

Operational Description

CardMan 5121 is a USB hosted smart card reader which supports both ISO 7816 contact smart cards and 13.56 MHz contactless smart cards. The reader is based on an ATMEL single chip USB smart card controller for support of the contact smart card interface and a Philips RFID chip CL RC63201T for support of contactless cards.

The RFID Chip along with the EMC filter, the Matching Circuit and the antenna supports contactless smart cards. The 13.56 MHz field is used to both supply the card with energy and to communicate with the card. Reading distance is in the range of two inches.

During operation, a 13.56 MHz field is radiated by the antenna. When a contactless card gets into the reading range, typically communication between the RFID chip and the card will be established. Through the ATMEL USB controller, the RFID chip communicates with the host (typically a PC) via USB.

The reader components are mounted on a four layer PCB. Ground is implemented as a groundplane. The USB cable is shielded. The antenna is integrated in the PCB.