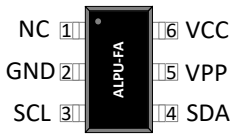
Features

- User programmable copy protection IC
- 32 Kbits EEPROM, Retention(10 years)
- Erase/Write Endurance: 100K
- Standard AES-128 encryption and decryption
- SHA-256/AES-128 Authentication
- User ID, User Serial, MIDR, RVC
- 3.3V Operation Voltage, I2C I/F
- Built- in Power on Reset and 8 MHz OSC.
- Active, Sleep Power Mode

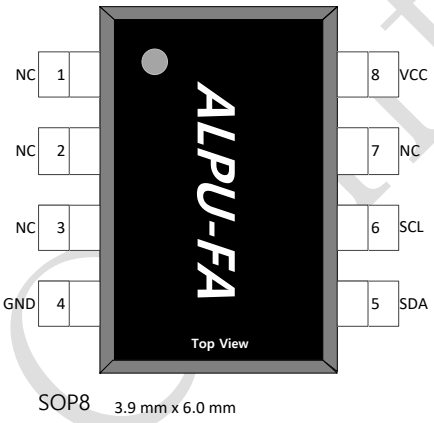
Applications

- Print cartridge, GPS, Navigation
- Mobile Device, IPC, CCTV, DVD
- Set-Top Boxes (STBs), Etc.

Pin Configuration



<SOT-23-6L Package>

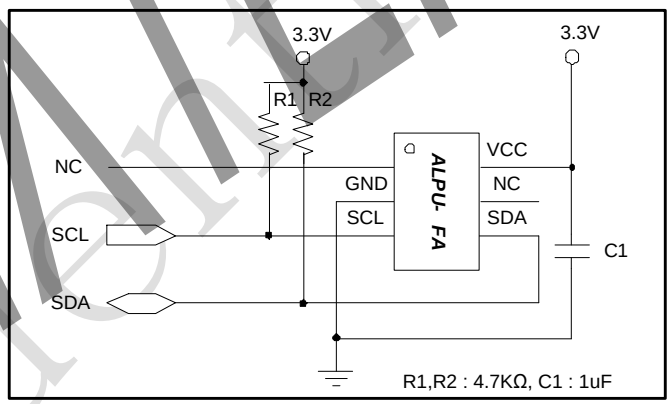


<SOP-8L Package>

General Description

The ALPU-FA is the high-end IC among the ALPU series. The ALPU-FA has 32 Kbits EEPROM. A configuration data and user data can be saved at the EEPROM. The data is protected by password and encryption. The ALPU has SHA-256 core. SHA-256 is used for a authentication. ALPU-FA encryption core is based on Rijndeal AES-128 with programmable parameters. It is a slave device that always operates with MCU through the serial bus. The ALPU has internal 8 MHz clock. When MCU does not access the ALPU for a defined time, The ALPU goes to sleep mode. The 8MHz OSC does not oscillate for sleep mode.

Typical Operation Circuit



< SOT-23-6L Package Type >

SCL and SDA is open drain. SDA is bi-directional port.

EEPROM

- Data Retention : 10 years
- Erase/Write Endurance: 100K@25℃
- Internally Synchronous read and read access time of 250ns.
- Low standby power consumption