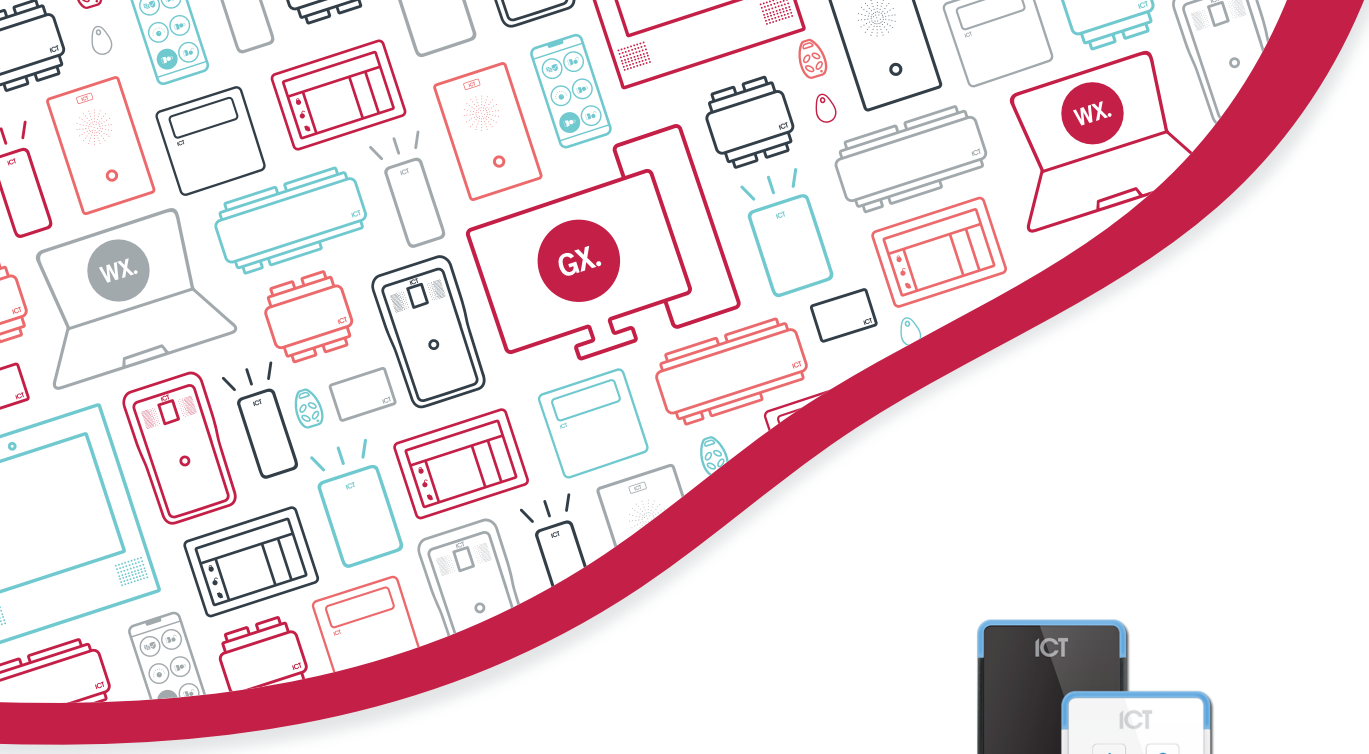

tSec Standard Reader

The tSec Standard Reader provides a complete multi-technology smart card RFID solution. Compatible with all Wiegand capable control systems and incorporating RS-485 communication, tSec Readers allow rapid deployment of secure technology in any environment. Available in multiple card capabilities (13.56MHz, 125kHz and/or **Bluetooth**® wireless technology), with an optional keypad, and in a choice of black or white, you can select the model to fit your needs and your decor.

Feature Highlights

- Multi card technology provides support for DESFire, MIFARE, and 125kHz cards from a single reader
- Encrypted RS-485 or standard Wiegand connection
- Optional Bluetooth® / NFC credential reading
- Supports OSDP communication protocol with Secure Channel
- Read range up to 60mm (2.36") with proximity ISO cards
- Configurable LED strip: 2 color control (blue and green) via external LED wiring, 16 color selectable for Protege function codes (RS-485 connection only)
- Fully encapsulated design with environmental IP Rating of IP65 for outdoor and indoor operation
- Medium size, making it suitable for all situations
- Optional Vandal Resistant Cover

Optional Features

A range of optional features means there is a model to suit everyone.

