

# LISYS Library Management System



Acuradata

RFID Library Management System

2026



Acuradata

[WWW.ACURADATA.COM](http://WWW.ACURADATA.COM)

*Real-time visibility. Zero missing assets. Maximum operational efficiency.*

*Version / Release: v4.2 / Cloud Edition*



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New Advanced  
Smart Library  
Management  
system with Smart  
multi devices  
integration.

Integration with  
KOHA LMS & Digital  
platform.

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RFID

# Business challenges

## Challenges Libraries Face in Traditional Library Management

- Slow book issue and return process
- Time-consuming inventory management
- Difficulty in finding misplaced books
- Lack of effective anti-theft protection
- High staff workload & inaccurate data and human errors
- Limited self-service options for users
- Lack of realtime library analytics

### Audit Failure



Incorrect  
Opinion  
by Librarians



Loss of Trust  
among  
Stakeholders



Regulatory  
Penalties



Loss of Investor's  
Confidence

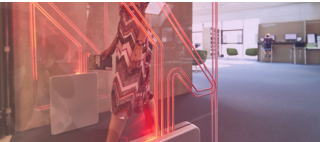


Change in  
Internal  
Control



High  
Maintenance  
cost

RFID technology solves these challenges by enabling automated circulation, rapid inventory management, accurate book tracking, and enhanced security.



# Our solution



With Lisys LMS, you are tagging not just your books but all physical assets of your library for quicker, real time asset auditing

## Lisys RFID & Barcode Library Management Solution

Modern libraries require faster circulation, accurate inventory management, and better security. Lisys RFID LMS Software enables fully automated library operations, reducing manual workload while improving user experience.

Lisys Library Management System integrates RFID tags, readers, kiosks, and intelligent software to automate book circulation, inventory management, security monitoring, and analytics.

- Multi-book detection
- Touchscreen interface
- Receipt printer
- Library card authentication
- Integration with LMS (KOHA)

Self-service kiosks reduce waiting time and automate circulation processes



RFID Handheld Reader



RFID Tags



Fixed Reader



Self Kiosk

## Simple. Accurate. Reliable.

All books are tagged with RFID with barcode labels and EM tags (for anti theft detection). Fixed RFID Readers installed at exit doors capture books movement.

Data syncs automatically to the central platform  
Real-time books location is displayed in dashboards  
Alerts, reports, and analytics are generated instantly  
Outcome:  
Complete visibility at all times.



# RETURN



## We are



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## LiSys Modern Smart Library Management System

### → Key Features

- Books registration & master data
- RFID / barcode tagging
- Real-time location & movement tracking
- Mobile scanning (Android/iOS)
- Web-dashboard
- Notification & on-authorized movement alerts
- Multi-Location support
- Role-based access control
- Bulk Asset Import (xml, csv file)
- Exit gate monitoring
- Theft & tamper detection
- Photo Upload of item
- SMS & WhatsApp LMS Integration



# Core modules

## Acquisition Management

Handles the procurement of new books, journals, and digital resources including vendor management, budgeting, and order tracking.

### Key Functions

- Purchase requests
- Vendor management
- Budget allocation
- Order tracking



## Catalog Management (Cataloguing)

Maintains the bibliographic database of all library materials with metadata like title, author, subject, and ISBN

### Key Functions

- MARC/ISBN cataloguing
- Classification systems
- Metadata management
- Digital catalog creation



## Circulation Management

The core operational module that tracks book movement.

This module controls real-time book transactions within the library.

### Key Functions

- Issue / Return
- Renewal
- Fine calculation
- Reservation / hold mgmt



## Member / User Management

Maintains the database of library members and access rights.

Members are given Smart cards

### Key Functions

- Member registration
- Membership levels
- Borrowing history
- Role-based access



## OPAC (Online Public Access Catalog)

A public search portal allowing users to search library resources online.

### Key Functions

- Book search
- Availability status
- Reservation requests
- Digital catalog access



## RFID & Smart Automation Module

This is a modern smart-library component integrating multiple access smart devices

### Key Functions

- Self-check kiosks
- Security gate integration
- Automated book return
- Inventory scanning



## Inventory & Shelf Management

Tracks the physical location and availability of books.

