

Success Story

The combination of EM Microelectronic Marin SA's experience in RFID circuits together with the systems competence of Hayek Engineering, Swatch and TeraTron has led to a world class application.

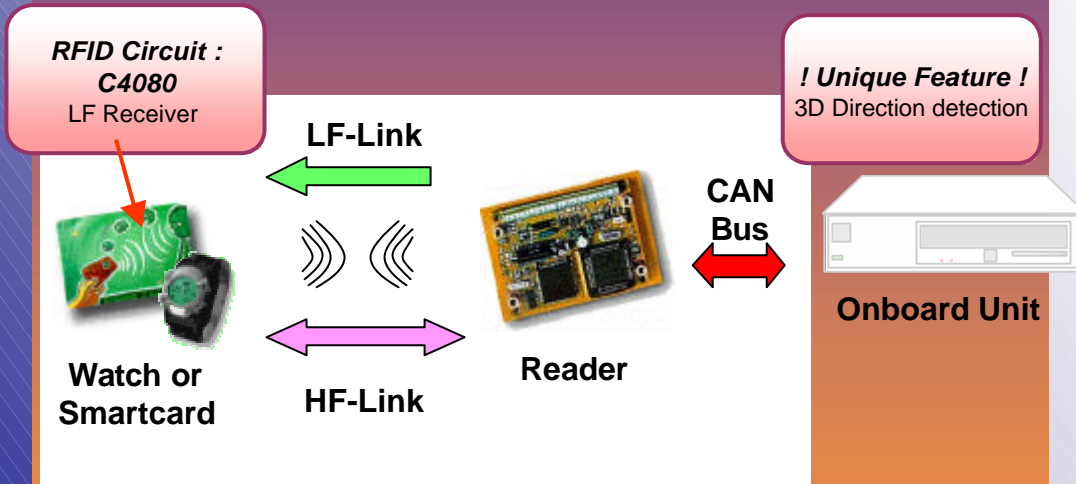


Hands Free Access

DESCRIPTION

The **Hands free Access** enables the ticket owner to access delimited areas, and to be registered when coming in and out of it.

- *The active ticket is in permanent 125 KHz listen mode, enabling a very low power standby mode.*
- *Wake-Up of the ticket is done when entering an LF field delimited by the door space.*
- *After wake-up, the ticket enters in bi-directional UHF telemetry data link with the delimited area.*



Main Features

- Hands free ticket size : 85 x 54 x 6 mm
- Be-In Be-Out (BIBO) concept
AND
- Walk-In Walk-Out (WIWO) concept
- Detection speed : 5 m/s on all 3 D
- Anticollision capacity: 20 simultaneous WIWO access.
- ETS 300-330 and ETS 300-220 Compliant

Functions

- 125kHz LF-interface link from reader to transponder
- Data transmission amplitude modulation
- Manchester encoded data for wake-up (2Kb)
- Battery low detection, Power-On Reset sequence
- -20 to +60 °C operating temperature range

Leaders in Low Power Low Voltage Solutions

Break-Through Solutions





EM-MARIN

Break-Through Solutions

HAYEK



WP Leaf/4080.1 E

Hands Free Access

Distinctive Advantages

- **Very low power standby mode**
This low power standby mode enables an active ticket with autonomy estimated to up to 2 years.
- **Room registration (BIBO), and /or Direction detection (WIWO)**
The BIBO mode detects the presence of ticket inside a defined area. In case this item leaves the defined area, it is registered as out.
The WIWO mode senses the direction from Out to In, and from In to Out of a defined area.
- **Full 3D wake-up**
The ticket can be carried in anyway by the wearer, no matter its orientation with respect to the entrance.
- **100% success rate**
Final users can rely on the success rate of the overall equipment.

Applications

- Mass Transportation
- Access control locations
- Flux of people
- Animal Tracking
- ...



& many more...

User's Benefits

- Ease of use
- Reduce logistics costs
- Add value to the access chain
- Very low-power standby mode

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