NoxCore Software Feature List

NoxCore is an item tracking system. A unique RFID (Radio Frequency ID) tag is placed on each asset/item and those items are then tracked by the NoxCore software system.

The NoxCore uses ATA's (Asset Tracking Appliances / Servers), RFID Readers, Video Cameras, and remote sensors ranging from sonar systems to electronic eyes.

Listed here are the capabilities and features of the NoxCore product.

Base Capabilities – NOX-COREX

Network – IP and Power Over Ethernet (PoE)	Nox works via an open-standard TCP/IP based network and does not interfere with other devices on this network. All RFID readers, cameras, and alarms support PoE (Power over Ethernet) for ease and durability of installation.
Local or Cloud	Nox can be installed as a local, private server (ATA or Asset Tracking Appliance) or it can operate via the cloud. Your local server can also become a cloud server for your remote locations. Each of these has advantages: Local for keeping your data on your local private network or cloud for ease of support and deployment.
RFID Fixed Reader Support	Nox supports these RFID readers via TCP/IP and PoE (Power Over Ethernet): • Impinj R220/R420 • ThingMagic/Trimble Astra, M5, M6 • Motorola XR-Series • Convergence Systems Limited CS203
RFID Mobile Reader Support	(*NOX-COREW Feature*) Nox supports the CSL CS101 in both Wi-Fi and USB Off-Line syncing for data exchange.
Scalability	The ATA (Asset Tracking Appliance) is a plug-and-play NoxCore device. Plug this into a network and it will configure itself to manage all your item movement. Custom configurations can be quoted for larger installations. Remote Sensors refer to: RFID Readers, Cameras, Terminals, Sonar, and other triggers. Nox-CoreX can be deployed on your Windows Server 2008 and Windows 7 Server. Nox can run in a VM. A typical environment (16GB RAM, i7 or better processor) can handle more than 100 RFID sensors.

SimplyRFiD also offers pre-configured hardware options for ease of deployment:
Nox-ATAMini: Up to 4 remote sensors
Nox-ATA300: Up to 50 remote sensors
Nox-ATA300X: Up to 500 remote sensors
Nox-ATACloud: Unlimited

Cameras

Nox works with most Axis and Lilin brand IP-based cameras.

Conveyors

Nox can control an automated tracking conveyor for counting item movement and determining what is in a box. A conveyor will only work on Nox-ATA300's and ATA300X's. *(Nox-CoreW Feature)*

Pack Stations

Nox can control an automated packing table for counting item movement/box content. Each pack station counts as a remote sensor, for scaling purposes, and works with all Nox systems. *(Nox-CoreW Feature)*

Printers

Nox supports the printers via native-level control code:
- Zebra R110Xi Rev3 – 200DPI, 300DPI
- Zebra R110Xi Rev4 – 200DPI, 300DPI
- Zebra 105SL
- Datamax H-Series 300DPI

Database

Nox supports:
- MS SQL Server 2008 R2
- MS SQL Server 2011
- MS SQL Server Express 2008 R2

Operating Systems

NoxCore server supports:
- Windows 2008 Web Server
- Windows 2008 Server
- Windows 7 Ultimate for smaller installations

Nox client user interface supports:
- Current / latest releases of web browsers on any operating system or handheld PDA.

Nox devices (terminals) include custom, appropriate OS.

Security Levels

Nox supports 3 security levels for browsing data:
- Admin – Create users and alter configuration
- Editor – Create, Read, Update, and Delete Data
- Read-Only – Browse asset status and history

Languages	Nox operates in English and Spanish
Support	Emergency support is available 24x7 in English and Spanish. Standard support is available 9am to 5pm, Monday through Friday in English and Spanish
Made in the USA	The NoxCore Software is designed and programmed in the United States of America.