### Key Functions

- Shelf verification
- Missing book detection
- Inventory audit
- Location tracking



## Digital Library / e-Resources Module

Supports electronic books, journals, and digital archives.

### Key Functions

- eBook access
- Digital repository
- Research papers
- Multimedia resources



## Automatic books sorting system

This extends Automatic book sorting to bin system through integrated escalators

### Key Functions

- Automatic book sorting
- Identification of wrong books
- Distribution



## Notification & Communication Module

Automates communication with library users.

### Key Functions

- SMS/email alerts
- Due date reminders
- Reservation notifications
- Overdue notices



## Reporting & Analytics Dashboard

Provides data insights for library management decisions.

### Key Functions

- Circulation statistics
- Popular books analysis
- Usage trends
- Inventory reports



## Additional Advanced Modules

Modern AI-driven libraries may also include:

- AI recommendation engine
- Mobile library app
- Multi-branch library management
- Self-service kiosks
- Cloud LMS
- Smart shelf monitoring



# Quick overview

## How RFID Library Management System Works;

The LISys RFID Library Management System automates book circulation, security, and inventory using RFID technology.

### 1. Book Tagging

Each book is fitted with an RFID tag containing a unique ID linked to the library database.

### 2. Book Issue / Checkout

At the circulation desk or self-service kiosk, an RFID reader scans multiple books simultaneously and records the transaction in the system.

### 3. Security Monitoring

RFID security gates at the library entrance detect books that have not been properly issued and trigger an alarm.

### 4. Book Return

Users can return books at a self-return station or drop box, where the RFID reader automatically updates the return in the system.

### 5. Inventory Management

Staff use handheld RFID scanners to quickly scan shelves, locate missing books, and perform inventory audits.

### 6. Real-Time Updates

All transactions are updated instantly in the Library Management Software database, providing accurate records and reports.



Secure-Cloud Hosting,  
Data Security &  
Encryption



Strong, secure and  
robust database  
architecture



Compliance with  
Industry Standards



Backup & Disaster  
Recovery

# Business benefits

## Measurable Business Impact:

Reduce asset loss by up to 40%



Faster audits—minutes instead of days



Improve asset utilization



Lower operational costs



Enhanced security & compliance



Data-driven decision making



### Customer Result:

Improved efficiency,  
reduced risk,  
and higher ROI



Higher Productivity



Increased Revenue



Improved Quality  
Data Capture



Shorter Process



Lower Cost



Improved Regulatory  
Compliance



Better Security



Accurate  
Management Info

# Components specification



## RFID Tags

- High Frequency RFID Label tags
- Passive tags 13.56 MHz (HF – High Frequency RFID)
- Read range: 10 cm – 1 meter
- ISO 15693 / ISO 18000-3 Mode 1



## Electro-Magnetic Tags

- EM tags are commonly used in library anti-theft systems
- Operating Frequency around 58 kHz
- Read range: 10 cm – 1 meter
- Amorphous metal strip with adhesive backing
- Magnetic activation / demagnetization



## Membership cards

- Barcode based unique member ID cards
- PVC / Laminated Plastic / Paper Card
- Thermal transfer or direct printing
- Scanning Method: Laser barcode scanner or CCD scanner
- Card Size: CR80 (85.6 x 54 mm) – standard ID card size



## RFID Tags printer

- Printing Method: Direct Thermal / Thermal Transfer
- Industrial RFID printers can print and encode RFID labels automatically during printing
- RFID Frequency: HF 13.56 MHz (ISO 15693 / ISO 14443)
- RFID Standards: ISO 15693, ISO 14443, ISO 18000

# Components specification



## Fixed RFID Reader for Library Exit Gates

- RFID Technology: HF RFID (High Frequency)
- Operating Frequency: 13.56 MHz
- RFID Standards: ISO 15693 / ISO 18000-3 Mode 1
- Library Data Standard: ISO 28580
- Detection Method: AFI / EAS security bit detection
- Read Range: Up to 90 – 120 cm between gate antennas
- Alarm System: Audio + Visual LED alarm



