

ISO 7816 - Stationary Reader ACS - ACR40U-A

- ISO 7816 Class A, B, C
- EMV™ & PBOC Level 1 Certified
- USB Type-A & USB Type-C
- Firmware upgradeable & user data storage
- USB CCID & PC/SC Compliant



ISO 7816 - Stationary Reader Compact USB Contact Smart Card Reader

Introducing the ACR40U, ACS's latest compact high-speed USB contact smart card reader. It provides seamless support for ISO 7816 Class A, B, and C smart cards, microprocessor cards using T=0 and T=1 protocols, and a wide range of memory cards available in the market.

The ACR40U features two LED lights, providing clear visual indicators for card and reader status. Exciting new additions include firmware upgradability and on-device user data storage, catering to various application scenarios. It also comes with a stand accessory that allows for multiple configurations, including upright and horizontal orientations.

The ACR40U is compliant with CCID, PC/SC, and Microsoft® WHQL standards, ensuring seamless integration with various operating systems such as Windows®, Linux®, macOS, iOS, iPadOS, and AndroidTM.

Both USB Type-A and USB Type-C interfaces are available, providing flexible connectivity options.

Common Applications

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





TECHNICAL SPECIFICATIONS

Supported Card Types SO 7816 Parts 1-4, Class A, B, C (5 V, 3 V, 1.8 V), Microprocessor Card (T=0, T=1), Memory Card, Mykad Card, CAC, Juls, SIPRNET Smart Card	TECHNICAE STEE				
Supported Card Types SO 7816 Parts 1-4, Class A, B, C (S V, 3 V, 1.8 V), Microprocessor Card (T = 0, T = 1), Memory Card, MyKad Card, CA, LUS, SPRNET Smart Card Supply Current	Contact Smart Card Interface		Physical Characteristics		
Supported Card Types Microprocessor Card (T=0, T=1), Memory Card, MyKad Card, CAC, J-LIS, SIPRNET Smart Card Supply Current Max. 50 mA Read/Write Speed 9.6 – 600 Kbps Clock Frequency 4.80 MHz: Operates Up to 16MHz Card Connector Card Insertion Cycles Min. 200,000 PPS (Protocol and Parameters Selection) Short Circuit Protection Supported Host Interface Protocol USB CCID Connector Type(s) ACR40U-AF: USB Type-A ACR40U-AF: USB Type-A ACR40U-AF: USB Type-C Connector Type(s) ACR40U-AF: USB Type-C Connector Type(s) Connector Type(s) ACR40U-AF: USB Type-C Connector Type(s) Supply Voltage 5 V Driver Supported OS Part. No. / Model Part. No. / Model	Number of Slot(s)	1 Full-Sized Card Slot	Dimensions	55.0mm (L) × 65.0mm (W) × 9.0mm	
Memory Card, Nysa Card, AC, ALS, SLIS, SIPNEL Smart Card Smart Card Smart Card Smart Card Smart Card Max. 50 mA Peripherals LED Blue & Green Peripherals LED Blue & Green Peripherals LED Blue & Green Operating Conditions Temperature O - 65°C Humidity Max. 95% (Non-Condensing) MTBF 600,000 Hours Power Supply USB Port Card Connector Type(s) ACR40U-AF: USB Type-A ACR40U-AF: USB Type-C USB Interface USB 20 Full Speed (12Mbps) Compatible with USB 3.0 Supply Voltage Sv Cable Length 1 m (Non-Detachable) Part. No. / Model Part. No. / Model	Supported Card Types	Microprocessor Card (T=0, T=1), Memory Card, MyKad Card, CAC, J-LIS, SIPRNET	Weight	40.0 g ± 5.0 g	
Read/Write Speed 9.6 - 600 Kbps Clock Frequency 4.80 MHz, Operates Up to 16MHz Card Connector Contact Card Insertion Cycles Min. 200,000 PPS (Protocol and Parameters Selection) Short Circuit Protection Supported Host Interface Protocol USB CCID Connector Type(s) ACR40U-A1: USB Type-A ACR40U-A1: USB Type-C USB Interface USB 2.0 Full Speed (12Mbps) Compatible with USB 3.0 Supply Voltage 5 V Cable Length 1 m (Non-Detachable) Peripherals LED Blue & Green Blue & Green Blue & Green Blue & Green Deparating Conditions Temperature 0 - 65°C Humidity Max. 95% (Non-Condensing) MTBF 600,000 Hours Power Supply USB Port Certifications/ Compliances