

## Multi-ISO - 13,56MHz Reader – “MISO”

### PRODUCT FEATURES

- Supports ISO14443 & ISO15693 based applications
- Optimized antenna design to support tags on metal / phone sticker tags
- Future-proof, upgradable firmware
- Compatible with various applications
- Easy to integrate, USB and RS232 versions
- PC/SC compliant

### TYPICAL APPLICATIONS

- Payment and Loyalty
- Logical PC / network access
- Transport & Event ticketing
- Tag personalization stations
- Library & Campus applications
- Car Rental – Hotel reception



The innovative ARYGN Multi-ISO High Frequency Reader offers a cost-efficient OEM and desktop solution combining high-frequency standards ISO14443 and ISO15693 in a single device. PC/SC standard on USB and uniquely for the RS232 interface version. Compatible to all major HF chips from various suppliers: Atmel, EM, ST, TI, Infineon, NXP (incl. MIFARE DESFire / EV 1, Ultralight / UL C, Plus, etc.). It also reads NFC phones in card emulation mode and contactless smart card controller chip cards. Optimized antenna design and tuning for tag on metal and payment phone stickers.

### TECHNICAL SPECIFICATIONS

Interface	USB (Desktop Reader/OEM Module)	RS232 (OEM Module)
<b>Supported Standards</b>	ISO14443 Type A and Type B, ISO 15693, MIFARE®	ISO14443 Type A and Type B, ISO 15693, MIFARE®
<b>Communication protocol</b>	USB CCID compliant protocol	Embedded PC/SC APDU protocol (e-PCSC)
<b>Data Rate (to Host)</b>	Full Speed (12 Mbps)	From 110 bps to 460.8 Kbps
<b>Baud rate (to Transponder)</b>	106 Kbps, 212 Kbps, 424 Kbps and 848 Kbps	106 Kbps, 212 Kbps, 424 Kbps and 848 Kbps
<b>Power supply</b>	USB high bus powered [5 VDC (±5%)]	5 VDC (±5%)
<b>Power consumption</b>	< 300 µA standby, 150mA operational	< 100mA Idle ,150mA operational
<b>Antenna</b>	Integrated	Integrated
<b>Reading distance</b>	Up to 10 cm (depends environment & transponder)	Up to 10 cm (depends environment & transponder)
<b>Features</b>	PC/SC v2.01.4 compatible driver USB device firmware upgrade with proprietary boot-loader via USB interface. DES & AES encryption/decryption for DESFire and DESFire EV1 Support for storing MIFARE and DESFire authentication keys. Support to configure RF and USB parameters	Embedded PC/SC like command interface for easy embedded application development Serial device firmware upgrade with proprietary boot-loader via RS232 interface. DES & AES encryption/decryption for DESFire and DESFire EV1. Support for storing MIFARE and DESFire authentication keys. Support to configure RF and RS232 parameters
<b>Indicator</b>	Bi-colour green and red LED (power and activity)	
<b>Dimensions</b>	55 mm x 90 mm	
<b>Weight</b>	18 g	
<b>Operating temperature</b>	-20C to +50C	
<b>Storage temperature</b>	-40C to +85C	
<b>Approvals</b>	FCC, CE, RoHS compliant, USB IF certified, Microsoft WHQL	
<b>Supported operating systems</b>	PC/SC driver available for Windows XP / 2003 / Vista / 2008 / 7 (32 & 64 bit)	Windows 2000, Windows XP, Windows Vista. (drivers not required). Any embedded OS with serial host
<b>SDK (optional)</b>	API Document, tutorial with sample and test applications, source code – available for VC 2005, C# .NET, VB 6.0, VC 6.0 and Java, User Manual	

### ORDERING INFORMATION:

- AMIM2US00** OEM Module, USB
- AMID2US00** Desktop Reader, USB
- AMIM23205** OEM Module, RS232, 5 VDC external power

Further Product and customization options upon request