



ARMS RFID
Armory Management System

Radio Frequency Identification

Armory Management & Weapons Accountability System

Radio Frequency (RFID) Weapons Tracking System



optimized weapons/gear/ammo accountability through best practices, technology and innovation

Executive Overview

The ARMS Armory Management system is optimized for Weapons / Gear Accountability, by tracking weapons, gear and defensive equipment using software screens, bar codes and / or RFID (Radio Frequency Identification) technologies. The software is fully developed, COTS (Commercial Off-the-Shelf) software, and is typically further customized according to each customer's specific requirements. The ARMS rapid-application-development toolkit enables the software to be rapidly configured according to each customer's preferred terminology (data fields), and to automate workflow and generate reports consistent with current or preferred operational practices.

In addition to tracking weapons and gear, ARMS provides software components to track weapons cleanings, inspections, maintenance, test firings and similar functions. ARMS also includes functionality to track and look-up weapons certifications, 'Do Not Arm' status, items-required-for-a-post, and similar database lookups during transfer and return processing.

A single database 'instance' of ARMS can be further configured to model and track a wide range of additional items, such as records, evidence, assets, people, vehicles or similar entities. The software is available hosted, or can be installed on local server(s), with cross-platform support for Windows and Linux environments. ARMS is scalable to unlimited item types, locations, users and records.

Software and Bar Code Tracking

ARMS includes a 'Weapon/Gear Tracking Screen' that enables staff to enter an item # by keyboard, or scan a bar code or RFID tag on an item (using a USB connected bar code or RFID scanner), to indicate an item that is being issued to personnel or returned to the armory. The armory, or the person to whom item(s) are being issued, can be entered by keyboard, selected from a drop-down list on the Tracking Screen, can be captured by scanning a bar code on an ID card/badge, or by scanning bar codes printed on sheet(s) of paper (each person/place is printed as a text field and is represented by a bar code on the sheets). As such, ARMS provides robust performance and tracking capabilities, with minimal investment, using software screens and/or USB-connected scanning devices.

RFID (Radio Frequency Identification) Tracking

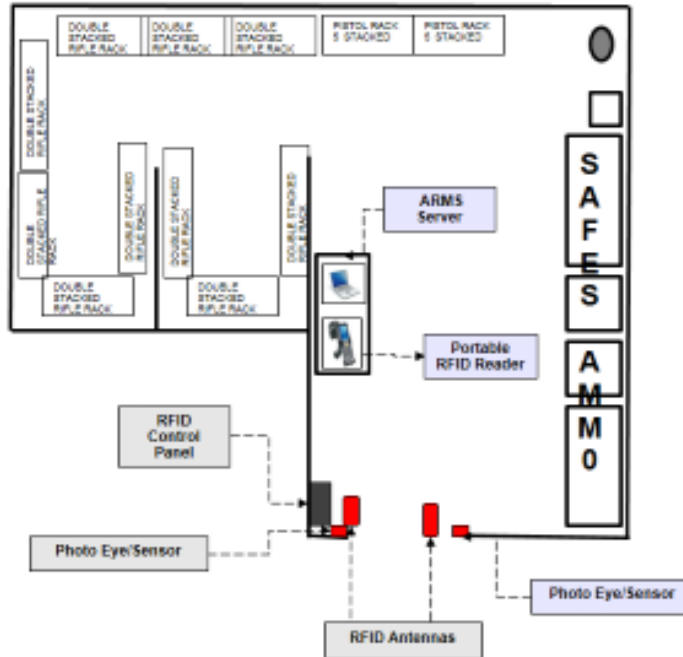
RFID Radio Frequency technology is the state-of-the-art in weapons tracking, and is achieved by placing special RFID tags within or on weapons and gear. The RFID tag # is linked to the Weapon or Item Serial # within the database. Staff can also be RFID-identified, by using RFID name badges issued to each authorized person (or RFID labels can be placed on existing name badges or name badge lanyards).

RFID antennas are placed around Armory issue-windows and/or doorways, and will passively detect each person and the item(s) passing into or out of the Armory, by saturating pass-through zones with radio waves {emitted by RFID antennas positioned around doorway(s) and/or issue-window(s)}. Motion sensors are placed on each side of the doorway or window, to establish directionality (Issue or Return), based on which sensor is first triggered. The sensors also turn on the RFID equipment, and the RFID antennas detect the items and/or people coming into or leaving the armory. The RFID data (item(s), person, RFID read-zone location) updates to the ARMS database and also logs the time and the date of the transaction. Flashing light stacks and alarms can be implemented as part of RFID implementations, and will trigger based on business rules (unauthorized access, unauthorized removal, failure to return an item, etc.).

After shift changes, and whenever otherwise appropriate, Portable RFID Scanners are typically used to rapidly inventory weapons and other gear, which uploads to the database and automatically generates inventory reports and inventory exceptions reports. Portable scanners can also be used to inventory items issued to posts or other non-armory locations. Additionally, portable RFID scanners enables specific or missing items to be found, by operating similar to a metal detector to guide Users to a specific item.



Representative Armory Outfitted with RFID Technology



Weapons Racks for Efficient Storage

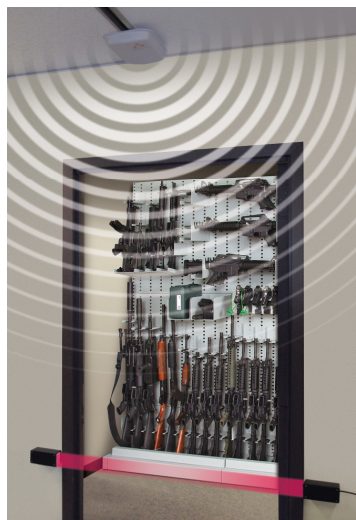
RFID Antennas / Sensors around Doorway(s) for In / Out Tracking

Portal RFID Reader for Rapid Inventories

File Server for the ARMS Armory Management System software

RFID Doorway(s) and Issue Window(s) at Armory for Issue / Return Tracking

RFID antennas around doorways or issue windows track officers/staff, weapons and gear. Proximity sensors establish directionality...items being Issued versus Returned. RFID tags are placed in or on weapons and gear, and RFID name cards can be issued to staff. Each time a person enters or leaves the armory, the database is updated with the person and the items that they removed or the items that they returned. Electronic signatures can be captured from the person removing/being issued items, or the armorer upon item return, and the signature saves to chain-of-custody logs, and log can be printed and show all signatures validating weapon/gear transfers for proof of custody. Flashing light/alarm mechanisms can be placed in armory, and are triggered based on business rules, such as unauthorized removal, person forgot to return an item after shift change, etc. Cabinets are available for housing reader and wiring, and for mounting lightstack/alarm.



Issue Window or Doorway Monitoring System

When an officer presents for receipt of weapons and gear, they can be identified by fingerprint, ID Card or from a drop-down list of authorized recipients. The software will automatically lookup the items assigned to the recipient, and will validate that their certifications are current, and that the person has not been marked as 'Do Not Arm' status. If the person is being assigned to a Post, the Post can be selected from a drop-down list. All items assigned to the recipient and that are required for the post will display as photographs on a flat screen monitor. Any weapons that should not be issued due to status or certifications will be highlighted in RED. An ammo magazine listing displays with only the cartridge #;s that match the weapon being transferred, with touch-screen selection of the magazine # being transferred. Any items previously issued to the recipient, but not returned, will be highlight in RED to create an Alert. The armorer will issue items through an issue-window, or arm-up the recipient in the Armory, and items issued will be tracked via RFID when the items pass through the Issue Window or when the recipient exits the Armory through a doorway. All items issued will display as photographs on a flat-screen monitor visible to the recipient and the armorer, and will be highlighted in GREEN. This enables transfer of custody validation, and the recipient can be required to sign an electronic signature pad to confirm receipt of the items issued.

When items are returned, each item will display on the flat-screen monitor for validation by the armorer and to transfer custody back to the armory. Any item issued to the recipient but not returned will display and highlight in RED. If appropriate, the armorer can be required to sign the electronic signature pad to accept custody of the items as returned-to-armory.

