

DEVELOP CUSTOM APPS IN A SNAP FOR THE 1128 *BLUETOOTH*[®] UHF RFID READER

A growing number of companies across a range of industries have discovered the benefits of radio frequency identification (RFID) technology. For example, because RFID does not require line of sight, retail companies can perform a full store inventory much faster than using barcodes. This means that out-of-stock inventory can be replenished faster, misshelved items can be located more easily, and goods received can be quickly and accurately verified.

Likewise, RFID has many uses in logistics, warehousing and distribution, such as reading/writing data on pallets and roll cages before loading onto vehicles, or storing maintenance and inspection records. Even document tracking is simplified with document management or folder location functions.

For nearly two decades, Technology Solutions UK Ltd (TSL) has delivered innovative RFID technology designed to streamline operations, reduce inventory shrinkage, improve logistics efficiencies and help corporations comply with regulatory requirements. The ruggedized 1128 *Bluetooth*[®] UHF RFID Reader from TSL is a modular, high-performance system for fast and accurate asset tracking.

Unlike other mobile RFID readers, the 1128 *Bluetooth*[®] UHF RFID Reader can be paired with any *Bluetooth*[®]-enabled mobile device without requiring a customized driver, offering the ultimate in functionality, flexibility and cost-effectiveness. This versatile RFID system is fully compatible with enterprise handhelds, consumer phones, touchscreen MP3 players, tablets and PCs running a range of operating systems, such as Android, iOS, Windows Mobile, WinCE and Windows.



WHY THE 1128 *BLUETOOTH*[®] UHF RFID READER?

- Works with ANY Bluetooth-enabled device
- Modular design means easy custom configuration to meet your needs
- Save money by using your installed base of handheld terminals
- Rugged – drop resistant, tumble resistant, IP54 sealed – yet lightweight
- Accommodate BYOD strategy without sacrificing performance
- ASCII protocol enables quick and easy development of customized apps.

EASY INTEGRATION

To simplify use of the 1128 *Bluetooth*® UHF RFID Reader, TSL utilizes a standard [ASCII protocol](#) that allows a practical set of simple, pre-configured commands to be executed locally within the *Bluetooth*® reader. ASCII command mode allows straightforward access to RFID tag functions - such as inventory, read and write - using simple, text-based commands. Using these low-level ASCII commands to create multiple tag operations, development of custom programs is greatly simplified for quick and easy integration with other applications, providing even greater functionality.

Furthermore, because TSL uses simple, high level commands, application developers do not have to deal with the complexities of the underlying native application programming interface (API). This approach not only speeds integration, but it ultimately results in unparalleled levels of productivity.

CUSTOMIZED COMMAND PERFORMANCE

While the standard ASCII commands available in TSL's powerful ASCII protocol can be used directly to perform tag operations, some developers prefer to use an API (Application Programming Interface). TSL have addressed this requirement by providing free software development kits (SDK) for iOS, Windows Mobile, Android™, and Windows Desktop operating systems.

