13.56 MHz and 125 kHz cards and antennas, along with HID Prox and AWID, or Indala expansion module. Additionally HID Connect offers developer documentation and PC source code.
Dimensions	2.44" x 1.10" x 0.61" (6.20 x 2.80 x 1.55 cm)
Weight	.582 oz. (16.51 g)
Power Requirements	Nominal input: 5 VDC Range: 5 – 16 VDC reverse voltage protected Linear supply recommended (Other types may degrade performance)
Current Requirements	55 mA AVG, 93 mA PEAK @ 12VDC***
Open Collector Rating	50mA @ 12 VDC
Operating Temperature	-31° to 150° F (-35° to 65° C)
Operating Humidity	5% to 95% relative humidity non-condensing
Transmit Frequency	13.56 MHz and 125 kHz
Cable Distance	Wiegand Interface – 500 feet (150 m) Clock-and-Data Interface – 500 feet (150 m) Recommended cable is ALPHA 1295 (22AWG) 5-conductor stranded with overall shield or equivalent. Additional conductors may be required to connect all outputs.
** Card Compatibility	The multiCLASS™ OEM150 Contactless Smart (13.56 MHz) and Proximity (125 kHz) Card Module is compatible with all HID iCLASS credentials in addition to HID Prox and AWID, or Indala Proximity** credentials. Additionally, the module is compatible with the following 13.56 MHz credential protocols and card data/applications: - ISO 15693 Card Serial Number (CSN) - ISO 14443-A CSN - ISO 14443-B CSN - FeliCa IDm - ISO 14443 US Government PIV (FIPS 201)
Certifications	UL294 Recognized Component Designed for EMC (FCC, CE, IC, etc.) OEM or integrator must secure regulatory approvals, for the entire integrated device, consisting of the module and OEM components.
Options	Key Management - Standard or Elite Selectable Output Type (for MIFARE Cards) Standard Termination: none, solder pads provided Programmable LED/Beeper Operation
Material	FR-4 Fiberglass laminate
Environmental	The module must be epoxy potted or installed in a watertight enclosure if used in outdoor environments.
Warranty	Warrantied against defects in materials and workmanship for one year. (See complete warranty policy for details.)

* Upgrades 3121BNN Read-Only Single-Technology (13.56 MHz) to Multi-Technology

** OEM150 w/ Indala Proximity module, or individual Indala Proximity module must be ordered with Indala format number that matches cards installed at the product installation site.

*** When configured with an HID Prox module - add 25 mA and when configured with an Indala module add 40 mA

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ACCESS experience.

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