Performance Metrics

RFID Read Rate	Most current hardware selections / target installations can handle 50+ RFID Readers. For pre-configured Nox hardware: ATA-300: More than 1,000 unique tags per second can be received and processed by Nox, continuously. ATA-300X: More than 4,000 unique tags per second can be received and processed by Nox, continuously.
Video Processing	High-speed disk is recommended. Most common, low-cost hardware can handle 15-30 cameras with little performance issue. For larger installations, we can help you scale to 100+ cameras at minimal expense. For pre-configured Nox hardware: ATA-300: 300 video frames per second (1024x768) can be stored. ATA-300X: 1,500 video frames per second can be stored.
Response Time	All screens in Nox are designed to respond in less than 1 second.

Reports

Seen over time	Number of times an asset has been seen over a period of time
Checkout Usage	Times a user has checked out items
Assets by Zone	Number of assets located in each zone
Calibration Due	Date each calibration is due, by item

Checked Out Count	Number of items checked out, by users
Most Popular	Asset use % -- list of all assets and which assets are in high-demand
Inventory Value **Context-Sensitive Search**	Dollar value of all items in inventory by item or by item-class Search descriptions, tag ID's, and device names and return a report of all items history / locate items quickly.
Export Data	Supports CSV (Comma Separated Values), XML, SQL Data reporting

System Health

Disk Utilization	Daily report of space remaining on system
Automatic Backup	Daily automated backup to external USB drive automated. Nox automatically recognizes multiple external USB backup drives. Simply disconnect a drive and plug in a new backup drive. Take the secondary drive off-site for safe storage.
RAID Support	Nox supports most RAID systems. For pre-configured Nox hardware: 300 and 300X: Full RAID-level backup of base data and battery backup on RAID controller card. Separate solid-state boot drive for high-performance and simple recovery in the event of a hardware failure.
Device Monitoring	Monitors all remote sensors (Cameras, RFID Readers, and other remote sensors) and reports every second on the status/health and response time of all remotely connected devices. Issues an alarm and emails alarm if there is no response from a device.

Surveillance and Security Features

Store Digital Video	Nox Core stores video from dozens of cameras simultaneously.
Search Video	Nox searches video by location, camera, time, and RFID-triggered events. Video can be located by: When an RFID tagged item was seen in the video, when the item missing, when an item was checked in/out, or when an item caused an alarm.
Play Video with Events	Nox plays video and shows all RFID tagged items in-view at time of the video being recorded, by each individual frame of the video. Video can be played forwards, backwards and in-real-time.

Visual / Audible Alarm	Nox can trigger an alarm via an IP network based on tagged item movement during restricted hours, items that have not been properly checked-out, or items being moved without an authorized user badge.
Social Alarms	Nox can trigger SMTP (email) and Text Message alerts for unauthorized asset movement. Nox can transmit a video or image with the alarm to help determine the cause of the alarm.
Asset History	Check the trail of any asset. Where has it been? Who had it? History is maintained for the life of the asset.

Check In / Check Out *(Requires Nox-CoreW)*

Nox Checkout can do all the surveillance features, and:

Item Check-Out Status	Nox maintains a list of checked out items and supports CSV export of all items by current status.
Authorization Levels	Items can be restricted for checkout by: • Who can check-out the item • Items can require multiple-users (user/manager authorization) • Time/Date restrictions
Multiple Checkout Terminals	Multiple checkout terminals can be setup for checkout from a single location or from multiple locations.
Ruggedized Checkout	*For pre-configured Nox hardware:* The Nox-T2 terminal is a rugged, touch-screen unit. It contains no 'fans' that will suck up dust and overheat. It is completely heat-sunk and a stand-alone unit integrating touchscreen and PC in a simple network-connected unit that can be attached to a wall.
Item History	Items are maintained by who checked out and returned items by date.
Checkout Status	Items can be searched for, from a remote location via a web browser, to see if they are available for checkout.
Reports	• Item Utilization - % of time checked-out. • Item Calibration Date – Warnings on when items need calibration. • Calibration Checkout Restriction – Prevent items from checkout if past calibration date and display warnings within 30 days.
Item Kits	Items can be grouped into a kit and Nox will prevent a partial kit from accidentally being checked out. For instance, a forensic kit that