Example Weapon/Gear Transfer Screen

RFID Reader - Dover AFB Armory Window1

RFID Reader: Dover AFB Armory Window1 ISSUE

Person
 pitakt-Pitak, Timothy

----- 3 Certifications -----

Certification# 1	M4	Expires	12/31/2011	<input checked="" type="checkbox"/> Current?
Certification# 2	M9	Expires	12/31/2011	<input checked="" type="checkbox"/> Current?
Certification# 3	Asp	Expires	12/31/2011	<input checked="" type="checkbox"/> Current?

NO ITEMS CURRENTLY AT pitakt-Pitak, Timothy

----- 2 Assigned Items -----

Assigned Item #1	M16+002+XXX0021	<input checked="" type="checkbox"/> Certification Required?	<input type="checkbox"/> Certified?	<input type="checkbox"/> Current?
Assigned Item #2	M9+005+XXX0051	<input checked="" type="checkbox"/> Certification Required?	<input checked="" type="checkbox"/> Certified?	<input checked="" type="checkbox"/> Current?

Destination
 MainGateA

----- MainGateA has 0 Required Items -----

Required Item #1	M9	<input checked="" type="checkbox"/> Certification Required?	<input checked="" type="checkbox"/> Certified?	<input checked="" type="checkbox"/> Current?
Required Item #2	Ammo9mm	<input type="checkbox"/> Certification Required?	<input type="checkbox"/> Certified?	<input type="checkbox"/> Current?
Required Item #3	Radio	<input type="checkbox"/> Certification Required?	<input type="checkbox"/> Certified?	<input type="checkbox"/> Current?
Required Item #4	Duress	<input type="checkbox"/> Certification Required?	<input type="checkbox"/> Certified?	<input type="checkbox"/> Current?
Required Item #5	Dosimeter	<input type="checkbox"/> Certification Required?	<input type="checkbox"/> Certified?	<input type="checkbox"/> Current?
Required Item #6	PBT	<input type="checkbox"/> Certification Required?	<input type="checkbox"/> Certified?	<input type="checkbox"/> Current?

Example Photo Confirmation Display

RFID Monitor for BNP Door1

RFID Monitor for: BNP Door1 Monitoring Doorway

Direction is OUT

BNP Door1

Item 1-Primary Radio+4950+4950 ACTIVE 	Item 2-Back-Up Radio+2260+2260 ACTIVE 	Item 3-Defense Technology MK-3 O ACTIVE 	Item 4-Security Keys+001+001 ACTIVE 	Location 2-BNP-TJLEWIS ACTIVE 	Item 5-Elcan Thermal Optic+001+70 ACTIVE
Item 6-Colt AR-15+001+tttttt ACTIVE 	Item 7-Night Owl Explorer Pro+001+ ACTIVE 	Item 8-ITT Night Vision 6016/PVS-14 ACTIVE 	Item 9-Super Pass II+001+001 ACTIVE 	Item 10-Seretta 9mm+001+BER4853 ARCHIVED 	

Portable RFID/Bar Code Scanner for Inventories

Portable RFID/Bar Code Scanners provide many important benefits, including the ability to perform rapid inventories and to FIND missing/needed items. The scanner sends out radio waves that detect items from up to 20' away, so that all weapons and gear in the armory can be quickly inventoried and the location of the items updated in the database as 'in armory'. If an item is missing, the serial # can be entered into the scanner, and it will detect the item and then beep faster or slower based on proximity to the item, to guide the User right to the needed item. Additionally, the scanner supports bar codes, so that bar codes can be placed on shelves, containers, etc. and the exact location of items can be identified (by scanning bar code) when they are placed into storage.



Placing Tags In or On Weapons

The ARMS system has been extensively tested using many varieties of tags for placement within or on weapons, as well as other gear and accessories. There are many styles of weapons tags and positions that the tags can be placed. Specially designed tags are available that are optimized for placement on a metal surface and/or for placement on composite surfaces. Tags are typically adhered within grips using epoxy with aggressive bonding properties, that ensure tags stay in place, even with the most rigorous usage. The Weapons/Gear tags and the epoxy withstand weapons firings, vibration, high/low temperatures, water, cleaning solvents, ultrasonics and typical weapons usage and cleaning processes.

For pistols, best results are typically achieved by placing a small RFID tag inside of the weapon handle, or within the handle cavity, which does not impede the magazine from sliding in or out. For long arms, best results are typically achieved by placing the tag within the grip, or along the exterior surface of the underside of the weapon. Example tags/tag placements are shown below:



Examples of Weapons and Gear Tracked by RFID



RFID Accountability – Item Tracking

The ARMS software is configurable to track unlimited item-types, using the same Server and database, enabling scalability over time with minimal investment. Software configurations are available for managing weapons, gear, inventory, records, assets, vehicles and many other items or classifications of people. Existing software applications can be utilized as-is by customers, or the software can be modified and customized according to each customer's requirements.

Weapons



Gear



Ammo



Materials

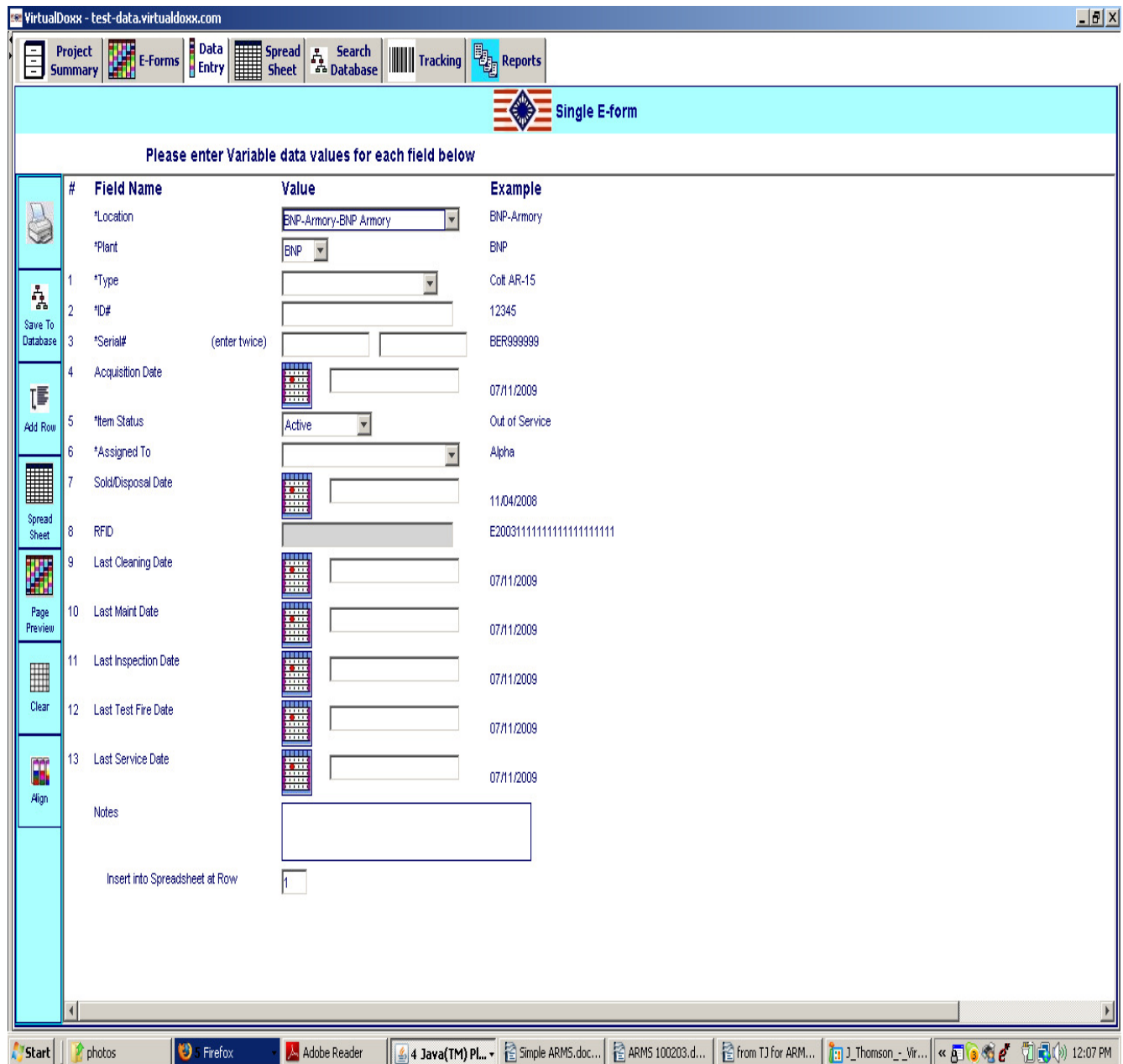


ARMS Armory Management – Example Screen Shots

The ARMS System enables tracking of weapons, gear and officers, as well as weapon inspections, cleanings, test firings and maintenance, along with many additional features and functions. Following are example software screens:

Adding a Weapon or Gear to the Database

The data entry screen is customized with the fields desired by each customer. Each field can be input by keyboard, via a drop-down list of values, with a Yes/No check box, using a pop-up calendar or by reading bar codes or RFID tags . Serial #'s typically must be entered twice, to avoid data entry errors. A note can also be added, and all fields and note text is fully searchable.



Importing Data from Host Application(s)

The “spreadsheet” screen enables data/records to be imported from host applications and/or spreadsheets. The “Open File” button will navigate to the file directory, and the User can navigate to the desired folder for data import, or, the Open File button can have a default-path to any computer folder desired, and will auto-import data/records. Records can also be entered into the spreadsheet via keyboard, for batch input.

VirtualDoxx - test-data.virtualdoxx.com

Project Summary | E-Forms | Data Entry | Spread Sheet | Search Database | Tracking | Reports

Print | Get Fixed RFID Scans | **Data Entry Spreadsheet** | Starting Print Position: 1

Row# & Source	Delete	*Type	*ID#	*Serial#	Acquisition Date	*Item Status	*Assigned To	Sold/Disposal Date	RFID	Last Clea
		Ex: Colt AR-15	Ex: 12345	Ex: BER999999	Ex: 07/11/2009	Ex: Out of Service	Ex: Alpha	Ex: 11/04/2008	Ex: E20031111111111111111111111111111	Ex: 07/11
1	<input type="checkbox"/>	Colt AR-15	1	11111	02/03/2010	Active		Alpha		
2	<input type="checkbox"/>	Bushmaster AR-15	1	22222	02/03/2010	Active		Bravo		
3	<input type="checkbox"/>	Beretta 9mm	1	33333	02/03/2010	Active		Charlie		
4	<input type="checkbox"/>	Elcan Thermal Optic	1	44444	02/03/2010	Active		Delta		
5	<input type="checkbox"/>	ITT Night Vision 6015/PVS-14	1	55555	02/03/2010	Active		Echo		
6	<input type="checkbox"/>	Night Owl Explorer Pro	1	66666	02/03/2010	Active		Fox		
7	<input type="checkbox"/>	Defense Technology MK-3 OC	1	77777	02/03/2010	Active		Golf		
8	<input type="checkbox"/>	Security Keys	1	88888	02/03/2010	Active		Hotel		
9	<input type="checkbox"/>	Super Pass II	1	99999	02/03/2010	Active		Alpha		
10	<input type="checkbox"/>	Primary Radio	1	101010	02/03/2010	Active		Bravo		
11	<input type="checkbox"/>	Back-Up Radio	1	111111	02/03/2010	Active		Charlie		

Restore Data | Sample Data | Remove Dups | Open Queue | Save To Queue | Delete Queue | Print Data | Align

Windows Taskbar: Start | photos | Firefox | Adobe Reader | 4 Java(TM) PL... | Simple ARMS.doc... | ARMS 100203.d... | from TJ for ARM... | J_Thomson_-_Vir... | 12:09 PM

Enter Many Weapons / Items as a Single Batch Input

If items are being entered manually, this screen allows many weapons (and/or gear and accessories) to be entered all at once. As well, the software enables parent/child database relationships, that would enable linking items received and entered to the database to Purchase Orders or Bill-of-Ladings, etc.

VirtualDoxx - test.virtualdoxx.com

Project Summary | E-Forms | Data Entry | Spread Sheet | Search Database | Tracking | Reports | File System

Single E-form

Please enter Variable data values for each field below

#	Field Name	Value	Example
1	*PO#	<input type="text"/>	2008-0001
2	*Date	01/23/2009	9/3/2008
3	*Vendor	<input type="text"/>	Remington Corp.
4	PO Amount	<input type="text"/>	\$123.45

#	Field:	*Type	Qty	*Serial#(s)-comma-sep	Acquisition Date	Actual Cost	*Item Status	*Assigned To
5	Example:	BushMaster XM15E2S 5.56mm	3	11111,22222,33333	9/3/2008	\$123.56	Destroyed	Vault
		<input type="text"/>	<input type="text"/>	<input type="text"/>	01/23/2009	<input type="text"/>	Active	Vault-Vault
		<input type="text"/>	<input type="text"/>	<input type="text"/>	01/23/2009	<input type="text"/>	Active	Vault-Vault
		<input type="text"/>	<input type="text"/>	<input type="text"/>	01/23/2009	<input type="text"/>	Active	Vault-Vault
		<input type="text"/>	<input type="text"/>	<input type="text"/>	01/23/2009	<input type="text"/>	Active	Vault-Vault
		<input type="text"/>	<input type="text"/>	<input type="text"/>	01/23/2009	<input type="text"/>	Active	Vault-Vault
		<input type="text"/>	<input type="text"/>	<input type="text"/>	01/23/2009	<input type="text"/>	Active	Vault-Vault
		<input type="text"/>	<input type="text"/>	<input type="text"/>	01/23/2009	<input type="text"/>	Active	Vault-Vault
		<input type="text"/>	<input type="text"/>	<input type="text"/>	01/23/2009	<input type="text"/>	Active	Vault-Vault
		<input type="text"/>	<input type="text"/>	<input type="text"/>	01/23/2009	<input type="text"/>	Active	Vault-Vault
		<input type="text"/>	<input type="text"/>	<input type="text"/>	01/23/2009	<input type="text"/>	Active	Vault-Vault

Notes:

Insert into Spreadsheet at Row:

Weapon Inspection Screen

ARMS includes the ability to track weapon inspection cycles, to ensure that all weapons are inspected according to prescribed schedules and requirements.

VirtualDoxx - test-data.virtualdoxx.com

Project Summary | E-Forms | Data Entry | Spread Sheet | Search Database | Tracking | Reports

Single E-form

Please enter Variable data values for each field below

#	Field Name	Value	Example
	*Plant	BNP	BNP
1	*Inspected By	TJ Lewis	John T Smith
2	*Type		Cott AR-15
3	*ID#		12345
4	*Serial#		BER999999
5	*Inspection Date		07/14/2009
6	Bore Scope?	<input type="checkbox"/> Y	Y
7	Throat Gauge?	<input type="checkbox"/> Y	Y
8	Head Space Gauge?	<input type="checkbox"/> Y	Y
9	*Inspection Results		Pass
	Notes		
	Insert into Spreadsheet at Row	1	

Windows Taskbar: Start | photos | Firefox | Adobe Reader | 4 Java(TM) Pl... | Simple ARMS.doc... | ARMS 100203.d... | from TJ for ARM... | J_Thomson_-_Vir... | 12:11 PM

Weapon Cleaning Screen

ARMS includes the ability to track weapon cleaning cycles, to ensure that all weapons are cleaned according to prescribed schedules and requirements.

