

*innovations
that help
your business
take the
next step
forward*

your window to the interconnected world

HARDWARE

TAGS

MIDDLEWARE

APPLICATIONS

SOLUTIONS

EsSEN RFID

the leading OEM
and Solutions
Provider
in India for RFID

RETAIL

INVENTORY

MANUFACTURE

LOGISTICS

PEOPLE

LIVESTOCK

LIBRARY

ACCESS CONTROL

take the
next step
with
EsSEN RFID



THE COMPANY

PARTNERS

RFID HARDWARE

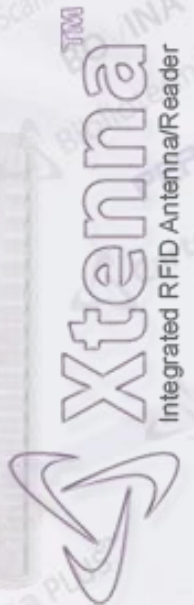
HIGH PERFORMANCE RFID TAGS

SOFTWARE API

RFID MIDDLEWARE CONNECTIVITY

ESSEN'S OWN MIDDLEWARE PLATFORM

INTEGRATED SOLUTIONS



THE COMPANY

Since the advent of the first IBM PC, the Essen Group has been a part of the computer industry and has seen it come of age

This long association has seen Essen launch innovative products in various segments and to a worldwide audience

EsSEN RFID's constant endeavor has been to identify relevant IT trends and technologies that impact business and provide its customers with cost-effective innovative solutions that are world-class

EsSEN RFID's products provide value-addition to partners, enabling them to be at the forefront of the next global IT trend

ESSEN'S FACT SHEET

Year of Establishment	1978
Products	Xtenna™ RFID Devices High Performance Tags RFID Middleware RFID Applications
IPR	US Patent No. 8237570 along with 50+ Trademarks/Copyrights India Patent pending
CEO	Mr. Apurva Parekh

SOME OF OUR CLIENTS



RFID DEPLOYMENTS

INDIA



DELHI

Inventory Management
Automobile Panel Tracking
Hospitality

DEHRADUN

Vehicle Tracking

KOLKATA

IT Services
Personnel Tracking

SUNDERGARH/JHARSUGUDA

Mining

BHOPAL

Library Management

INDORE

Highway Toll Plaza

AHMEDABAD

Transport Management

HAZIRA

Vehicle Tracking

SURAT

Jewellery Tracking

MUMBAI

Hospital Management
Access Parking

PUNE

Construction
Metal Tracking

NAGPUR

Security Management

GOA

Mining
Supply Chain Optimization

VISAKHAPATNAM

Defence

HYDERABAD

Telecom
Asset Management

GULBARGA

Agriculture
Farm Vehicle Tracking

BENGALURU

Parking Management

CHENNAI

Shipping

COIMBATORE

Solar Panels
Livestock Tracking

PALAKKAD

Livestock Tracking

RFID DEPLOYMENTS

AFRICA – WEST ASIA



- GHANA**
Mining
- KENYA**
Vehicle Tracking
- MOZAMBIQUE**
Tyre Tracking
- NIGERIA**
Student Tracking
Student & School Bus Tracking
- OMAN**
Asset Management
Hospitality
- QATAR**
Logistics
- SAUDI ARABIA**
Livestock Tracking
- UNITED ARAB EMIRATES**
Oil & Gas
Asset Tracking
Student Tracking

RFID DEPLOYMENTS

ASIA PACIFIC



INDONESIA
Library Management

VIETNAM
Vehicle Tracking

UNITED STATES OF AMERICA
Middleware Software

SYSTEM INTEGRATION PARTNERS

Besides SI partners, Essen RFID's product range also covers the SMB space through its vast network of Value Added Resellers (VARs) across India and overseas



TECHNOLOGY PARTNERS



RFID HARDWARE

UHF LONG-RANGE INTEGRATED ANTENNA/READER

(Read range: upto 10 metres; upto 17 metres)

Xtenna™

Xtenna PLUS™



UHF NEAR-RANGE READER

(Read range: 2 cm to 1 metre)