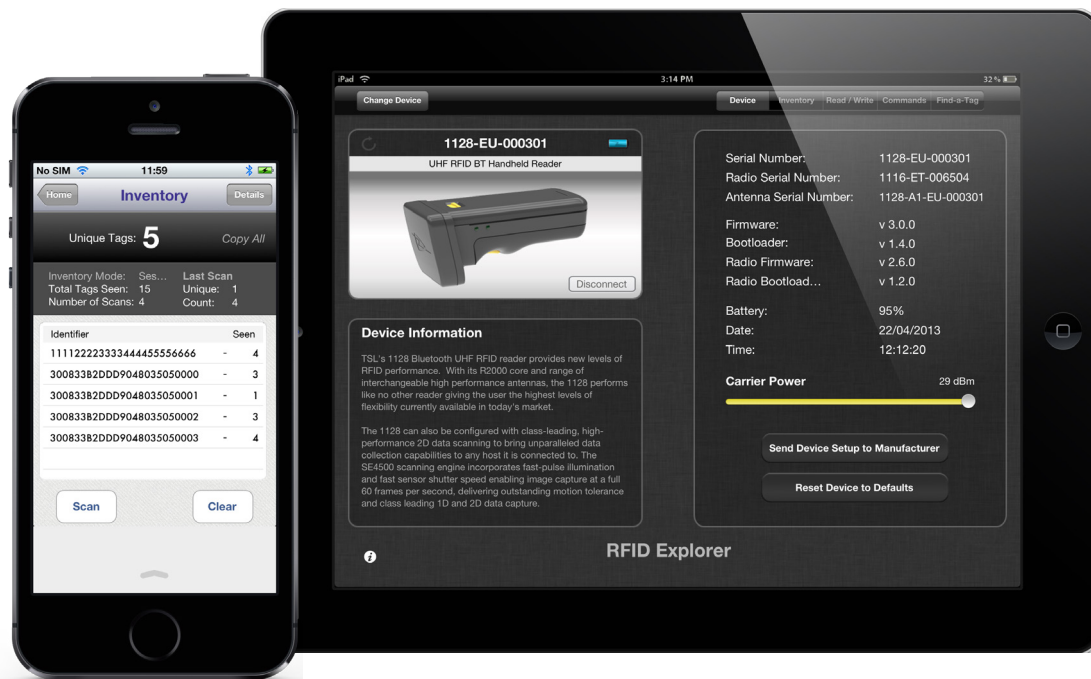
Built around TSL's unique ASCII protocol, the SDK provides a powerful set of tools for truly custom applications. For example, developers can create apps to “check in/ check out” assets, conduct an “inventory audit” or “find specific items” using the 1128 *Bluetooth*® UHF RFID Reader and any Bluetooth-enabled mobile device.

The SDK includes TSL's ASCII Commands framework, help documentation and sample projects that demonstrate how to perform many of the common operations required by RFID applications, such as inventorying, reading and writing to transponders.



RFID EXPLORER APP

To help users get the most performance and functionality from the 1128 *Bluetooth*[®] UHF RFID Reader, TSL offers the RFID Explorer App. This free app for iOS and Android powered devices demonstrates the full capability and versatility of the 1128 *Bluetooth*[®] UHF RFID Reader and TSL's powerful ASCII protocol. The RFID Explorer App can be downloaded for free from [iTunes[®]](#) or [Google Play[™]](#).



RFID EXPLORER FEATURES

- **Inventory** – Rapidly generate a list of unique, nearby transponder tags and review a summary of scan operations.
- **Read/Write** – Inspect information stored in the memory banks of a chosen tag or create customized tags by writing new information to a chosen tag memory bank. Use the transcript to discover the underlying ASCII protocol command parameters that power these operations.
- **Commands** – See the reader execute a wide selection of ASCII commands whilst viewing all the detail of the data packets sent and received from the device. Query the reader for information such as firmware and hardware versions, region information, battery level and scan 1D and 2D barcodes.
- **Find-a-tag** – Locate a specific tag with the handheld reader, aided by the graphical representations of tag signal strength levels.

MICROSOFT SOFTWARE PARTNER PROGRAM

Technology Solutions is a member of the Microsoft Software partner program. TSL developer capabilities include support for Visual Studio, driver development capabilities, firmware development, and secure encrypted downloader technology for FLASH upgrade of firmware in the field. TSL offers experience with a wide range of APIs and technologies: Winsock, WinScard / PCSC, ASP.NET, SQL, GPSID, IrDA, Bluetooth, GSM, RFID.

ABOUT TSL

ABOUT

Technology Solutions UK Ltd (TSL) enables fast and efficient logistical operations for many respected global corporations, including Motorola, DHL, FedEx, Canada Post and Atos SE. TSL is adept at working with system integrators to deliver complete mobile data solutions for a range of applications -- supply chain management, stock inventory control, ticketing, data management and biometric scanning.

TSL designs and manufactures both standard and custom embedded, snap on and standalone peripherals for handheld computer terminals. Embedded technologies include:

- RFID - Low Frequency, High Frequency & UHF
- *Bluetooth*[®] wireless technology
- Contact Smartcard
- Fingerprint Biometrics
- 1D and 2D Barcode Scanning
- Magnetic Card Readers
- OCR-B and ePassport

Utilizing class leading Industrial design, TSL develops products from concept through to high volume manufacture for Blue Chip companies around the world. Using the above technologies TSL develops innovative products in a timely and cost effective manner for a broad range of handheld devices.

For more information about the TSL ASCII Protocol, and to download the free SDK and user guides, please visit: www.tsl.uk.com/software.

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