VirtualDoxx - test-data.virtualdoxx.com

Project Summary | E-Forms | Data Entry | Spread Sheet | Search Database | Tracking | Reports

Single E-form

Please enter Variable data values for each field below

#	Field Name	Value	Example
	*Plant	BNP	BNP
1	*Cleaned By	TJ Lewis	John T Smith
2	*Type		Colt AR-15
3	*ID#		12345
4	*Serial#		BER999999
5	*Cleaning Date		07/14/2009
6	*Cleaning Results		Pass
7	*Discrepancy Found		Yes
8	*Verified By		JSUPER
	Notes		
	Insert into Spreadsheet at Row	1	

Save To Database | Add Row | Spread Sheet | Page Preview | Clear | Align

Windows Taskbar: Start | photos | Firefox | Adobe Reader | 4 Java(TM) Pl... | Simple ARMS.doc... | ARMS 100203.d... | from TJ for ARM... | J_Thomson - Vir... | 12:12 PM

Weapon Test-Fire Screen

ARMS includes the ability to track weapon test-firing cycles, to ensure that all weapons are periodically test-fired according to prescribed schedules and requirements.

Please enter Variable data values for each field below

#	Field Name	Value	Example
	*Plant	BNP	BNP
1	Test Fired By	TJ Lewis	John T Smith
2	*Type	Colt AR-15	Colt AR-15
3	*ID#	12345	12345
4	*Serial#	BER999999	BER999999
5	*Test Fire Date	07/14/2009	07/14/2009
6	*TestFireResults	Pass	Pass
	Notes		
	Insert into Spreadsheet at Row	1	

Weapon Maintenance Screen

ARMS includes the ability to track weapon maintenance events, to document each service of weapons and all data/parts related to the maintenance event.

All data relative to maintenance, inspections, cleaning and test-firing saves to the database and to audit trails for each weapon/item.

#	Field Name	Value	Example
	*Plant	BNP	BNP
1	*Maintained By	TJ Lewis	John T Smith
2	*Type	Colt AR-15	Colt AR-15
3	*ID#	12345	12345
4	*Serial#	BER999999	BER999999
5	*Maintenance Date	07/14/2009	07/14/2009
6	*MaintResults	Pass	Pass
	Notes		
	Insert into Spreadsheet at Row	1	

Example Service Tag

SIS
SECRET INTELLIGENCE SERVICE

Name: Bond, James
Phone: (777) 007-0007
Weapon Class: Walther PPK
Serial #: 007
Certification: Other
Cert. Date: 08/20/2007

T300054

SIS
SECRET INTELLIGENCE SERVICE

Date: 08/29/2007
Name: Bond, James
Office: MI-6
Phone: (777) 007-0007
Weapon Class: Walther PPK
Serial #: 007
Description of Malfunction: bio-contamination

Expected Disposition:
Returned to "M" for inspection

Actual Disposition (circle one):
 Repaired for Agent
 Repaired for FTU
 Marked for Destruction
 Repaired for MSD
 Prepared for Factory Refinish
 Repaired & Prepared for Factory Finish
 Prepared for Issue/Stock
 Repaired for Issue/Stock **T300054**

Parts Used:
Barrel
Trigger
Spring

SIS
SECRET INTELLIGENCE SERVICE

RECEIPT

Name: Bond, James
Weapon Class: Walther PPK
Serial #: 007
Received by: Leiter, Felix
Date: 08/29/2007

T300054

Handwritten on the slide: Carl Walther-Waffenfabrik Ulm/IdO, Modell PPK, Cal 9mm kurz 380ACP, WALTHER MADE IN USA

Electronic Forms & Report Formats

ARMS includes the ability to scan-in or design electronic forms into the application, and data entry screens model the data that is input to the form. If the forms are printed-out and additional information is handwritten, the form can be scanned/digitized and attached to the associated database record, and then viewed on computer screens. Additionally, report data can be formatted into electronic form formats matching existing report formats, or can be customized to any report formats desired.


ARMS Receiving Form 070917.pdf - Adobe Reader

File Edit View Document Tools Window Help

1 / 1 60% Find

Inbound Weapons/Gear Shipping Form

WGS Number: S700437



MAIN WEAPONS VAULT

Name/Agency: Federal Bureau of Prisons - Kansas City: 09/16/2007
 Incoming Registry#: Post Shipping From: NOS
 Cable Reference Number: Ship Date: 09/16/2007
 Work Order Number: K500283

WEAPON CLASS:	QTY:	WEAPON SERIAL NUMBERS:
AK47 7.62x54mm	1	18089
Beretta M9 9mm	2	80003, 00019
BushMaster XM15E2S 5.56mm	1	80766
Colt 203 40mm	3	12224, 46445, 87876
FNH M240 M.G. 7.62mm	5	80003, 80077, 78764, 34042, 11081
Glock 19 9mm	4	12224, 34343, 80777, 44483
Heckler & Koch G33 7.62mm	1	80080
Ramington M40.308	3	11122, 20454, 80776
Ruger Mini 14 5.56mm	2	87803, 10018
Uzi SMG 9mm	1	80708

SERIALIZED GEAR

GEAR TYPE:	QTY:	GEAR SERIAL NUMBERS:
ACOG	1	01008
Suppressor	2	15485, 00019
AMP922	1	80786
5050 Binoculars	5	11122, 76547, 87817, 12204, 45816
Eotech	3	80703, 80445, 11081
AMP95-14	1	78777
Laser	4	13384, 11123, 10884, 77778

Services Requested:

New from Manufacturer

Return To Stock Reason:

Services Performed:
 Performed LTI Y
 Contacted By _____
 on _____
 Not In Global On
 BSAC Initial Issue
 Temp Loan

Acknowledge receipt of equipment by Vault Personnel:
 Name (Print): Jimmy Franks - Pe
 Date: _____
 Signature: _____

Start Time: 09/17/2007 08:14
 End Time: 09/17/2007 10:45

ACCESSORIES

Qty:	Accessory:
10	Protective Vest
5	Handcuffs w/ Key
6	Magazines, Glock
7	Holder(s)
10	Kalib(s)
15	Galon w/holder
25	Magazine Pouch(es)
100	PRS Pins
12	Cleaning Kit
5	Fanny Pack

Make Copy of this form to Acknowledge receipt of equipment and send back to:
 *** MAIN WEAPONS VAULT ***
 1 Main St
 Washington, DC 20001

Signature: _____
 Name: _____
 Office/Phone: _____
 Date: _____
 Outgoing Registry Number(s) _____ thru _____

Weight: _____
 Dimensions: _____
 Post Shipping To: Vault
 Hold For: Inspection by Armorer

Database Searches and Weapon/Gear Record Detail (Data and Meta-Data)

Each serialized item in the database can be searched to display a full view of data and meta-data elements. Buttons along the left of the screen enable task accomplishment and viewing of the records Audit Trail/History. Data entry screens/electronic forms for events related to weapons can be launched from this screen, and will auto-populate data fields to ensure integrity of data (note buttons along bottom left of screen, that launch data entry screens for cleaning, service, test firing, inspection and maintenance.

The screenshot displays the VirtualDoxx ARMS Item Record interface. The window title is "VirtualDoxx Item: 5319144". The interface is divided into several sections:

- RECORD INFO** as of 12/22/2010 18:01:39
- RECORD FIELDS**:
 - Barcode: W500022
 - *Type: Smith & Wesson 19.357
 - *Serial#: 2222
 - Acquisition Date: 08/06/2009
 - Actual Cost: [Empty]
 - *Item Status: Active
 - *Assigned To: Vault-Vault
 - Sequence: W500022
- Standard Fields(Meta-data)**:
 - Record Seq#: 5319144
 - Record ID: Smith & Wesson 19.357+2222
 - Sequential#: W500022
 - Description: Print Item
 - Record Status: Active
 - E-Form: ARMSItem
 - Classification: [Empty]
 - Location: Vault-Vault
 - Home Location: Vault-Vault
 - Printed: 08/06/2009 13:00:46
 - Last Transfer Out: [Empty]
 - Last Return: [Empty]
 - Last Out Time Limit: [Empty]
 - Destroy Date: [Empty]
 - Destroy Q: [Empty]
 - Destroy Method: [Empty]
 - Created: 08/06/2009 13:00:46
 - Created By: ARMS Demo
- VirtualDoxx ARMS Item Record**:
 - Type: Smith & Wesson 19.357
 - SN: 2222
 - Acquisition Date: 20090806
 - Actual Cost: [Empty]
 - Item Status: Active
- Barcode**: W500022
- Image**: A photograph of a Smith & Wesson 19.357 handgun.