Xtenna Proximity™



UHF HAND-HELD INTEGRATED RFID DEVICES

(Read range: 5 cm to 3 metres)

Handy Scanna™

Handy Scanna PLUS™



UHF HYBRID INTEGRATED ANTENNA/READER

(Read range: upto 5 metres)

Xtenna Hybrid™



UHF PORTAL READER

(Read range: upto 5 metres)

Porta™



UHF BUILT-IN APPLICATION DEVICES

Bibliotenna™



RFID HARDWARE

EsSEN's Xtenna™ UHF readers can be easily integrated to Microsoft BizTalk, IBM Websphere Premises Server and EsSEN's own Xtenna Studio™ Middleware Platforms

Providing enterprise level seamless connectivity with Middleware, Paid/Free Databases (IBM DB2, Oracle, MySQL) and ERP applications (SAP)

Click product logos or images for more information

UHF LONG-RANGE INTEGRATED ANTENNA/READER

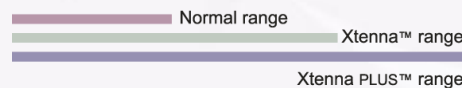


Read range:
upto 10 metres using Passive UHF tags

UHF NEAR-RANGE READER



Read range:
2 cm - 1 metre
(programmable)



Longer read range:
upto 17 metres (a distance of 3 full-size car lengths) using Passive UHF tags

RFID HARDWARE

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Providing enterprise level seamless connectivity with Middleware, Paid/Free Databases (IBM DB2, Oracle, MySQL) and ERP applications (SAP)

UHF HAND-HELD INTEGRATED RFID DEVICES



- Read range: 5 cm to 3 metres
- Built-in VGA touch screen display
- Built-in WiFi connectivity
- Built-in GPS connectivity
- Built-in GPRS connectivity
- Bluetooth enabled
- Continuous use time of 8 hours
- Data storage 2 GB internal memory



Additional Features:

- USB connectivity
- Biometric Fingerprint Scanner
- Built-in Smart Card Reader
- Receipt Printer on USB port



RFID HARDWARE

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UHF HYBRID INTEGRATED ANTENNA/READER



Read range: upto 5 metres
 Comprises 1 Reader with 2 Antenna
 Pair can be spaced 5 metres apart
 Most suitable for tracking movement from Antenna A to Antenna B, to track personnel or assets moving IN and OUT
 Can operate in Bi-static mode
 Compliance with IP65 standard

Click product logos or images for more information

UHF PORTAL READER



Read range: upto 5 metres
 Floor standing or mountable
 Can be placed facing each other as a pair upto 5 metres apart, to function as a portal gateway
 Useful in tracking personnel, livestock, hospital patients in gurneys, etc.
 Also suitable for shopping malls, schools, banks, security establishments, etc.

RFID HARDWARE

Click product logos or images for more information

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Providing enterprise level seamless connectivity with Middleware, Paid/Free Databases (IBM DB2, Oracle, MySQL) and ERP applications (SAP)

UHF BUILT-IN APPLICATION DEVICES



Intelligent multi-purpose self-service Library Kiosk with two integrated RFID Readers



- Dual TFT touch screens with independent search
- Dual Xtenna™ independently confirm returned books
- Connectivity to central database
- In-built receipt printer
- Waiting list messaging
- Built-in drop box, spring-loaded cart, book trolley and conveyor
- Local library search enabled
- Global search enabled
- Automated check out enabled
- Multiple check out enabled

HARDWARE ADVANTAGE

INNOVATIVE TECHNOLOGY

EsSEN's Xtenna™ device platform – integrates, extends, improves, simplifies, saves cost, maximizes value; helps your business take the next step forward

A ready-to-use integrated RFID device, Xtenna™ is a power-extended RF Antenna Reader that offers the RFID antenna, reader and power supply in a single convenient, compact unit

Xtenna™ features include:

1. Advanced reader/dual antennas (in a single compact unit)

Consists of dual hi-gain circular polarized antennas

Covers RFID bands across EU (865-870 MHz), USA (902-928 MHz) and Korea (910-914 Mhz)

