

13.56 MHz Reader/Writers



ET4 Series

e*Tag® reader/writers, using 13.56 MHz High Frequency RFID Technology are ideally suited for a wide variety of Automatic Identification and Data Collection applications, including access control, time and attendance, membership/loyalty programs, logical (PC) access, storage of biometric templates, parking, ePurse, fuel management, data retrieval and many others.

e*Tag® Reader/Writers are designed to work with custom software applications developed by original equipment manufacturers and systems integrators. e*Tag® technology allows the host system to read and write to the card, and to store data on the card for one or more applications.

These 13.56 MHz units communicate with a wide variety of open standard cards, including Secura Key e*Tag® cards; TI HF-1; Philips iCode SLI; ST-Micro LRI 512 and 2kBit; Infineon My-D and My-D Lite. e*Tag® Reader/Writers also work in UID-only mode with any ISO 15693 compliant contactless smart card.

e*Tag® reader/writers are available in a standard Wall switch housing, in the S-shaped Mini-mullion housing, in a desktop USB reader, or as a board only with a built-in or remote antenna options for embedded applications.

The Wall switch and Mini-mullion housings are weatherproof, epoxy-potted units suitable for outdoor applications, and they meet UL 294 and FCC/CE standards.

The e*Tag® reader/writers are available with a variety of communications capabilities. RS-232 units can connect to the serial COM port of a PC. RS-485 units can connect to another RS-485 device, or to a PC with an RS-485 converter at distances up to 4000 feet (up to 100 units can be addressed on one RS485 network). For embedded applications, TTL communications can be used to link a reader/writer to a microprocessor. USB units communicate with PCs or other electronic devices with USB ports.

Standard e*Tag® transponders offer 2K or 10K bits of user-controlled data storage, plus a 64 bit Unique I.D. number. If the card is also used for an access control application, the Secura Key Wiegand format data is encoded, DES-Encrypted using diversified keys and locked in the first 6 blocks of the card. The cards are laser engraved with the card ID and facility code. If the card is not used for access control, the entire card memory is available to the end user.

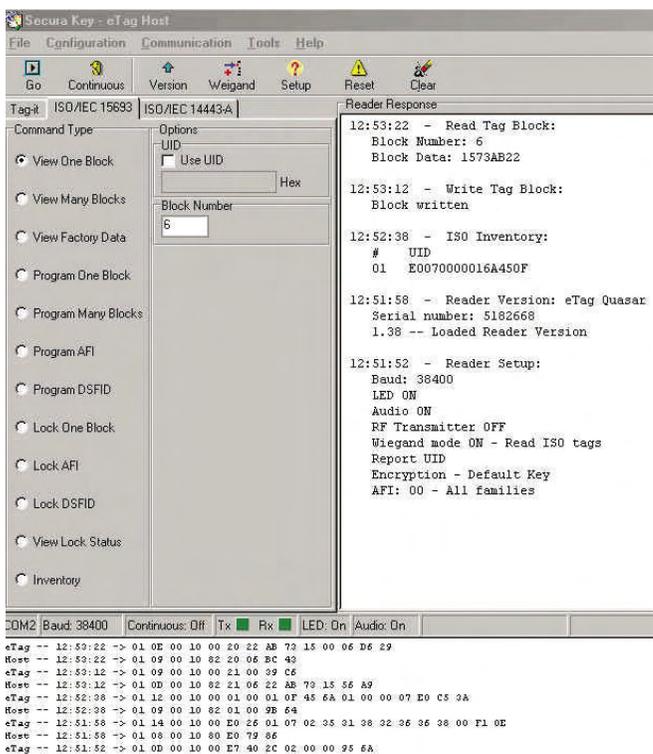
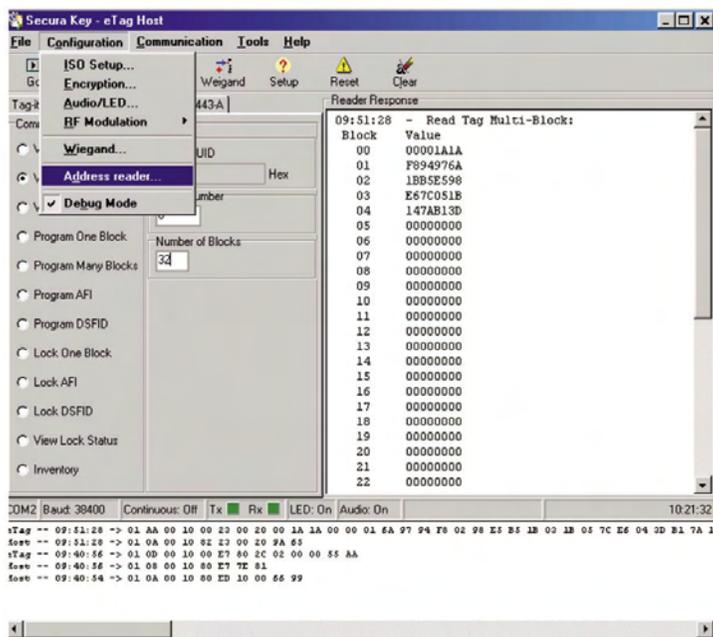
Features:

- ISO 15693 Open Standard 13.56 MHz Technology
- Access Control Data DES Encrypted Using Diversified Keys
- Epoxy Potted Reader Housings for Superior Weather Resistance
- Mullion and J-box Mounting Options
- Host Controlled Bi-Color LED (Red/Green)
- Host Controlled Buzzer
- Read/Write Capability
- UL294, FCC and CE Regulatory Approvals
- RS-232, RS-485, TTL, USB and Wiegand Communications
- OEM Board Assemblies available with Onboard or Off-board Antenna

Software Development

e*Tag® has been developed to meet international standards and supports interoperability between RFID manufacturers. The e*Tag® communications protocol is available free of charge at www.securakey.com. An e*Tag® Development Kit is available to assist OEMs and System Integrators to evaluate the products and to develop their own application-specific software. The kit includes e*Tag® Host demonstration software, as well as a reader/writer, power supply, and sample transponders.

For easy hookup to your PC, the RS-485 demo kit, ET4-DK1 is provided with an RS-485-to-RS-232 converter, and the RS-232 demo kit, ET4-DK2 includes an RS-232-to-USB converter.



e*Tag® Host is a graphical user interface (GUI) that allows the reader/writer to be placed in a variety of operating modes. Host commands to the reader/writer permit data to be written to, read from and “locked” on tags. In the “Debug” mode the actual messages passing between the host and the reader/writer can be viewed, which is a tremendous aid to programmers. Additional engineering support for customized firmware, data encryption and specialized antennas or housings is available on an NRE basis.

Developers Kits

ET4-DK1 Includes ET4-WXS, RS485 Reader/Writer on stand, switchplate housing, 12 VDC international power supply, DB9 connector, 3 ETST03-2 Key Tags, 3 ETCI04-5 cards, e*Tag® Host software CD and NETCONV-P RS232-to-RS-485 converter

ET4-DK2 Includes ET4-WRS, RS-232 Reader/Writer on stand, switchplate housing, 12 VDC international power supply, DB9 connector, 3 ETST03-2 Key Tags, 3 ETCI04-5 cards, e*Tag® Host software CD and SK-USB RS-232-to-USB converter

Ordering Guide

The model numbering format for e*Tag® reader/writers is:

ET4-XXX-XXX

Variables (X) from left to right:

- A – Auto Read (sends data immediately)
 - O – OEM (custom firmware, suffix after model number)
 - W – Wiegand (sends Wiegand format data immediately)
 - R – RS-232 output
 - U – USB output
 - X – RS-485 output
 - T – TTL output (for embedded applications)
 - B – board only with integral antenna
 - E – board only, no antenna, embedded application
 - M – mini-mullion housing (S-shaped)
 - S – Standard wall switch-housing
 - S-D – Desktop housing
- XXX – OEM Customer/version

Please contact Secura Key's RFID Sales before ordering – not all variables can be combined.

Credentials

Secura Key offers a wide selection of RFID packages, including plastic cards, key tags, pallet tags, wristbands and adhesive labels. Custom packages can be created with your choice of RFID inlay, package shape and four-color graphics.