The interface includes a sidebar on the left with buttons for "Print", "Transfer", "Audit Trail", "Queue", "Remove from Q", "Lock", "Update", "Email", "Print Queue", and "Service Tag". A progress indicator on the right shows 300% completion. The Windows taskbar at the bottom shows the Start button and several open applications, including "VirtualDoxx | R...", "Downloads", "OpenOffice...", "Military Case St...", and "VirtualDoxx - te...". The system clock shows 6:05 PM.

Electronic Signature Pads/Electronic Signatures

ARMS includes the ability to capture electronic signatures related to weapons, gear and ammo transfers. When items are transferred to an officer or other recipient, the items being transferred display as rows of data on the signature pad display. This enables recipients to validate that the items being transferred to their custody are accurate. Upon validating the items being received are displayed as rows of 'item transfer data' on the signature pad, the recipient signs the signature pad and the electronic signature saves to and displays in the Chain-of-Custody (Audit Trail) report. This provides maximum accountability of weapons and gear issues and returns.




Chain-of-Custody / Audit Log

All events related to weapons and gear, from acquisition through final disposition, are tracked in audit logs. When issuing weapons and gear to officers, electronic signatures can be captured, and will save to the audit log. The chain-of-custody log can be printed and will display signatures, to validate custody of items over time.

VirtualDoxx Record Audit Trail: 4776825 - AK47 7.62X54mm+111

AUDIT TRAIL FOR RECORD 4776825 - AK47 7.62X54mm+111

Audit Trails: Oldest Item: Newest Item:


 Views
 Updates
 Transfers

Audit Seq#	Date/Time	Type	Key	Action	User	Location	Old Value	New Value	IP
1805441	12/04/2008 06:50:28	Save Linked ...	4776825	Save Linked Record - ...	ARMS Demo	Vault	ARMSPurchase	ARMSitem - +AK47 7.62X54mm+111	Vdoxx-Vista001/192.168...
1805461	12/04/2008 07:42:12	View Record	4776825	View Record	ARMS Demo	Vault			Vdoxx-Vista001/192.168...
1805462	12/04/2008 07:42:12	View Record	4776825	View Record Pop-up	ARMS Demo	Vault	AK47 7.62X54mm+111	ARMSitem	Vdoxx-Vista001/192.168...
2047153	01/23/2009 13:11:19	View Record	4776825	View Record	ARMS Demo	Vault			VDOXX-VISTA002/69.13...
2047154	01/23/2009 13:11:19	View Record	4776825	View Record Pop-up	ARMS Demo	Vault	AK47 7.62X54mm+111	ARMSitem	VDOXX-VISTA002/69.13...
2047155	01/23/2009 13:13:45	Transfer	4776825	Transfer Record	ARMS Demo	Warder	Vault	Warder	VDOXX-VISTA002/69.13...
2047156	01/23/2009 13:14:44	Update Record	4776825	Update Record	ARMS Demo	Vault	Loc: Warder	Loc: Vault+DestroyDate: 12/31/2025	VDOXX-VISTA002/69.13...
2047157	01/23/2009 13:15:25	Status Change	4776825	Change Record Status	ARMS Demo	Vault	Active	Inactive	VDOXX-VISTA002/69.13...
2047158	01/23/2009 13:15:44	Transfer	4776825	Transfer Record	ARMS Demo	OUT	Vault	OUT	VDOXX-VISTA002/69.13...
2047159	01/23/2009 13:16:00	Transfer	4776825	Transfer Record	ARMS Demo	Vault	OUT	Vault	VDOXX-VISTA002/69.13...
2047160	01/23/2009 13:16:11	Status Change	4776825	Change Record Status	ARMS Demo	Vault	Inactive	Active	VDOXX-VISTA002/69.13...
2047161	01/23/2009 13:16:23	Status Change	4776825	Change Record Status	ARMS Demo	Vault	Active	Destroyed	VDOXX-VISTA002/69.13...
2047162	01/23/2009 13:16:57	View Record	4776825	View Record	ARMS Demo	Vault			VDOXX-VISTA002/69.13...
2047163	01/23/2009 13:16:58	View Record	4776825	View Record Pop-up	ARMS Demo	Vault	AK47 7.62X54mm+111	ARMSitem	VDOXX-VISTA002/69.13...

Reports

ARMS includes a complete reporting sub-system that executes direct database queries, such as all items, all items 'out', inspection/cleaning/test firing histories, inventory reports, and inventory exceptions reports. ARMS includes standard and custom reports and displays data in .csv, .html and/or spreadsheet formats.

Standard Reports

- Shift Inventory
 - Shift Exceptions AM
 - Shift Exceptions PM
 - Monthly Cleanings
 - Quarterly Cleanings
 - Cleanings by Dates
 - Testing Firings by Dates
- Quarterly Maintenance
 - Semi-Annual Test Firing
 - Annual Inspection
 - All Cleanings
 - All Test Firings
 - Maintenance by Dates
 - Inspections by Dates
- All Inspections
 - All Service Tags
 - All Maintenance
 - RFID Scans by Date
 - RFID Scans by Date/Time
 - Service Tags by Dates
 - All Items

Item Type	ID#	Serial#	Current Location	Last RFID Scan	Notes
Back-Up Radio	BR2260	2260	BNP-Armory		
Back-Up Radio	BR2261	2261	BNP-Armory		
Back-Up Radio	BR2262	2262	BNP-Armory		
Back-Up Radio	BR2263	2263	BNP-Armory		
Back-Up Radio	BR2264	2264	BNP-Armory		
Back-Up Radio	BR2265	2265	BNP-Armory		
Back-Up Radio	BR2266	2266	BNP-Armory		
Back-Up Radio	BR2267	2267	BNP-Armory		
Back-Up Radio	BR2268	2268	BNP-Armory		
Back-Up Radio	BR2269	2269	BNP-Armory		
Back-Up Radio	BR2270	2270	BNP-Armory		
Back-Up Radio	BR2271	2271	BNP-Armory		
Back-Up Radio	BR2272	2272	BNP-Armory		
Back-Up Radio	BR2273	2273	BNP-Armory		
Back-Up Radio	BR2274	2274	BNP-Armory		
Back-Up Radio	BR2275	2275	BNP-Armory		
Back-Up Radio	BR2276	2276	BNP-Armory		
Back-Up Radio	BR2277	2277	BNP-Armory		
Back-Up Radio	BR2278	2278	BNP-Armory		
Back-Up Radio	BR2279	2279	BNP-Armory		
Back-Up Radio	BR2280	2280	BNP-Armory		
Back-Up Radio	BR2281	2281	BNP-Armory		

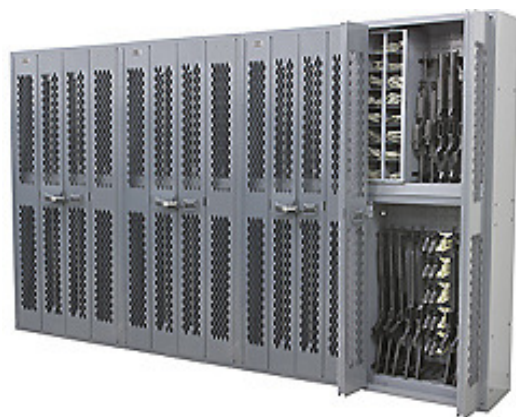
Security Mechanisms

RFID read-zones at armory doorways / issue-windows can include alarm/light-stack, that are triggered based on business rules. For example, if an unauthorized person enters the armory, or, if an unauthorized person leaves the armory with a weapon, or, if a person forgets to return an item during weapon/gear post-shift returns, etc. If business rules are violated, the alarm sounds and lights flash, and SMS text message or email alerts can be automatically triggered.

