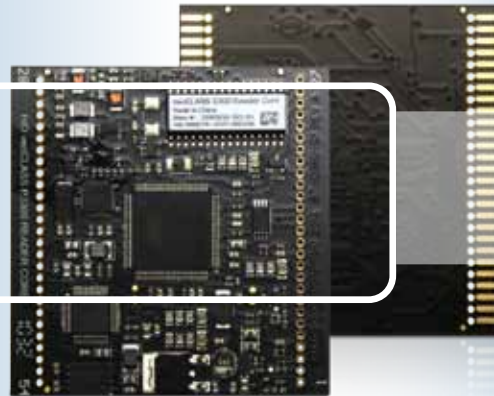


# veriCLASS™ Payment and Ticketing Embedded Reader Platform



veriCLASS Developer Tool Kit

## INNOVATIVE PLATFORM FOR OPEN- AND CLOSED-LOOP PAYMENT SCHEMES

- **Exceptional Flexibility** – configurable for multiple contactless smart card technologies, payment protocols and both open- and closed-loop payment schemes, providing access to a wide range of applications
- **Future-proof Contactless** – scalable platform readily supports current contactless technologies, and will accommodate tomorrow’s payment technologies and functionality requirements
- **Faster-to-Market** – global certifications secured by HID Global accelerate development cycles; reducing design, implementation and testing phases, and shortening time to revenue

### veriCLASS Highlights:

- Supports multiple contactless technologies and credentials: FeliCa™, iCLASS®, MIFARE®, DESFire®, NFC, ISO 14443 A/B, and ISO 15693
- Supports multiple contactless payment communication protocols: Calypso®, MasterCard® PayPass™, Visa® payWave, American Express® expresspay™
- Supports both open- and closed-loop payment schemes
- Pre-certified to both FCC modular and CE standards
- Complete line includes reader modules, boards, integration tools and support
- Comprehensive Developer Tool Kit accelerates design-in cycles and speeds products to market
- Embedded Device Manager enables remote service, diagnostics and upgrades, facilitating life cycle management

veriCLASS™ is a complete line of interoperable contactless reader boards and modules, augmented with extensive integration tools and support. The flexible veriCLASS embedded reader platform will accommodate universal and multiple applications. It can be configured to support nearly every contactless payment technology and credential, as well as open- and closed-loop payment schemes at the same time, making veriCLASS the ideal solution to integrate both existing and emerging technologies.

HID Global has uniquely prepared the veriCLASS platform to help developers significantly reduce development time and expense. veriCLASS embedded boards and modules have FCC and CE approvals

important for global installations, and EMVCo approvals that facilitate integration into contactless systems using MasterCard and Visa communication protocols. Even after installation, integrators can remotely service veriCLASS readers and update firmware via the Embedded Device Manager and other mass deployment mechanisms.

Compact design allows boards and modules to fit easily into equipment such as handheld and point-of-sale (POS) payment terminals used in transit and retail applications.

veriCLASS is the ideal contactless platform for automatic fare collection and ticketing, as well as POS, ATM, vending, kiosk and loyalty solutions.

# SPECIFICATIONS



**vericlass Reader Core**

**vericlass Reader Board**

**vericlass Enhanced Reader Board**

Base Part Numbers	VP3300A00	VP3500A00	VP3700A00
<b>Dimensions</b>	2.17" x 2.24" x 0.17" 55 mm x 57 mm x 4.2 mm	3.5" x 3.5" x 0.36" 90 mm x 90 mm x 9.2 mm	Available soon
<b>Weight</b>	0.52 oz / 15 g	1.34 oz / 38g	Available soon
<b>Operating Temperature</b>	-25° to 80° C		
<b>Storage Temperature</b>	-40° to 120° C	-40 to 85° C	
<b>Operating Humidity</b>	0 - 90% non-condensing		
<b>Power Supply</b>	3 V to 5 VDC +/- 10% regulated		
<b>Current Requirements</b>	200 mA (typical) @ 5 VDC	370 mA (typical) @ 5 VDC	Available soon
<b>HOST INTERFACE</b>			
<b>Communication Interface</b>	USB 2.0 CCID & Serial (TTL)		
<b>Transmission Speed</b>	12 Mbps (USB 2.0 full speed)		
<b>CONTACT SMART CARD INTERFACE</b>			
<b>Standards</b>	ISO 7816		
<b>Protocols</b>	T=0, T=1		
<b>Interface</b>	Up to 4 External	2 x Integrated ID000 Sockets	4 x Integrated ID000 Sockets Up to 2 External (disables corresponding integrated sockets)
<b>Supported Card Types</b>	5 V, 3 V and 1.8 V Smart Cards, ISO 7816 Class A, B and C		
<b>Power to Smart Card</b>	Up to 60 mA		
<b>Smart Card Detection</b>	Movement detection with auto power-off / Automatic detection of smart card type / Short circuit and thermal protection		
<b>CONTACTLESS SMART CARD INTERFACE</b>			
<b>RF Transmit Frequency</b>	13.56 MHz		
<b>Smart Card Technologies</b>	ISO/IEC14443A/B, ISO/IEC15693, FeliCa™ <sup>1</sup> , NFC reader mode, CEPAS		
<b>Protocols</b>	EMVCo, Calypso		
<b>Transmission Rate</b>	Up to 848 Kb/s (depending on IC & OS)		
<b>Supported Credentials &amp; ICs</b>	NXP:MIFARE®, MIFARE Plus®, MIFARE DESFire® 0.6, MIFARE DESFire® EV1, MIFARE Ultralight®, MIFARE Ultralight® C, SMART-MX HID: iCLASS®		
<b>Antenna Support</b>	External antenna x 2	Integrated antenna x 1	Integrated + external antenna x 1 Up to 4 external with optional vericlass antenna multiplexer
<b>GENERAL FEATURES</b>			
<b>S/W Driver</b>	USB version PC/SC driver: Windows® 2000 (32bit), 2003 Server, 2008 Server, Windows® XP (32 / 64bit), Windows® Vista (32bit / 64bit), Windows 7 (32bit/64bit), Windows CE (4.2 / 5.0 / 6.0)		
<b>I/O</b>	4 x LED's - TTL (EMV or custom control), 1 x Buzzer - Open Collector		
<b>Microprocessor</b>	ARM Controller, AT91SAM7X512		
<b>Firmware Upgrade</b>	Local or remote upgrade of firmware providing firmware upgrade and feature enhancement capability		
<b>Connectors</b>	Gold plated contacts for direct embedding on application PCB	USB mini type B RS232/UART I/O Connector	USB mini type B RS232/UART I/O Connector Antenna Connector x 1 External Contact Card Connector x 2
<b>Embedded Device Manager</b>	Integrated Web server on embedded readers enabling local and remote configuration, diagnostics & firmware updates through a standard Internet browser		
<b>Industry Approvals</b>	EMVCo V2.0, EMV2000, Microsoft® WHQL, USB 2.0 (USB 1.1 compatible), ISO 7816 Part 3, CCID1 (contact interface only), USB CDC EEM		
<b>Global Certification</b>	CE, FCC 47 Part 15 modular approval, RoHS, WEEE		

<sup>1</sup> FeliCa IDm only

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