Dual antennas that separately transmit and receive in an omni-circular direction

2. Lossless digital transmission (long distance data and power)

Can be deployed in remote locations/long distances without signal deterioration

Carries both data and 48V DC power over a single normal CAT-6 cable

3. Convenient and versatile (high performance/cost effective)

Easy to mount, sturdy yet light weight (IP 54 compliant/optional IP65)

Can be put to versatile use across varied environments

Uncomplicated yet highly effective device that extends RFID's reach and scope

HARDWARE ADVANTAGE

SUPERIOR DIGITAL TECHNOLOGY

EsSEN RFID's path breaking and innovative approach towards technology has resulted in yielding superior read distances as well as improved cost efficiencies, thereby positively impacting ROI from Day 1

ORDINARY RF - ANALOG

Standard readers and antennas available in the marketplace are connected via **RF cable** that transmit **analog signals**

Analog signals are highly sensitized to noise i.e., random unwanted variation resulting in **signal loss and distortion**

RF interference causes upto 50% of the problems for wireless networks, leading to **slow performance or dropped service**

This in turn impacts the read range adversely thereby giving a **read range of only upto 10-12 feet** under ideal conditions

Moreover RF cables are **extremely expensive** and can be a **cost burden** to the client during implementation

XTENNA™ - DIGITAL

EsSEN's Xtenna™ transmits digital signals between the Reader and the Antenna via a **CAT-6 cable**

Digital signals create **lossless data transmission** as they are **impervious to any form of external disturbances** including noise

Thus, they provide **enhanced read ranges of upto 50 feet** under ideal conditions

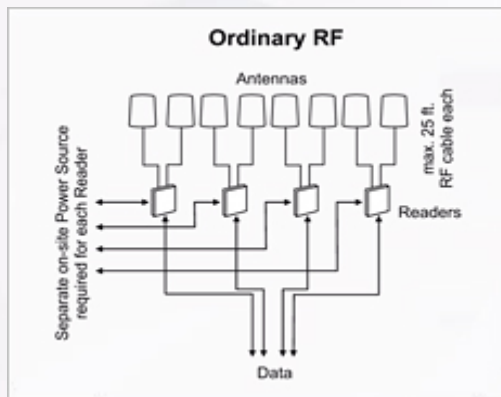
CAT-6 cable does not get factored in at all as a cost component during implementation on account of its **relatively cheap price**

In addition, **CAT-6 cable can transmit both power and data** thereby showcasing its **2-in-1 dual carrying capacity advantage** over a RF cable

HARDWARE ADVANTAGE

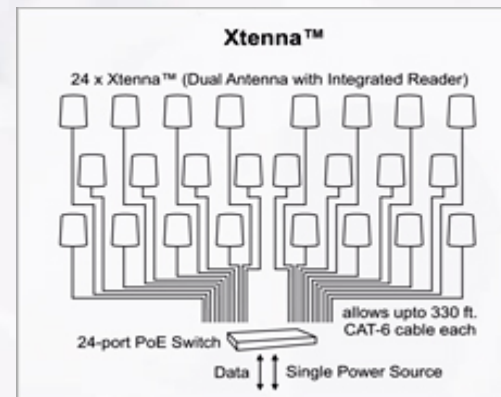
ORDINARY RF - ANALOG

- Requires expensive shielded RF cable
- Limited distance - RF cable length limited to 20 ft. before signal deterioration
- Sensitive analog signal
- Separate 115 / 230V outlet needed at source for power supply to the Reader
- Reader and antenna have to be mounted separately near each other



