

ACR40 USB Software Development Kit



The ACR40U from ACS is a compact USB contact smartcard reader that supports all ISO 7816 microprocessor-based smartcards as well as numerous popular memory cards. This highly durable desktop reader is the latest evolution of the popular ACR39, including a second LED for user feedback, on-device user data storage and support for remote firmware upgrade. The ACR40 chipset supports a wide range of operating systems including Windows, Linux and MacOS, IOS, iPadOS and Android.

The ACR40 SDK is a complete package providing all the components required for application developments:

- 1 x ACR40U contact smartcard reader
- 5 x ACOS3 contactless smartcards
- 1 x SDK download key - to access PC/SC compliant sample codes for device and card programming.

Development kit for the ACR40U contact smartcard reader range.

To buy, visit:

<https://www.smartcardfocus.com/shop/ilp/id~1047/p/index.shtml>

This Product Briefing has been produced by Dot Origin Ltd, the smart card experts behind SmartcardFocus.com. If you have a query email sales@smartcardfocus.com or call us on +44 (0)1428 685250.

ACR40U Technical Specifications

Product:

Credential type(s): Contact

Read/Write: Read and Write

Form factor: Portable

Connector: USB CCID (Standard 2.0 Type A connector), Compatible with USB3.0

OS support: Windows; Linux; Mac OS; iOS; iPadOS; Android; Solaris

Contact Smartcard Interface:

Contact interface standard: ISO 7816

Contact card types: Contact chip - standard sized card, Processor cards (T=0 and T=1) and Memory cards

Data transmission protocol: T=0 / T=1

Contact read/write speed: 9.6kbps - 600kbps

Clock frequency: 4.8MHz; operates up to 16MHz

Card insertion cycles: Min 200 000

Host Interface:

Host interface standards: PC/SC; USB CCID

Host data transmission speed (wired): 12 Mbps (USB full speed)

Other Features:

Card detection: Protocol and parameters selection, Short circuit protection

Status indicator: Blue and Green LEDs

Firmware in-field upgradeable: Yes

User data storage: Yes

Certifications:

Manufacturer's warranty: 1 year

Type approvals: CE, UKCA, FCC, RoHS, REACH, WEEE, IEC 62368

Security certifications: FIPS 140-2 Level 3

Application approvals: EMV Level 1 (Contact), TAA (USA), J-LIS (Japan), KC (Korea), VCCI (Japan), PBOC (China)

Country of origin: China

Physical:

Dimensions: 65 x 55 x 9mm (2.6 x 2.2 x 0.35in)

Weight ($\pm 5\%$): 40g (1.41oz)

Cable length supplied: 1m (39in) captive

Power:

Supply voltage: 5V DC

Operating current: 50mA max

Battery power option: No

Environment:

Operating temperature: 0 to 65degC (32 to 149degF)

Operating humidity: 95% RH (non-condensing)

Manufacturer's part number: ACR40U-A1

Country of origin: China

HSF code: 84719000

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- 1 x ACR40U-A1 contact smartcard reader
- 5 x ACOS3 contactless smartcards
- 1 x SDK download key

The SDK download includes:

Supports Windows 11, Windows 10

Utility Tools:

- ACS Smart Card and Reader Tool - to support reader polling and programming and card programming.
- ACS QuickView - which reads and displays smartcard reader and smartcard details, and polls to test the presence of a card in the reader
- ACS Script Tool - helps to send APDU commands to one or more smartcards or smartcard readers, including passing values between readers
- ACS CCID PC/SC Driver

Sample Codes: Demonstrates basic commands used to communicate with the ACR40U reader and smartcards. PC/SC card polling to test the reader's card detection capability and simple PC/SC commands application to send commands to a smartcard. Visual Basic, Visual C++, Visual C# (.NET framework 4.7.2), Java (JDK8)

Reference Manuals: Easy to use reference manuals for the ACR40U-A1 reader and ACOS3 smartcards to help with the development process

Technical Specifications: Includes detailed technical specifications of all the contained products

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