Standards USB CCID, PC/SC, EMY** Level 1 (Contact), TAA, J-US, Microsoftis Regulatory / Environmental CE, IEC/EN 62368, MCA, PCC, VCCI, REACH, WEEE, UL 62368, KC Driver Supported OS Driver Supported OS Perit No. / Model Peripherals LED Blue & Green Department of the Contact of Conditions Temperature 0 - 65°C Humidity Max. 95% (Non-Condensing) MTBF 600,000 Hours Certifications/ Compliances Standards USB CCID, PC/SC, EMY** Level 1 (Contact), TAA, J-US, Microsoftis Regulatory / Environmental CE, IEC/EN 62368, MCA, PCC, VCCI, REACH, WEEE, UL 62368, KC Driver Supported OS Priver Supported OS Priver Supported OS Priver Supported OS Priver Supported OS Part, No. / Model			Available Colour(s)	White	
Read/Write Speed 9.6 - 600 Kbps Clock Frequency 4.80 MHz; Operates Up to 16MHz Card Connector Contact Card Insertion Cycles Min. 200,000 PPS (Protocol and Parameters Selection) Short Circuit Protection Supported Protocol USB CCID Connector Type(s) ACR40U-A1: USB Type-A ACR40U-A1: USB Type-C USB Lotterface USB 2.0 Full Speed (12Mbps) Compatible with USB 3.0 Supply Voltage 5 V Cable Length 1 m (Non-Detachable) LED Blue & Green Derating Conditions Temperature 0 - 65°C Humidity Max. 95% (Non-Condensing) MTBF 600,000 Hours Fower Supply USB Port Certifications/ Compliances Standards USB CCID, PC/SC, EM/** Level 1 (Contact), TAA, J-LIS, Microsoftet Regulatory / Environmental CE, IEC/EN 62368, KC Driver Supported OS Driver Supported OS Windows®, Linux®, macOS, IOS (PadOS, AndroidTM, SolarisTM) Application Programming Interface Part. No. / Model	Supply Current	Max. 50 mA	Peripherals		
Cord Connector Cord Insertion Cycles Min. 200,000 PPS (Protocol and Parameters Supported Short Circuit Protection Supported Protocol USB CCID Connector Type(s) ACR40U-A1: USB Type-A ACR40U-AF: USB Type-C USB 2.0 Full Speed (12Mbps) Compatible with USB 3.0 Supply Voltage 5 V Cable Length 1 m (Non-Detachable) Operating Conditions Temperature 0 - 65°C Humidity Max. 95% (Non-Condensing) MTBF 600,000 Hours Power Supply USB CCID Certifications/ Compliances Standards USB CCID, PC/SC, EM/W Level 1 (Contact), TAA, J-LIS, Microsoftia, Regulatory / Environmental CE, EC/EN 62368, LKCA, FCC, VCC, INCAC, VCC, VCC, VCC, VCC, VCC, VCC, VCC,	Read/Write Speed	9.6 – 600 Kbps		Blue & Green	
Card Insertion Cycles Min. 200,000 PPS (Protocol and Parameters Selection) Short Circuit Protection Supported Humidity Max. 95% (Non-Condensing) MTBF 600,000 Hours Power Supply USB Port Certifications/ Compliances Connector Type(s) ACR40U-A1: USB Type-A ACR40U-A1: USB Type-C USB Lot Flace USB 2.0 Full Speed (12Mbps) Compatible with USB 3.0 Supply Voltage 5 V Driver Supported OS Driver Supported OS Windows®, Linux®, macOS, iOS iPadOS, AndroidTM, SolarisTM Application Programming Interface Part. No. / Model	Clock Frequency	4.80 MHz; Operates Up to 16MHz			
PPS (Protocol and Parameters Supported Short Circuit Protection Supported Host Interface Protocol USB CCID Connector Type(s) ACR40U-A1: USB Type-A ACR40U-AF: USB Type-C USB 2.0 Full Speed (12Mbps) Compatible with USB 3.0 Supply Voltage 5 V Driver Supported OS MTBF 600,000 Hours MTBF 600,000 Hours MTBF 600,000 Hours Certifications/ Compliances Standards USB CCID, PC/SC, EMV™ Level 1 (Contact Level 1 (Contact), TAA, J-LIS, Microsoft® Regulatory / Environmental CE, IEC/EN 62368, UKCA, FCC, VCCI, IRACH, WEEE, UL 62368, KC Driver Supported OS Driver Supported OS Power Supply Voltage 5 V Driver Supported OS Priver Supported OS Power Supply Voltage 5 V Driver Supported OS Power Supply Voltage S V Part, No. / Model	Card Connector	Contact	Operating Conditions		