## Handheld HF RFID Readers - Without display

- Scan books on shelves, to perform inventory, and locate misplaced books
- RFID Technology: HF RFID (High Frequency)
- Operating Frequency: 13.56 MHz
- Supported Standards: ISO 15693, ISO 18000-3
- Read Range: 20 – 30 cm typical
- Reading Speed: Up to 50 tags per second
- Communication: BLE, Wi-Fi, USB



## Handheld HF RFID Readers Android Display

- Android - latest version, 5.5" display
- RAM: 2 GB – 4 GB, Storage: 16 GB – 64 GB
- Operating Frequency: 13.56 MHz
- Supported Standards: ISO 15693, ISO 14443A/B
- Read Range: 25 – 35 cm typical
- Reading Speed: Up to 50 tags per second
- Operation: Read / Write capability
- Communication: BLE, Wi-Fi, USB



## Desktop / Workstation HF RFID Reader/ Writer

- Installed at staff workstations for book issue, return, and tag encoding
- RFID Frequency: 13.56 MHz (HF RFID)
- Supported Standard: ISO 15693 / ISO 18000-3 Mode 1
- Read Range: 30 – 30 cm (typical)
- Read Speed: Multi-tag reading (up to 50 tags/sec)
- Operation: Read / Write / Encode
- Memory: 128 MB – 512 MB RAM (sufficient for library operations)
- Interface: USB, Ethernet, RS232
- Display: Optional LED indicators / LCD screen for status

# Components specification



## RFID library Staff Work Station

- Used by library staff to enter books, reader information, convert tags.
- RF protocol standard
- ISO 18000-6C (EPC C1G2) / HF: ISO15693
- working frequency: 920-925MHz (840-960MHz adjustable, HF 13.56MHz)
- Communication interface: Wi-Fi, RJ45



## Self-service Books Return Terminal

- It has a graphical and friendly operation interface
- The anti-theft position of the book label can be automatically reset and set when borrowing books.
- Built-in RFID reader and antenna to identify multiple books at a time.
- Connected to the workstation via Ethernet port, serial port & USB.
- Frequency: 840~960MHz
- RF protocol standard: ISO 18000-6C (EPC C1G2) / ISO18000-D-3
- Reading radius: 0-100mm
- way of communication: Wi-Fi, RJ45



## 24-hour Book Reserve Case

- The case is mainly used for book reservation, self-borrowing, self-return, self-renewal and borrowing query, etc.
- Working Frequency: 902MHz~928MHz (default), can be set (840-960MHz)
- Communication interface: RJ45; RS232 (Wi-Fi/4G optional)



## Members App + E books Portal

- Members Admin Panel
- Define users role
- Android, ios, Web portal for multi device Access
- Integrate to access E books
- Customized theme
- Third party integration.

# Project implementation

## 1. Discovery & Requirement Assessment

- Business objectives and use cases
- Book types and volumes
- Site feasibility study
- Technology selection (RFID / Barcode / Hybrid)
- Success metrics definition

## 2. Solution Design & Architecture

- Module Selection
- Hardware selection (tags, readers, antennas)
- Antenna placement & coverage planning
- Dataflow and integration design
- Security and compliance planning

## 3. EM Tagging & Commissioning

- Physical EM tagging of books
- Quality checks and verification

## 4. Infrastructure Deployment

- Reader and antenna installation
- Network and power setup (PoE/Wi-Fi)
- Gateway and edge device configuration
- System connectivity validation

## 5. Software Configuration & Integration

- Platform configuration and workflows
- User roles and access setup
- ERP integration
- Alert rules and reporting setup
- Uploading digital copies of books for E-books
- Mobile application deployment

## 6. Books Tagging & encoding

- Book Registration & RFID-tagging
- Encoding data
- Smart Shelf profiling

## 7. Training & GO-Live

- Production rollout
- Data migration (if applicable)
- System monitoring

## 8. Support, Monitoring & Enhancement

- Ongoing support and maintenance
- System health monitoring
- Periodic audits and reports
- Feature enhancements
- Scalability planning

# Get started today

Request a demo or speak with our experts to transform your  
asset management.

## Contact Us

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