- Available with or without capacitive touch keypad
- Choose from the 125kHz or MIFARE/DESFire models, or the Multi Technology model that supports all formats
- Optional Bluetooth® / NFC connectivity to allow access via a smartphone
- Opt for either black or white according to your decor

Multi Card Technology

Available with 13.56MHz smart card capability or as a multi technology reader that combines both 125kHz proximity and 13.56MHz capabilities in a single unit, delivering maximum compatibility while providing a path forward to the latest technology. The multi technology reader is ideal for organizations that wish to transition to smart technology at their own pace, as it means they don't need to replace all their cards up front.

Optional Bluetooth® / NFC Credential Reading

Bluetooth® / NFC capability enables you to use your smartphone as your access credential for maximum convenience.

Equipped with support for most modern iOS and Android devices, you can unlock the door using a unique access credential that is entered against your user record in Protege, and authenticated by a secure cloud based server.

Flexible Communication

Choose between the intelligent RS-485 connection for fast, flexible, secure communication, or Wiegand for compatibility with all standard access control systems. RS-485 provides the added benefits of being easier and more cost effective to wire and deploy, and allows for direct integration with Protege systems, enabling you to make changes on the fly once readers are installed. RS-485 also allows for longer cable runs and offers a simpler firmware update process.

OSDP Communication

The OSDP protocol improves interoperability and adds scalability, flexibility and ease of implementation.

OSDP with Secure Channel offers additional security with AES-128 encryption and predefined key management and authentication.

For specifications and reader configuration, refer to AN-321 Configuring tSec Multi-Technology Card Readers for OSDP Communication, available from the ICT website.

Configurable LED Strip

The tSec Reader provides the ability to change the color of the LED strip (16 colors available) to show when a function has started, succeeded or failed. For example, for a function that is used to arm an area you might set the LED to change to orange to show that the function has started, yellow to show that the area has armed successfully, and red to indicate when the function has failed.

*This feature is only supported when wired using RS-485.

IP65 Protection

The IP65 environmental rating provides a high degree of protection from the elements, making the reader suitable for harsh environments. Readers can be mounted indoors or outdoors, located anywhere from the car park gate to the office door.

Optional Vandal Resistant Cover

Designed to withstand some of the harshest settings, the optional vandal resistant covers are ideal for locations where a card reader may be exposed to damage, including corridors, parking buildings, correctional facilities, and other public places. Highly resistant to impact, such as from the swing of a hammer or baseball bat, its robust construction provides greater durability and protection against vandalism and malicious damage. The flush design also serves as an anti-ligature measure for an additional level of safety.

Covers can be ordered using the following part codes:

- **tSec Standard Reader**: (missing or bad snippet)
- **tSec Extra Reader**: (missing or bad snippet)
- **tSec Mini Reader**: (missing or bad snippet)

Mounted correctly, the tSec Reader Vandal Resistant Cover is compliant to DHF TS 001:2013, the ENHANCED REQUIREMENTS & TEST METHODS FOR ANTI-LIGATURE HARDWARE to grade B4 for vertical direction devices and to impact level IK10.

Keypad Support

Regular keypad variations of the tSec Reader range do not operate correctly with the vandal resistant covers that are provided separately. You must order the reader as a kit (including the cover) using one of the following part codes:

- **tSec Standard Reader**: (missing or bad snippet) (Multi Technology), (missing or bad snippet) (13.56MHz), (missing or bad snippet) (Multi Technology with Bluetooth® Wireless Technology).
- **tSec Extra Reader**: (missing or bad snippet) (Multi Technology), (missing or bad snippet) (13.56MHz), (missing or bad snippet) (Multi Technology with Bluetooth® Wireless Technology).

