



Operational Description of the i-CARD

The IDENTEC i-CARD is a PC Card Type II with PCMCIA connector, suitable for any PCMCIA card slot in portable devices.

It is a low-power RFID transceiver for communicating with the i-Q series of active tags and will plug into PCMCIA slots of portable devices like Handheld Scanners, Palm-PCs, etc.

It must be powered by a 5V source, capable of supplying 150mA.

The i-CARD firmware is configured by Identec to provide application developers with either a PCMCIA or with a serial interface, depending on card version, for advanced automatic data capture applications using ILR technology. Typically, the PCMCIA interface will be used in handheld and portable devices.

The i-CARD enclosure is a common PC Card Type II shielding tin can. Three status LEDs can be viewed from the front edge; they are Carrier Detect (green), Transmit (red) and Receive (green). The front also hosts the MMCX 50Ω coax RF connector for the antenna.

The antenna is part of the system and will be supplied by IDENTEC, one antenna per i-CARD. It may be connected by the customer upon installation of the i-CARD.

In addition, the front edge holds a 15-pin PC Card I/O connector for serial (RS-232) access and card programming.

Programming of the i-CARD requires proprietary software and can only be performed by IDENTEC or one of its authorized affiliates.

The i-CARD contains a Configurable Processor System Unit (CPSU) with internal non-volatile memory. The CPSU chip is pre-programmed by IDENTEC and contains the firmware code.

Further, the i-CARD contains the RF circuitry for the wireless communication with same frequency IDENTEC tags. The application software running on the device hosting the i-CARD sends commands to the CPSU in order to communicate with the tags. The CPSU on the i-CARD controls all functions of the board. The normal mode (power-up and standby) of the i-CARD is 'Receive Mode', as opposed to the burst-style 'Transmit Mode', which has to be initiated by the controlling host computer.

Power-up resets all previous RF power settings to a default low-power setting.

Note: The i-CARD is also used in the IDENTEC i-PORT, only then it is not configured with a PCMCIA interface, but with a serial interface. The two interface versions are not interchangeable.

Each i-CARD is marked with an interface type, either PCMCIA or serial. Do not use an i-CARD with a PCMCIA interface in the i-PORT.

Vice versa, do not use an i-CARD with a serial interface in any other portable device with PCMCIA slot.