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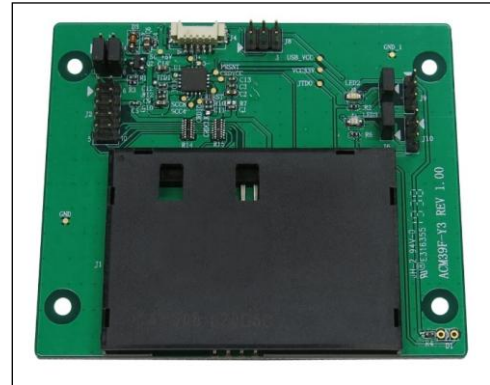


1.0. Introduction

The ACM39U-Y3 provides a solution for secured access control by employing the globally recognized ACR39 core. It comes in module form to enable easy implementation of smart card-based solutions in embedded systems. The ACM39U-Y3 uses the latest microchip technology, bringing you high security for your confidential files in a convenient and easy way.

1.1. Smart Card Reader

The ACM39U-Y3 supports ISO 7816 Class A, B, and C smart cards. It also works with memory cards and microprocessor cards with T=0 and T=1 protocol. It features a USB Full Speed interface and a smart card read/write speed of 600 Kbps. This exceptionally durable device lasts for at least 200,000 card insertion cycles.



1.2. Ease of Integration

The ACM39U-Y3 is easy to install and use with various environments. Being PC/SC and CCID-compliant, its drivers are compatible with operating systems such as Windows®, Linux®, and Mac OS®. In addition, the ACM39U-Y3 can also be integrated with systems running the Android™ platform with versions 3.1 and later.

With its various features, the ACM39U-Y3 is a powerful component that is ideal for Security, e-Banking, e-Payment, and e-Government applications.



2.0. Features

- USB 2.0 Full Speed Interface
- Plug and Play – CCID support brings utmost mobility
- Smart Card Reader:
 - Contact Interface:
 - Supports ISO 7816 Class A, B and C (5 V, 3 V, 1.8 V) cards
 - Supports CAC (Common Access Card)
 - Supports SIPRNET Card
 - Supports J-LIS Card
 - Supports microprocessor cards with T=0 or T=1 protocol
 - Supports memory cards
 - Supports PPS (Protocol and Parameters Selection)
 - Features Short Circuit Protection
- Application Programming Interface:
 - Supports PC/SC
 - Supports CT-API (through wrapper on top of PC/SC)
- Supports Android™ 3.1 and later¹
- Compliant with the following standards:
 - EN 60950/IEC 60950
 - ISO 7816
 - EMV™ Level 1 (Contact)
 - PC/SC
 - CCID
 - CE
 - FCC
 - WEEE
 - RoHS
 - REACH
 - Microsoft® WHQL

¹ PC/SC and CCID support are not applicable



3.0. Supported Card Types

3.1. MCU Cards

The ACM39U-Y3 works with MCU cards following either the T=0 or T=1 protocol. It also works with CAC cards, making it ideal for US PIV and PKI applications.

3.2. Memory-based Smart Cards

The ACM39U-Y3 works with several memory-based smart cards such as:

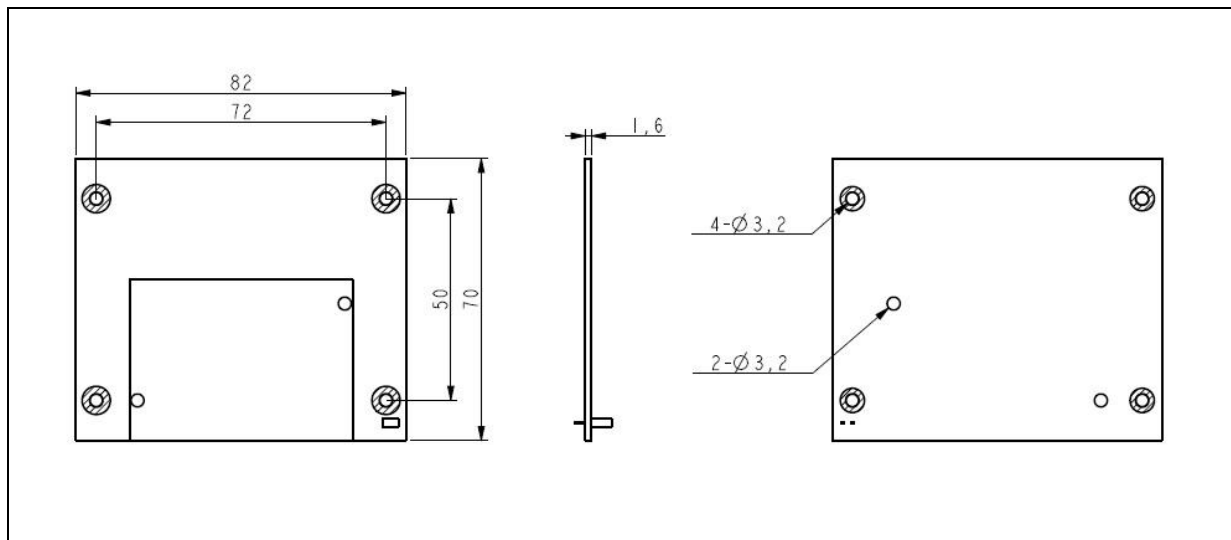
- Cards following the I2C bus protocol (free memory cards) with maximum 128-byte page with capability, including:
 - Atmel®: AT24C01/02/04/08/16/32/64/128/256/512/1024
 - SGS-Thomson: ST14C02C, ST14C04C
 - Gemplus: GFM1K, GFM2K, GFM4K, GFM8K
- Cards with intelligent 1-kilobyte EEPROM with write-protect function, including:
 - Infineon®: SLE4418, SLE4428, SLE5518 and SLE5528
- Cards with intelligent 256-byte EEPROM with write-protect function, including:
 - Infineon®: SLE4432, SLE4442, SLE5532 and SLE5542



4.0. Typical Applications

- e-Government
- Banking and Payment
- e-Healthcare
- Public Key Infrastructure
- Network Security
- Access Control
- e-Purse and Loyalty

5.0. Technical Specifications



Physical Specifications

Dimensions 70 mm (L) × 82 mm (W) × 10 mm (H)
Weight 32 g

USB Host Interface

Protocol USB CCID
Connector Type 1x5 Pin Header Connector, 2x3 Pin Header Connector
Power Source From USB port
Speed USB Full Speed (12 Mbps)
Supply Voltage 5 V

Contact Smart Card Interface

Number of Slots 1 Full-sized Card Slot
Standard ISO 7816 Parts 1-4, Class A, B, C (5 V, 3 V, 1.8 V)
Protocol T=0; T=1; Memory Card Support
Supply Current Max. 50 mA
Smart Card Read/Write Speed 9.6 Kbps – 600 Kbps
Short Circuit Protection (+5) V/GND on all pins
Clock Frequency 4.80 MHz
Card Connector Landing
Card Insertion Cycles Min. 200,000

Built-in Peripheral

LED (optional) 2 single-color: Green and Red

Operating Conditions

Temperature 0 °C – 60 °C
Humidity Max. 90% (non-condensing)
MTBF 500,000 hrs

Application Programming Interface

PC-linked mode PC/SC
..... CT-API (through wrapper on top of PC/SC)

Certifications/Compliance

EN60950/IEC 60950, ISO 7816, USB Full Speed, EMV™ Level 1 (Contact), PC/SC, CCID, CE, FCC, WEEE, RoHS, REACH, Microsoft® WHQL



Device Driver Operating System Support

Windows® 7, Windows® 8, Windows® 8.1, Windows® 10

Windows® Server 2003, Windows® Server 2008, Windows® Server 2008 R2, Windows® Server 2012, Windows® Server 2012 R2, Windows® Server 2016

Linux®, Mac OS®, Android™ 3.1 and later



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