Available Models / Ordering Information

The tSec Standard Reader is available with a range of features.

tSec Standard Reader	117 x 46 x 18mm (4.61 x 1.81 x 0.71")				
	Keypad	125kHz	MIFARE/ DESFire/ NFC	Bluetooth® Technology	Vandal Resistant Cover*
PRX-TSEC-STD-B tSec Standard Multi-Technology Card Reader		✓	✓		
PRX-TSEC-STD-KP-B tSec Standard Multi-Technology Card Reader with Keypad	✓	✓	✓		
PRX-TSEC-STD-125-B tSec Standard 125kHz Card Reader		✓			
PRX-TSEC-STD-DF-B tSec Standard 13.56MHz Card Reader			✓		
PRX-TSEC-STD-DF-KP-B tSec Standard 13.56MHz Card Reader with Keypad	✓		✓		
PRX-TSEC-STD-BT-B PRX-TSEC-STD-BT-W tSec Standard Multi-Technology Card Reader with Bluetooth® Wireless Technology		✓	✓	✓	
PRX-TSEC-STD-KP-BT-B PRX-TSEC-STD-KP-BT-W tSec Standard Multi-Technology Card Reader with Keypad and Bluetooth® Wireless Technology	✓	✓	✓	✓	
PRX-TSEC-STD-KP-BT-B-VRC tSec Standard Multi-Technology Card Reader with Keypad, Vandal Resistant Cover and Bluetooth® Wireless Technology	✓	✓	✓	✓	✓
PRX-TSEC-STD-DF-BT-B tSec Standard 13.56MHz Card Reader with Bluetooth® Wireless Technology			✓	✓	
PRX-TSEC-STD-DF-KP-BT-B tSec Standard 13.56MHz Card Reader with Keypad and Bluetooth® Wireless Technology	✓		✓	✓	

* Keypad editions with vandal resistant cover included. Covers may be purchased separately for readers without keypads, but regular keypad editions do not support vandal resistant covers.

Technical Specifications

Ordering Information	
Order Codes	See tSec Reader editions.
Power Supply	
Operating Voltage	12VDC (9.5 to 14VDC)
Operating Current	tSec Standard Reader: 254mA (Peak, Reading) tSec Extra Reader: 298mA (Peak, Reading) tSec Mini Reader: 203mA (Peak, Reading)
Communications	
Card Read Range	MIFARE 60mm (2.36") * DESFire EV1 ISO 15mm (0.6") * 125kHz Clamshell 40mm (1.57") †
Tag Read Range	MIFARE 30mm (1.2") * DESFire EV1 6mm (0.23") * 125kHz 25mm (0.98") †
Wiegand Interface	Multiple format 26 or 34 Bit data 0 and data 1, card defined
Frequency	13.56 MHz ISO/IEC 14443 Type A * 125KHz pulse width modulated †
Multi Conductor Cable	Wiegand: 22Awg alpha 5196, 5198, 18Awg alpha 5386, 5388. Max Distance 150m (492ft) Module comms/RS485: Belden 9842 or equivalent. Max distance 900m (3000ft)
OSDP Communication	OSDP standard 2.1.5 with Secure Channel Protocol ** / ***
Bluetooth® Wireless Technology	
Bluetooth® Read Range	Proximity mode: up to 0.5m (1.6ft) Configurable ** Action unlock (shake): up to 5m (16.4ft) Configurable **
Bluetooth® Electronic Credential Transmission Technology	NRF8001 Bluetooth® version 4.0 compliant Proprietary data exchange protocol. AES128 Encrypted Reader App Version: 1.04.175 and above Credentials can be distinguished by unique site code and card number
Bluetooth® Wireless Device	Protege Mobile 1.0.x
NFC	
NFC Read Range	Up to 60mm ***
NFC (Near-field communication) electronic credential transmission technology	Android 4.4 or above, with phones which support ISO7816-4 Proprietary Secured DESFire credential Credential is AES-256 (NIST certified AES algorithm) Reader App Version: 1.04.175 and above Credentials can be distinguished by unique site code and card number
NFC Wireless Device	Protege Mobile 1.0.x
Operating Conditions	

