

► **PRODUCT RELEASE: HF | NFC EMBEDDED MODULE M980**
iDTRONIC's 8-Channel RFID Solution for Lean Production



iDTRONIC, Europe's leading supplier of embedded RFID modules, has developed and released a new high-performance HF (13.56 MHz) RFID module. Based on iDTRONIC's flagship M900 IC chip, this expanded 8-port module has been developed with current Industry 4.0 and IoT trends in mind.

The iDTRONIC HF | NFC Embedded Module M980 is a high performance and low-cost reader for the integration into check-in counters, libraries, retail or shelving systems. With its cutting edge microcontroller and latest HF transceiver technology, the reader allows users to read and write 13.56 MHz transponders supporting the common RFID standard ISO15693.

Thanks to its 8 antenna channels the HF | NFC Embedded Module M980 achieves reading ranges of up to 10 cm (depending on type of transponder). Its serial-based interface RS485 allows an easy and fast integration into existing electronics or a fast paced new development of high-end identification applications.

▶ 8 CHANNEL MODULE WITH MULTIPLEXER

The M980 HF | NFC embedded module is specially designed to accurately read RFID data from multiple input signals originating in different locations. Due to the integrated multiplexer, each one of the 8 antenna channels can be individually activated and configured to read HF/NFC tags according to the parameters of the application. Whether you are taking stock in a shelving system or tracking progress in a production process, the M980 offers flexibility as well as stable operation, even in harshest of environments.

▶ RS485 INTERFACE

The M980's RS485 interface allows its nodes to be networked in a daisy-chain, also known as party line or bus topology. In this topology, the RFID devices connect to a main cable trunk via short network stubs and receive individual addresses. This network functionality makes it faster for users to read multiple HF | NFC RFID tags in a crowded environment and ensures consistency in tag reads.

iDTRONIC's hardware comes with a useful SDK for the development of controller, Linux or Windows-based applications. Beside the documentation, command protocols and source codes, the SDK includes a Windows-based demo application with full functionality over the supported HF RFID standard.

▶ LEAN PRODUCTION - THE BENEFITS

HF | NFC RFID technology can offer several benefits when applied to Lean Production processes. Lean Production focuses on minimizing waste, improving efficiency, and optimizing overall manufacturing processes. Here are some benefits of utilizing the M980 in Lean Production:

- **Real-Time Visibility and Traceability:** Real-time tracking and monitoring of products, materials, and assets throughout the production process. This enhances visibility and traceability, allowing for better control and management of the entire production flow.
- **Quick Changeovers and Setup Times:** Expedite the identification and tracking of tools, equipment, and components needed for production setups. This leads to faster changeovers, reducing downtime and improving overall production efficiency.
- **Work-in-Process (WIP) Visibility:** Work-in-process items provide real-time visibility into the status and location of each product in the production line. This information helps in identifying bottlenecks and optimizing the flow of materials through the production process.

- **Enhanced Quality Control:** Automated tracking of components and materials, making it easier to implement quality control measures at various stages of production. This can help identify and address quality issues early in the process, reducing the likelihood of defective products.
- **Streamlined Kanban Systems:** Integration into Kanban systems, enabling automatic triggering of material replenishment based on actual usage. This ensures that materials are restocked just in time, minimizing excess inventory and waste.

Implementing the M980 in Lean Production can contribute to a more efficient and responsive manufacturing environment by addressing key challenges and supporting the principles of Lean Manufacturing.

► **SHELVING SYSTEMS - ADDITIONAL BENEFITS**

Utilizing HF | NFC (13.52 MHz) technology in shelving systems offers various additional benefits to those apparent in lean management, particularly in improving the efficiency and management of inventory and storage:

- **Automated Inventory Management:** Automatic tracking and identification of items on shelves. This automation streamlines inventory management processes, reducing the need for manual counting and minimizing human errors.
- **Quick and Accurate Audits:** Conducting regular inventory audits becomes faster and more accurate with the M980. The technology enables rapid scanning of items on shelves, facilitating timely and precise reconciliation of inventory levels.
- **Enhanced Order Fulfillment:** RFID technology enables efficient order picking by providing real-time information on item locations. This results in faster and more accurate order fulfillment, improving overall customer satisfaction.
- **Shelf Replenishment Optimization:** RFID tags on items can trigger automatic alerts for shelf replenishment when stock levels fall below a certain threshold. This ensures that shelves are consistently stocked without the need for constant manual monitoring.
- **Customizable and Scalable:** Meet specific shelving and inventory management needs. Additionally, the technology is scalable, allowing businesses to expand and adapt their shelving systems as needed.

Implementing the M980 Embedded Module in shelving systems can contribute to a more efficient, accurate, and responsive inventory management process, ultimately leading to cost savings and improved customer satisfaction.

More Information on Embedded HF Readers M980

Product Website: <https://idtronic-rfid.com/en/embedded-rfid-2/hf-nfc-embedded-modules/m980/>

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