Standard plastic card and tag packages are available with ISO 15693 compliant transponders containing 2K or 10K bits of data storage:

ETCI04-5	ISO Card, 2k bit, unencoded
ETCI31-1	ISO Card, 10k bit, unencoded
ETST03-2	Compact Key Tag, 2k bit, unencoded
ETST33-1	Compact Key Tag, 10k bit, unencoded
ETKT03-5	Round-head Key Tag, 2k bit, unencoded
ETKT33-1	Round-head Key Tag, 10k bit, unencoded
ETPT03-1	Pallet Tag, 2k bit, unencoded
ETAT03-2	Adhesive Tag, 512 bit, unencoded

These part numbers are for Secura Key e*Tag® credentials, using Secura Key access control formatting and TI HF-1 2k bit, Infineon 10k bit, or ST Micro 512 bit inlays. Contact Secura Key's RFID sales for non-access control formats or custom inlays. Custom Graphics are available for cards and key tags.



ETCI



ETST



ETPT



ETKT



ETAT

Shown To Scale, but Not Actual Size

SPECIFICATIONS

	ET4-xxS Wall switch	ET4-xxM Mini-Mullion	ET4-xxB/E Board Only	ET4-AUS-D Desktop
Dimensions L x W x H	4.5" x 3.2" x 0.84" 11.43 x 8.13 x 2.13 cm	3.5" x 1.6" x 0.6" 8.89 x 4.06 x 1.52 cm	2.05" x 1.28" x 0.5" 5.21 x 3.25 x 0.127 cm	4.5" x 3.2" x 0.84" 11.43 x 8.13 x 2.13 cm
Mounting	US Single Gang Box	Mullion, Wall, Post	Customer housing	Desk top, counter
Weight	6.67 oz (189.15 gm)	2.88 oz (81.65 gm)	0.40 oz (11.34) gm	8 oz (226.8 gm)
Material	Polycarbonate	ABS	NA	Polycarbonate
Color	Beige or Black	Black	NA	Beige
Power Requirements	50/90 avg/max @ 5-14VDC			5 VDC USB Port Power
Read Ranges (ISO Card) (Keytag)	Up to 6.0" (15.24 cm) Up to 3.5" (8.89 cm)	Up to 4.0" (10.16 cm) Up to 2.5" (6.35 cm)	Integral Antenna - up to 4" (10.16 cm) External Antenna - depends on antenna	Up to 6.0" (15.24 cm) Up to 3.5" (8.89 cm)
Relative Humidity	0 to 100% (non-condensing)		0 to 95% (non-condensing)	0 to 100% (non-condensing)
Temperature Range	-40° to +70°C (-40° to +158°F)			
Bi-Color LED	Red/Green, Host Activated			
Buzzer Control	Host Activated			
Communications	Wiegand (all models) and R – RS232 output, U – USB output, X – RS485 output, T - TTL output			USB Only
Cable Distance	Wiegand – 500 ft. (152.4m); RS-232 -100 ft. (30.48m); USB – 12 ft. (3.65m); RS-485 – 4000 ft. (1219.2m); TTL - 12 in. (30 cm)			
Cable Required	Wiegand – 22-24 AWG, 5-10 cond, shielded; RS-232 – 4 cond shielded; USB – Standard USB Host cable; RS-485 - 2 TW/PR or CAT-5; TTL- 4 cond; Antenna cable - RG316			5' (1.52m) cable supplied
Comm Protocol	Wiegand – SIA Standard; RS232, RS485, USB – Secura Key e*Tag® Protocol			
ISO Standard	ISO 15693			
Data Encryption (Access control data)	DES with diversified keys			
Operating Modes	Read only: access control card data (send immediately) UID: send immediately - simultaneous Wiegand & Serial (RS-232/485, TTL, USB) Read-Write: host managed RS 232/485, TTL, USB			
Card Compatibility R/W	Secura Key e*Tag® cards; TI HF-1; Philips iCode SLI; ST-Micro LRI 512 and 2kBit; Infineon My-D and My-D Lite.			
Card Compatibility Read UID	Cards meeting the ISO 15693 standard			
Regulatory Approvals	UL/ cUL294, Part 15 Class B FCC, CE Mark, Canada Radio			
Frequency	13.56 MHz			
Warranty	These Secura Key products are warranted against defects in materials and workmanship for lifetime. Secura Key will replace any Secura Key manufactured product that fails to perform as intended. This warranty does not include freight, taxes, duties, or installation expenses. See price list for complete terms and conditions.			

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Secura Key
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