Environment IP Rating	IP65
Operating Temperature	UL/ULC -35° to 66°C (-31° to 151°F) : EU EN -40° to 70°C (-40° to 158°F)
Storage Temperature	-10˚ to 85˚C (14˚ to 185˚F)
Mean Time Between Failures (MTBF)	520,834 hours (calculated using RFD 2000 (UTE C 80-810) Standard)
Dimensions	
Reader Dimensions (H x W x D)	tSec Standard Reader: 117 x 46 x 18mm (4.61 x 1.81 x 0.71") tSec Extra Reader: 117 x 75x 18mm (4.61 x 2.95 x 0.71") tSec Mini Reader: 85 x 46 x 17mm (3.35 x 1.81 x 0.67")
Vandal Resistant Cover (H x W x D)	PRX-SVRC tSec Standard Reader cover: 162 x 91 x 22.6mm (6.37 x 3.58 x 0.88") PRX-XVRC tSec Extra Reader cover: 162 x 120 x 22.6mm (6.37 x 4.72 x 0.88") PRX-MVRC tSec Mini Reader cover: 127 x 88 x 20mm (5.0 x 3.46 x 0.78")

Reader Weights	Net Weight	Gross Weight
tSec Standard Reader	110g (3.9oz)	130g (4.6oz)
tSec Standard Reader with VRC	190g (6.7oz)	280g (9.9oz)
tSec Extra Reader	160g (5.6oz)	190g (6.7oz)
tSec Extra Reader (UHF)	180g (6.3oz)	200g (7.1oz)
tSec Extra Reader with VRC	270g (9.5oz)	360g (12.7oz)
tSec Mini Reader	80g (2.8oz)	100g (3.5oz)

* Applies to MIFARE/DESFire and Multi-Technology models only

† Applies to 125kHz and Multi-Technology models only

** Applies to Bluetooth® wireless technology enabled models only

*** Applies to NFC capable models only

The size of conductor used for the supply of power to the unit should be adequate to prevent voltage drop at the terminals of no more than 5% of the rated supply voltage.

Regulatory Notices

New Zealand (RSM) and Australia (RCM)

This equipment carries the R-NZ label and complies with EMC and radio communications regulations of the Australian Communications and Media Authority (ACMA) governing the Australian and New Zealand (AS/NZ) communities.

AS/NZS 2201.1 Class 5

Protege systems conform to AS/NZS 2201.1:2007 Class 5 intruder alarm systems standards for the construction, operation, performance and installation of intruder alarm equipment and systems installed in clients' premises.

CE – Compliance with European Union (EU)

Conforms where applicable to European Union (EU) Low Voltage Directive (LVD) 2014/35/EU, Electromagnetic Compatibility (EMC) Directive 2014/30/EU, Radio Equipment Directive (RED)2014/53/EU and RoHS Recast (RoHS2) Directive: 2011/65/EU + Amendment Directive (EU) 2015/863.

This equipment complies with the rules of the Official Journal of the European Union, for governing the Self Declaration of the CE Marking for the European Union as specified in the above directives.

Security Grade 4, Environmental Class II, EN 50131-1:2006+A2:2017, EN 50131-3:2009, EN 50131-6:2008+A1:2014, EN 50131-10:2014, EN 50136-1:2012, EN 50136-2:2013, EN 60839-11-1:2013, Power frequency magnetic field immunity tests EN 61000-4-8, Readers Environmental Class: IVA, IK07.

UL/ULC (Underwriters Laboratories)

> UL 294 for Access Control System Units

> CAN/ULC S319 for Electronic Access Control Systems

Industry Canada

ICES-003

This is a Class A digital device that meets all requirements of the Canadian Interference-Causing Equipment Regulations.

CAN ICES-3 (A)/NMB-3(A)

Federal Communications Commission (FCC)

FCC Rules and Regulations CFR 47, Part 15, Class A.

This equipment complies with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference; (2) This device must accept any interference received, including interference that may cause undesired operation.

> For a full regulatory and approval list please visit the ICT website.

Designers & manufacturers of integrated electronic access control, security and automation products.
Designed & manufactured by Integrated Control Technology Ltd.

www.ict.co

06-Sep-21