Video/camera units can also be implemented as components of RFID read-zones, which, as with alarms/light-stacks, are triggered based on business rules. Any event that occurs that is designated as a business-rule to capture still pictures or running video, will trigger the device to capture appropriate content to create proof and evidence of the event.



Weapon racks and lockers can be equipped with 'smart locks', that control access and keep track of anyone that opens the rack or locker. Special computerized keys are encrypted with a person's ID #, and any locker that the key is used to try to open, or to open, is stored in the locks memory. Data from the lock, including all attempts to open (and who), each time a locker/cabinet was opened, and the date/time are all exported to the ARMS database management system and its chain-of-custody audit logs.



Technical Requirements

Server / Deployment

ARMS is available hosted in a 'world class', highly secure data center, including Production Server and Back-up Server, as well as nightly back-up to external media for Disaster Recovery. ARMS can also be installed in data center(s) in any physical locale. The software is available to any Internet-connected computer using any standard browser.

Alternatively, ARMS can be installed on local Server(s) {behind firewalls} and accessed by any network-connected computer. ARMS is cross-platform, and is available with all best-of-breed open source tools, including Linux, Java and MySQL, enabling enterprise-class implementations without any licensing or maintenance fees. ARMS is also fully supports Microsoft operating systems, SQL-SVR and LDAP. Workstation computers are thin-client, only requiring a browser and recent version of Java.

Server Requirements:

RAM – 4GB+

Processor – 1 dual core or quad core

Hard Drive – 2 x 500GB for RAID1

- Java 6.0 JDK (1.6)

Networking Requirements:

- Static IP Address Compatible with Network
- Network Mask
- Network Gateway IP Address
- Domain Name Server IP Addresses
- Domain Name (optional)
- DNS Entry pointing to Server, unless HOSTS files will be updated per workstation, or use IP Address for Server Name

Workstation Requirements:

- RAM – 2GB+
- Recent version of Java

RFID requirements:

- portable scanner requires workstation computer where software will be installed for syncing with ARMS (data upload and download when synced via USB connection)
- Fixed RFID readers that enable RFID read-zones require network connection and power source

Virtual Doxx Corporation Representative Customers

U.S. Air Force

U.S. Department of State

U.S. Department of Homeland Security

U.S. Department of Transportation

U.S. Department of Labor

U.S. National Oceanic and Atmospheric Administration

Government of Dubai Civil Defense

Government of Nigeria

Government of Tanzania

Government of Canada

Government of Trinidad-Tobago

State of Arizona Crime Lab

State of Georgia Police Department

State of New York Court System

State of New Jersey Court System

State of Nebraska Court System

State of Nebraska Prosecutor's Office

State of Nebraska DA's Office

State of Maryland Prosecutor's Office

State of Washington School System

Coca-Cola

Apple Computer

Paramount Studios

BankUnited

Walkers Global Law Firm



Armory Management & Weapons Accountability System

Radio Frequency (RFID) Weapons Tracking System

Statement of Work

&

Deliverables

Product Description

The Armory Management System must establish a SQL database management system with data views for weapons/gear, ammunition, officers/staff, posts, staff certifications, weapons maintenance, weapons inspections, weapons cleanings, weapons test firings, and/or other data views as may be required. Software must include the ability for unlimited data fields and data views, including the ability to generate unlimited reports meeting existing and/or preferred standards, by executing SQL queries and complex multi-table extracts. Software must be COTS (Commercial Off-the-Shelf) software, and be fully configurable and customizable, including unlimited task queues, task schedule tracking, data views, data fields, label designs and printing, electronic form designs and printing, report designs and printing and other common weapons tracking system functionality, with the ability to fully deploy and implement within 30 days of contract execution.

Technical Requirements

- software must support installation on Windows, Linux or Solaris/Unix operating systems.
- software must support Microsoft SQL-SVR or Oracle MySQL databases.
- software must be J2EE/J2SE Java environment supporting Java 7
- server stack software must be available utilizing license-free software, such as Linux, Java, and MySQL
- software must support LDAP/Active Directory integration.
- software must have ability to trigger emails to host email systems.
- software must include a repeatable 'installer'.
- application software must enable rapid updates by uploading no more than 5 files.
- software must support scheduled and 'hot' database backups.
- software must be scalable to essentially unlimited Armories, Users and Weapons/Gear/Ammo items
- workstation software must be thin-client and only require recent version of Java and browser. No fat client software or workstation software license/support fees are acceptable.
- software must be available externally hosted as a 'cloud-based' solution utilizing commercial data center.

Software / Database Management System

- software must be COTS (Commercial Off-the-Shelf) software, and fully customizable must have easy-to use record input screens (with customer defined fields) that enable new records to be entered.
- must support unlimited data fields and field inputs must include:
 - text entry
 - entry by selecting from a project defined drop-down list
 - entry by popping-up a calendar and choosing a date
 - entry by selecting a 'Yes' checkbox
- single data entry screen must have ability to add record to database, and/or the ability to add the data to a spreadsheet for batch database input, label printing and/or electronic form printing. Must also have the ability to enter data for weapon maintenance events, and print out a weapons tag including services and parts used for maintenance of weapons.
- each record added to the database must have the ability to automatically print one or more weapon tags, electronic forms and/or custody receipts for each record entered
- must have import capabilities for auto-database population using host database or spreadsheet files, including:
 - ad hoc by enabling User to navigate to electronic folder and double-click on a file (containing new records)
 - nightly, automatic update
 - timed, interval updates, such as every minute or every hour
- must support at least 25 different, industry-leading UHF RFID tag styles, optimized for maximum RFID

- detection range for each item-type to be tagged and tracked, such as pistol, long-arm, radio, taser, key fob, OC spray, baton/asp, pelican cases, vests, night vision, gas masks, etc.
- must include weapon/gear tracking screen that enables single or multi-item transfers In and/or Out of the armory
 - must include weapon/gear status-control screen that enables single or multi-item status change(s)
 - must support electronic signatures, to transfer custody when issuing weapons/gear, with validation of custody-transfer via signature of person that received items
 - electronic signatures must save to audit log/transaction history (chain-of-custody log), and be printable with signature display to authenticate chain-of-custody
 - must include Search screen that enables Users to search for records using any data or meta-data field, or note field text
 - must support wild card database searches
 - must allow single, multiple contiguous and/or multiple non-contiguous records displayed to be selected for required actions, including the ability to Queue the record(s) for task fulfillment
 - must include ability to track maintenance cycles and automatically Queue weapons that are due for maintenance / service, and create database record documenting the maintenance provided, by whom and the parts
 - must include ability to track inspection cycles and automatically Queue weapons that are due for inspection, and create database record documenting the inspection results
 - must include ability to track cleaning cycles and automatically Queue weapons that are due for cleaning, and create database record to document the cleaning event
 - must include ability to track test firing cycles and automatically Queue weapons that are due for test firing, and create database record to document the test firing event
 - must include ability to print repair tickets, with tear-off receipt for handing to person that presented their weapon for repair, and a tear-off hanging tag for use while weapon is in custody of armory/repair staff, and section for documenting the repair information, and log repair event data to the database
 - must support unlimited workflow/task Queues (record 'placeholders')
 - must include native reporting sub-system that executes SQL-queries and renders .csv or .html report data, and cannot require 3rd party reporting software
 - must support bar coding, UHF RFID and Active RFID technologies
 - must support desktop USB and network RFID readers and scanners
 - must support parent child relationships, such as 'Weapon/Gear' and 'Sub-Components of Weapon/Gear' (such as a radio 'Parent' and battery 'Child')
 - must enable assignment of weapons/gear to staff, and tracking of 'assigned' and 'current' location of weapons/gear
 - must include the ability to custom-design electronic forms and populate-print electronic forms
 - must include the ability to scan and/or attach documents to the database
 - must include the ability to display a photo of officers/staff when viewing database records
 - a single database instance must be scalable to unlimited item types and data views including weapons/gear/ammo, materials, assets, documents, vehicles or other items and people-types

Capability Checklist

The below Capability Checklist lists requirements. Vendors that respond in the affirmative to any of the items listed in the Capabilities Checklist, but do not implement those features or provide those capabilities within 6 weeks of contract award, are subject to contract cancellation and potential fees for damages at the sole discretion of **XYZ Organization**. For purposes of the below capability checklist:

M = Mandatory

H = Highly Desired

Requirements indicated as M = Mandatory must be available for implementation within 6 weeks of contract award. Requirements indicated as H = Highly Desired are not mandatory, but vendors that can provide these capabilities will receive favorable consideration when evaluating **Tender** responses (see **Section x.x** for factors and weight in **XYZ Organization's** evaluations of proposals)

Vendors in responding must indicated their solution's suitability for **XYZ Organization** by providing an adequate narrative and by indicating one of the following values:

Y = Yes

N = No

E = Not immediately, but can be developed, tested and implemented in proper working order within 6 weeks.