Selection) Short Circuit Protection Supported MTBF 600,000 Hours Host Interface Protocol USB CCID Connector Type(s) ACR40U-A1: USB Type-A ACR40U-AF: USB Type-C USB 2.0 Full Speed (12Mbps) Compatible with USB 3.0 Supply Voltage Supply Voltage Standards USB CCID, PC/SC, EMV** Level 1 (Contact), TAA, J-LIS, Microsoft@ Regulatory / Environmental CE, IEC/EN 62368, UKCA, FCC, VCCI, REACH, WEEE, UL 62368, KC Driver Supported OS Cable Length 1 m (Non-Detachable) Driver Supported OS Part. No. / Model	Card Insertion Cycles	Min. 200,000	Temperature	0 - 65°C	
Host Interface Protocol USB CCID Connector Type(s) ACR40U-A1: USB Type-A ACR40U-AF: USB Type-C USB 2.0 Full Speed (12Mbps) Compatible with USB 3.0 Supply Voltage Supply Voltage Standards USB CCID, PC/SC, EMV™ Level 1 (Contact), TAA, J-LIS, Microsoft® Regulatory / Environmental CE, IEC/EN 62368, UKCA, FCC, VCCI, IRACH, WEEE, UL 62368, KC Driver Supported OS Cable Length 1 m (Non-Detachable) Driver Supported OS Part. No. / Model		Supported	Humidity	Max. 95% (Non-Condensing)	
Protocol USB CCID Connector Type(s) ACR40U-A1: USB Type-A ACR40U-AF: USB Type-C USB 2.0 Full Speed (12Mbps) Compatible with USB 3.0 Supply Voltage Cable Length 1 m (Non-Detachable) Certifications/ Compliances Standards USB CCID, PC/SC, EMV™ Level 1 (Contact) Level 1 (Contact), TAA, J-LIS, Microsoft® Regulatory / Environmental CE, IEC/EN 62368, UKCA, FCC, VCCI, REACH, WEEE, UL 62368, KC Driver Supported OS Driver Supported OS Windows®, Linux®, macOS, iOS iPadOS, AndroidTM, SolarisTM Application Programming Interface Part. No. / Model	Short Circuit Protection	Supported	MTBF	600,000 Hours	
Connector Type(s) ACR40U-A1: USB Type-A ACR40U-AF: USB Type-C USB 2.0 Full Speed (12Mbps) Compatible with USB 3.0 Supply Voltage Cable Length 1 m (Non-Detachable) Standards USB CCID, PC/SC, EMV™ Level 1 (Contact), TAA, J-LIS, Microsoft® Regulatory / Environmental CE, IEC/EN 62368, UKCA, FCC, VCCI, REACH, WEEE, UL 62368, KC Priver Supported OS Windows®, Linux®, macOS, iOS iPadOS, AndroidTM, SolarisTM Application Programming Interface Part. No. / Model	Host Interface		Power Supply	USB Port	
Connector Type(s) ACR40U-AF: USB Type-C USB Interface USB 2.0 Full Speed (12Mbps) Compatible with USB 3.0 Supply Voltage Standards Level 1 (Contact), TAA, J-LIS, Microsoft® Regulatory / Environmental CE, IEC/EN 62368, UKCA, FCC, VCCI, REACH, WEEE, UL 62368, KC Driver Supported OS Cable Length 1 m (Non-Detachable) Driver Supported OS Windows®, Linux®, macOS, iOS iPadOS, AndroidTM, SolarisTM Application Programming Interface Part. No. / Model	Protocol	USB CCID	Certifications/ Compliances		
USB Interface Compatible with USB 3.0 Supply Voltage Supply Voltage Cable Length 1 m (Non-Detachable) Driver Supported OS Windows®, Linux®, macOS, iOS iPadOS, AndroidTM, SolarisTM Application Programming Interface Part. No. / Model	Connector Type(s)		Standards	USB CCID, PC/SC, EMV™ Level 1 (Contact Level 1 (Contact), TAA, J-LIS, Microsoft®	
Cable Length 1 m (Non-Detachable) Driver Supported OS Windows®, Linux®, macOS, iOS iPadOS, AndroidTM, SolarisTM Application Programming Interface Part. No. / Model	USB Interface		Regulatory / Environmental	CE, IEC/EN 62368, UKCA, FCC, VCCI, R REACH, WEEE, UL 62368, KC	
Application Programming Interface Part. No. / Model Policia Industrial Programming Interface Policia Industrial Programming Interface	Supply Voltage	5 V	Driver Supported OS		
PC I in land A land	Cable Length	1 m (Non-Detachable)	Driver Supported OS	Windows®, Linux®, macOS, iOS, iPadOS, AndroidTM, SolarisTM	
PC-Linked Mode PC/SC ACR40U-A1 (USB Type-A)	Application Programmi	ng Interface	Part. No. / Model		
	PC-Linked Mode	PC/SC		ACR40U-A1 (USB Type-A)	
Other Features ACR40U-AF (USB Type-C)	Other Features			ACR40U-AF (USB Type-C)	
Firmware Upgrade Supported	Firmware Upgrade	Supported			
User Data Storage Supported	User Data Storage	Supported			