	requires 15 components would issue a warning at checkout of any missing parts.
Unlimited Data Fields	An unlimited number of data fields may be added about an item. Data Field Types include: • Attachment – Attach a PDF or other item (e.g. a Calibration report) • Dropdown List – Define a set of possible choices. • Checkbox – Multiple choice of items • Date, Time, or Date & Time • Integer • Dollar • Float • Text (255 Characters) • Long Text (Unlimited Characters)
Unlimited Item Classes	Items can be classified with a default set of extra data fields. For instance, a PC-Class may require Serial Number and Purchase Date.
Supports Handheld	A handheld may be used online (via WiFi) or offline (by USB synchronization) to check items out at remote locations or for large assets that won't fit in the building.
Stock Levels	Items may be assigned a stock classification and stored as quantities of items for reporting/checkout/consumables purposes. Reports show quantity of items remaining in-stock.
SOX-Compliance (Sarbanes-Oxley Fixed Asset Compliance)	Simple integration with Microsoft Excel via CSV allows fast data exchange of inventory and what items are still found and missing for quick compliance reporting. Using the handheld, a report will determine: • Items that are missing • Items that are found and their location • Items that are unexpected (previously missing, but now found)

Supply Chain *(Requires Nox-CoreW)*

Contract / Delivery Tracking	Downloads contracts and delivery orders and tracks the fulfillment of items against those deliveries. Prevents over-ships, under-ships, and mis-ships.
RFID Tag Printing	Prints, encodes and tracks the following tags: - Item Level RFID

- Case Level RFID
- Pallet Level RFID
- MSL with and without RFID
- Unit Pack with and without RFID
- Custom label formats, as needed

Unused Stock	Tracks unused tags to prevent waste and reprinting of tags.
Automatically Calculate Weights	Uses item-level weights to calculate case and pallet weights
Stops Overpacks	Monitors a box to ensure the maximum pack quantities are not exceeded.
Stops Underpacks	Warns users if they are about to underpack a box. Marks box with a SHORT indicator.
Track Quantity Shipped	Monitor total shipment progress by shipment or supply to ensure shipments go out on-time.
Pack to Inventory	Pack items to sit in inventory for expedited packing/shipping when a delivery order is received.
Palletize from Inventory	Quickly palletize-and-ship items from Inventory without manually packing. RFID monitors the shipment to ensure the correct items are loaded onto the pallet for shipment.
Automated Item-to-Case	Automatically scan boxes using a conveyor or pack table or handheld RFID Reader and pack them into a virtual box.

RFID Tag Choices and Encoding

UHF EPC Generation 2	Supports any world-standard UHF Generation 2 tag / ISO 18000-6C
Pre-Programmed	Supports pre-programmed RFID tags
Manual Programming	Supports manually programming RFID tags
Tag Filtering	Supports Mil-Spec (MIL-STD 129P) data formats for RFID tags. Filters tag data for performance and to prevent false-data reads.
On-Metal Tags	Supports Rugged High-Temperature On-Metal RFID Tags

Supports Item-Level Tag ID's	Differentiates item-tag by type and manages item-level RFID information.
Supports Case-Level Tag ID's	Organizes RFID data based on whether it has been packed in a case and manages tag ID's as CASE containers.
Supports Pallet-Level Tag ID's	Organizes case RFID tags onto Pallets.

Data Integration

WAWF	Supports RFID Item, Case and Pallet Data Exchange with WAWF (Wide Area Workflow) *(Requires Nox-CoreW)*
VIM-ASAP	Supports full contract download and data upload for all item-level RFID tag detail and case/pallet tag detail by shipment. *(Requires Nox-CoreW)*
CSV	Export and Import data in CSV format
XML	Export data in XML format
MS-SQL	Export/Import data in MS-SQL Server Format