N = No

F = Can be developed in the future at additional cost and/or time.

#	Requirement	M, H	Y, N, E, N, F	Vendor Solution Suitability
1	Supports Windows, Linux and Solaris Operating Systems	M		
2	Supports Windows, Mac and Linux workstations	M		
3	Supports Microsoft SQL-SVR and Oracle My-SQL	M		
4	Available by installation on local server or by access via commercial data center via the Internet (cloud-based computing)	M		
5	Database supports multiple layers of parent/child relationships including weapons/magazines, pelican case/items,	M		

	etc.			
6	Supports unlimited Data Views within a single database instance			
7	Supports use with computers, tablets and phones	H		
8	Supports 1D Bar Codes and UHF RFID	M		
9	Supports 2D Bar Codes, Active RFID and WiFi RFID	H		
10	Supports Electronic Form generation and version control	M		
11	Supports attachment of documents, images, photos, video and similar content	M		
12	Enables enrolling database records by auto-polling data from host applications for auto-import or by entering data by keyboard	M		
13	Enables data entry using a single entry screen that enables single record entry or by aggregation of new records in batch mode to Spreadsheet screen for processing	M		
14	Enables data entry using a spreadsheet screen for batch processing	M		
15	Enables imported data to auto-queue in processing/workflow Queues	M		
16	Enables printing of multiple labels and electronic forms based on a single data record or batches of database records to multiple printers and printer trays	M		
17	Supports ink jet and laser printers for printing information asset labels including primary index variable color-coding, text fields and bar	M		
18	Includes discreet Casual User Interface for staff to look-up weapons/gear/ammo items and input results relative to inspections, test firings and cleanings	M		
19	Includes automatic email notifications to designated administrators when weapons are due for inspection, test firing or cleaning	M		
20	Includes workstation manual tracking of weapons/gear/ammo utilizing USB-connected scanner supporting RFID and bar coding	M		
21	Supports USB-connected RFID scanners being named in database as a location,	M		

	person or workflow process, with automatic location updates within the database when a RFID tagged item comes within proximity of the scanner			
22	Supports Network-connected RFID readers and antennas to establish passive detection zones, with each detection zone named in the database as a person, place or workflow step with automatic database updates reflecting any items or persons passing through any detection zone	M		
23	Supports Network-connected RFID readers and antennas at armories with motion sensors for directionality and alarms/lights/video cameras supported for security controls	M		
24	Supports Portable Bar Code Scanners with Application Software residing on the scanner for inventory and tracking purposes	M		
25	Supports portable Scanners supporting both 1D bar coding and UHF RFID and with Application Software residing on the scanner for inventory and tracking purposes, and for FINDING missing items, with range of approximately 7 meters that can scan 100's of tagged items within 3 seconds	M		
26	Supports Electronic Signature Pad and display of rows of data for each item being issued or returned, and the ability to attach signatures to the chain-of-custody audit trail rows of transaction data, and signatures printable when the audit trail history is printed	M		
27	Supports tracking with Active RFID technology	H		
28	Supports tracking with WiFi technology	H		
29	Includes ability to define an approved time-period prescribed for having weapons/gear/ammo in-possession and generates automatic emails to person(s) that have had items that are overdue for return	M		
30	Supports 'Status' tracking throughout weapons/gear/ammo life cycle, including new, issued, in-maintenance, to-factory for repair, destroyed, etc.	M		

31	Includes ability for staff to query the database using an administrative software interface or using a casual user interface to determine the location(s) of weapons/gear/ammo and Request needed items	M		
32	Includes ability for Request Queues to print a pull-list and print the list in alphabetic, straight numeric or terminal digit sequence correlating to the physical organization of items (for example, weapon number sequence)	M		
33	Establishes a chain-of-custody audit trail update each time a record is viewed, updated, moved, status changes, workflow occurs or any similar event including the person that performed the event, the computing device's IP address, time and date	M		
34	Includes standard reports and unlimited custom reports executed as SQL queries or comparable and including complex multi-table joins	M		
35	Includes bi-directional interface data interchange with host applications using shared network folder, web services or similar methodology	M		
36	Enables ability to customize the GUI (Graphical User Interface) and database tables based on customer-specified setup, data, workflow and reporting requirements, and as such the application software is fully customized and is not 'canned'	M		
37	Entire administrative software interface and weapon/gear/ammo issue and return system is fully touch-screen enabled and does not require use of keyboard or mouse	M		
38	Must include a listing of post-assignments and perform database look-ups keyed-to recipient being issued weapons/gear/ammo and display items required for post and weapons assigned to the recipient	M		
39	Must display photos of all items to be issued and must look-up in database the recipient's certification status and	M		

	'arm/do-not-arm' status and must highlight in red any weapons that the recipient is not supposed to receive and the transfer cannot be performed unless the Armorer overrides the do-not-arm status			
40	Must include a database table of all magazines and cross-reference each magazine to the specific weapons(s) the magazines are to be issued-for and during transfer transaction the system must enable the Armorer to touch a picture of the magazine and get a drop down list of only the magazines that are in the armory and that are approved for use with the weapon(s) being issued and that allows the armorer to touch the part # for authenticating the transfer	M		
41	Any gear or weapons that are not tagged, when being transferred, must display as photos and enable the armorer to touch the photo and display a listing of the part #'s of only the available items currently in the inventory and that allows the armorer to touch the part # for authenticating the transfer	M		
42	Windows and doorways must support implementation of flashing lights, alarm and video camera based on business rules, such as 'weapon leaving armorer but no ID card recognized'	M		
43	Supports SGVA signature pads including the ability to display rows of data for each item being transferred for validation by recipient and requiring signature to complete the transfer or require override by the armorer			
44	Supports dome USB-connected bar code scanners for hands-free ID card bar code scanning			
45	Upon contract award, vendor will extensively test tags with RFID issue/return windows and armory doorways, to validate that tags are detected 100% of the time when traveling through doorway or window, and Customer can cancel the contract at no cost to Customer should 100% tag-reads			

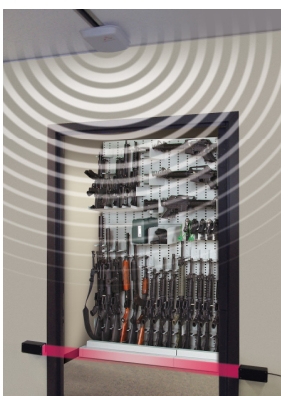
	not be able to be demonstrated during pre-implementation testing			
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Hardware

System must support 1D and 2D Bar Codes, UHF RFID (Euro frequency) and Active RFID, including all components itemized below:

- USB bar code scanners
- Portable bar code scanners
- USB RFID scanner with motion sensor and single-scan tag detection
- USB RFID/Bar Code scanner that enables multi-tag scans from-a-distance
- RFID Issue Windows and Doorways, including motion sensors, RFID Reader and RFID Antennas
- Lights, Alarms and Video Cameras for rules-based activation

RFID Armor Doorway and Issue-Window Detection-Zones



- system must support RFID infrastructure at all armory entrance/exit points to passively track transfers and returns
- RFID must be able to detect ID cards and Weapons/Gear/Ammo items and track in the database both the person and the items without requiring door access control systems
- reader must include Linux operating system

