AFFIX Electronica

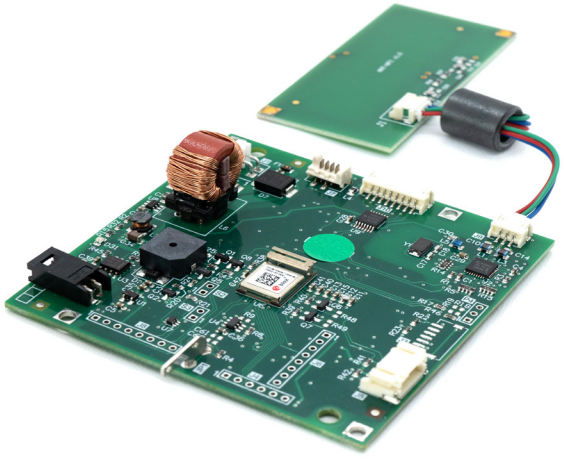
part of HID

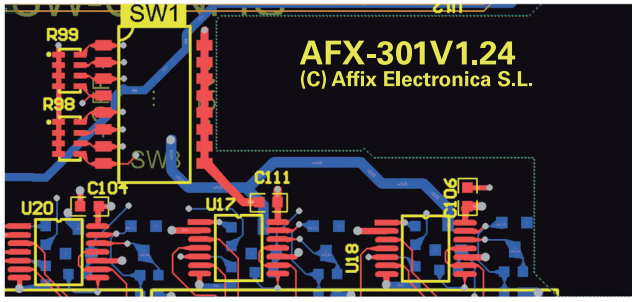
AFFIX Electronics is the engineering branch of CALMELL GROUP specialising in RFID solutions, engaged in the development of hardware and software necessary for the implementation of access control systems and identification. Founded in 1994, it boasts over 25 years' experience in designing and manufacturing contactless interface smart card readers.

The fields of application of AFFIX Electronics products range from passenger control systems in railways (underground, trains, tramway), buses (urban and interurban) and parking access control systems to recharging systems for automatic sales. AFFIX Electronics distributes its products through system integrators, being able to supply only the control card or all the integrated equipment.

RFID readers from AFFIX Electronics can handle a wide variety of smart cards that operate in compliance with international standards ISO/IEC 14443, ISO/IEC 15693 and ISO/IEC 18092.

These include MIFARE®, Calypso ® and FeliCa® cards, as well as ICODE® cards.





AFFIX Electronics also offers its customers engineering services to develop tailor-made control boards. We oversee the entire process: from the electrical design, capture of diagrams and design of the PCB to the production and commissioning of the prototypes and manufacture of the series. We can also create SAM modules to store the encryption keys that protect access to the data contained in the cards.

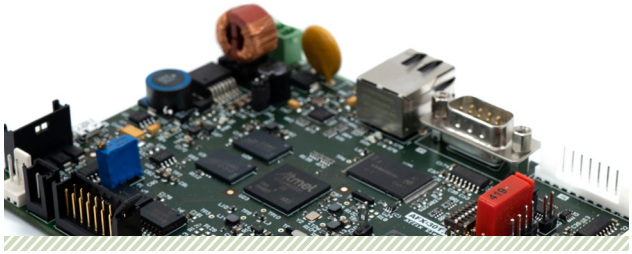
Calmell Group part of HID

Polígono Ind. Pla d'en Coll Fresser 12 C 08110 MONTCADA I REIXAC (Barcelona)
+34 93 564 14 00 I info@affix.es I www.affix.es

AFFIX Electrónica

part of HID

CONTROL BOARD AFX-301

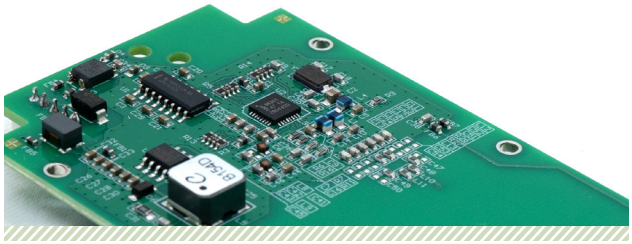


- Cortex® A-5 @536 MHz processor.
- 4Gbit RAM Memory, 2 x DDR2 – 512Mbytes
- 2Gbit Flash Memory, 1 x SLC NAND - 256Mbytes
- Input Voltage Range: 9-36volt
- 4 receptacles for SIM/SAM MODULES
- 2 interfaces for active antennas according to ISO14443, ISO15693 and ISO18000-3
- Fault Tolerant UBIFS File System
- Linux Operating System
- SDK Available

SAM MODULES & HSM SYSTEM

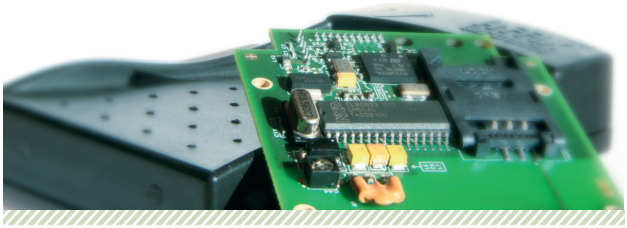
- SAM AV2® personalization
  - ➤ Key selection ceremony
  - ➤ SAM hierarchy definition
  - ➤ SAM documentation – Users' manual
- HSM: SAM module virtualization
  - ➤ Hardware Security Module featuring anti-tamper mechanism
  - ➤ Possibility to add specific algorithms
  - ➤ Multiple methods to upload keys securely

ACTIVE ANTENNA TR-209



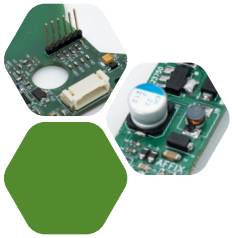
- RF interface according to ISO14443, ISO15693 and ISO18000-3
- Input voltage range: 9-36 volts
- Communication by serial channel
- Railway homologation
  - ➤ EN 50121-3-2:2016 +A1:2019
  - ➤ ETSI EN 301 489-3V2.1.1 (2019-03)
  - ➤ ETSI EN 300 330V2.1.1 (2017-02)

TABLE TOP-READER TR-212



- Cortex® M0 microcontroller
- 160 Kbytes FLASH Memory
- 12 Kbytes SRAM data memory
- 1 SIM/SAM receptacle (ISO-7816 Class A, B & C)
- RF interface according to ISO-14443, ISO-15693 and ISO-18000-3
- USB interface
- PC/SC protocol (BC-Prot available)

Calmell Group part of HID



Polígono Ind. Pla d'en Coll Fresser 12 C 08110 MONTCADA I REIXAC (Barcelona)
+34 93 564 14 00 I info@affix.es I www.affix.es