- reader must include at least 4 inputs and 8 outputs, and specifically must support:
 - up to 4 antennas
 - at least 2 proximity sensors
 - light stack / alarm
 - camera/video
 - integration with flat/touch screen computers for displaying scanned items
 - integration with electronic signature or biometric pads to validate weapon/gear transfers
- proximity sensors must trigger reader to turn-on antennas for a defined # of seconds
- antennas cannot emit radio waves unless triggered by proximity sensors
- each antenna must have ability for individual attenuation
- reader/antennas must be able to recognize both item and people RFID ID #'s/tags
- reader must connect to network and automatically update database with 'reads'/data
- antennas must have the ability to scan up to approximately 40' +

RFID Reader



Technology:	UHF Worldwide Frequency
RoHS:	EU 2002/95/EC compliant
Inputs/Outputs:	0-24VDC rail. 4 inputs. 8 outputs (500mA capacity)
Operating System:	Linux
Application Software:	Ruby (used to trigger alarm based on business rules)
Supported Tags:	EPC Gen 2; ISO 18000-6c
Connectivity:	Connects to Network and Auto-Uploads RFID data
LAN Protocols:	TCP/IP, NTP, DNS, DHCP, SNMP
Communications:	LAN TCP/IP (RJ-45), RS-232 (DB-9 F)
Size:	8" x 8.3" x 1.8"
Weight:	4.4 lbs
Read Distance:	Up to 40'
Device Support:	Up to 4 antennas. Proximity Sensors. Alarm. Light Stack. Camera/Video

RFID Antenna



Technology: UHF Worldwide Frequency
Radio Wave: Circular or Directional
Sizes: 1' to 7' height, 1' width and 1" depth
Heights: 1' to 7' heights must be available for full body scanning

Proximity Sensor (establishes directionality; turns-on Reader which turns-on Antennas)



Design: One-piece, rugged sensor with advanced optical performance
Detection: Long-range adjustable field sensors
Sensing: Two-turn, logarithmic adjustment of sensing field cutoff point from 0.2 to 2m
Beam: Infrared, visible red LED or laser sensing beam options
Output: 10 to 30V dc and bipolar NPN/PNP outputs or 12 to 250V ac and 24 to 250V ac with e/m

Lightstack/Alarm



Size: 40mm diameter
Input Voltage: AC/DC24V // - AC90-250V
Functions: Continuous, flashing. Alarm is optional.
Alarm: Selectable, single-tone, intermittent (slow or fast beep) alarm, 85dB (at 1m)
Voltage: Direct voltage control for DC24V, continuous and alarm functions
Protocol: SNMP
Cooperation: Integrates with multiple kinds of network devices that support SNMP protocol
Send Messaging: Ability to send SNMP Trap Exclusive MIB loaded
Connectivity: Network connected to control itself with SNMP Ping Monitoring
Monitor: Up to 16 network devices using Ping Corresponds to RSH Command
Security: Database integration to trigger warning light, flashing and buzzer as warning when unauthorized event or access is being attempted

IP Video Camera



Resolution: 1920(H) x 1080(V)
Lens: 3.3 – 12mm
IR LED: 12 pc Super Plus Led
IR Distance: 10 – 15m
Local Video Output: BNC 75 ohm
Network Interface: RJ-45 10/100 Base-T
Network Protocols: RTP/RTCP, TCP/UDP, IPv4, HTTP, RTSP, RTP, RTCP
Network Functions: DHCP, DNS Client, PPPo E, DDNS
Electrical: DC 12/POE

Hands-Free Bar Code Scanner



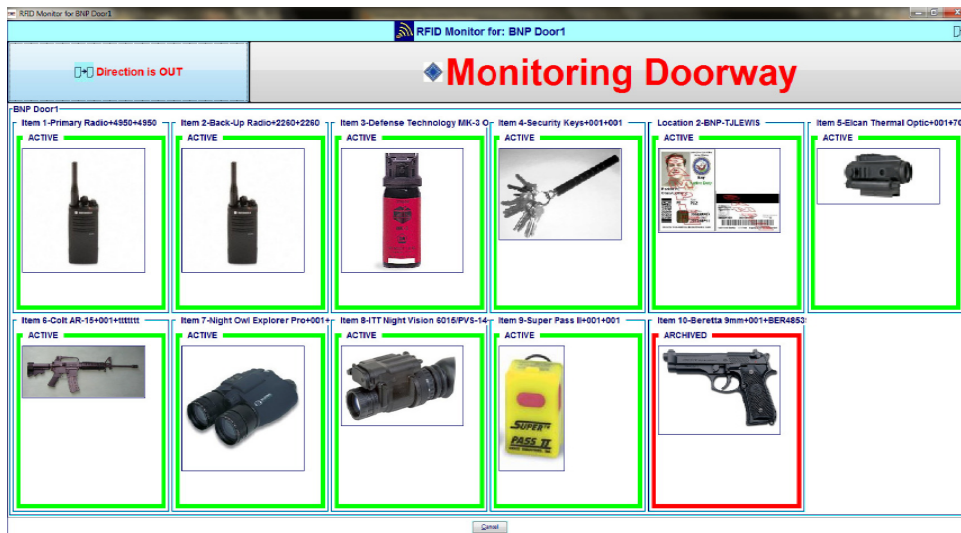
Data Input: Scans bar code on personnel ID card to initiate transfers and returns
Triggers: Triggers database lookup of post assignments and weapon assignments
Scan Operation: Fully automatic
Data: Custom edit bar code data for keyboard emulation
Laser Power: 0.663mW
Scan Depth: up to 215mm
Scan Width: 60mm
Scan Speed: 1200 scan lines per second
System Interface: Keyboard wedge, RS232, OCIA, USB
Power: 1.1 W
Input Voltage: 5 VDC

Electronic Signature Pad



Data Display: Displays rows of data for each item being transferred or returned
 Database Save: Signatures save to chain-of-custody transaction history
 Sensor Technology: Tempered glass with active pen
 Connectivity: USB, Serial, Ethernet
 Resolution: 377 pps, 420 ppi
 LCD: TFT Color VGA 640 x 480
 Text Display: 1024+ characters per screen
 Viewing Contrast: 300:1

Touch Screen Software Interface



Device: Touch screen
 Display: Photos of items required for post and assigned to officers receiving items
 Weapon Validation: Automatic look-up of weapon certifications and arm/do-not-arm status
 Alerts: Highlights in red weapons that are not approved for issue
 Pop-up Lists: Displays list of approved magazines or other items being issued that are in-armory

Navigation: Touch navigation without requiring keyboard or mouse

RFID/Bar Code Portable Scanner



Technology: UHF RFID Euro, 1D bar codes
Operating System: Windows CE 5.0, Android
Range: 6m
Software: Armory Inventory and Item-Find
Integration: USB batch upload, Bluetooth, WiFi
Ruggedness: 1.5m drop-to-concrete, waterproof, dustproof
Memory: RAM 512 MB/ROM 512 MB
Display: WVGA TFT LCD 480W x 800L
Audio: Speaker, Microphone, Headset
Battery: Lithium-ion 3.7V/2,260mAH



Desktop RFID/Bar Code Scanner



Operation: Plug-in-play, no programming required
Technology: 1D bar code, UHF RFID
Input: Keyboard emulation
Scanning: Many tagged items at a time from distance of 1+m
Software: Commissions tag #'s to database matched-to weapon, gear, ammo #'s

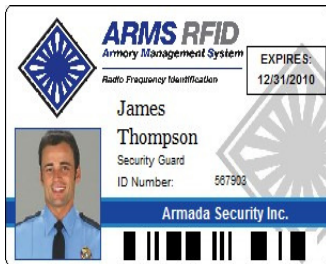
Weapons/Gear/Ammo RFID Tags



em

Technology: UHF RFID Euro and worldwide
Size: 1 7/16" x 7/16" x 3/32"
Range: 6m
Assortment: Multiple tag types and sizes available and optimized through testing validation for application to weapons, gear and ammo

RFID Name Badge



Technology: UHF RFID Euro and worldwide
Size: 3.5" x 2 1/8"
Range: 8m
Printing: Text fields, bar code and photo