XTENNA™ - DIGITAL

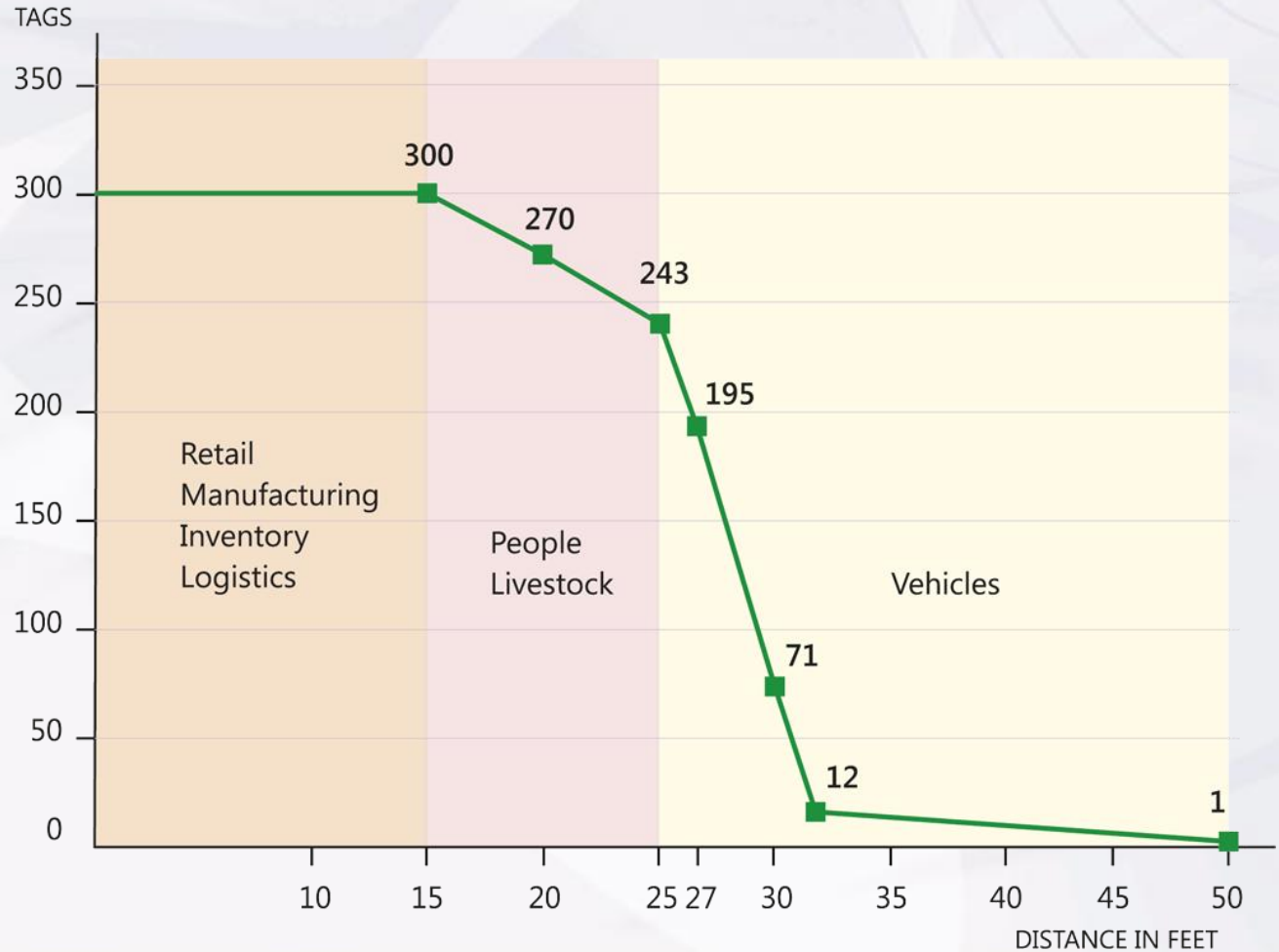
- Only requires inexpensive CAT-6 cable
- Distance between Xtenna and PoE switch can now be enhanced to 330 ft without loss
- Stable digital transmission
- Single CAT-6 cable can carry 48V DC power simultaneously along with data
- Reader, antenna and power supply in a single convenient integrated device



HARDWARE ADVANTAGE

SUPERIOR TAG READABILITY

EsSEN RFID's Xtenna™ gives a superior tag reading performance that not only supports Dense Reader Mode but is also able to read tags at a distance of 50 feet



HIGH PERFORMANCE RFID TAGS

Superior High Performance RFID Tags that have been specially devised to be read at longer distances

Outperform regular Passive RFID Tags through long-distance reads that enable quick item clearance, thereby improving overall operational efficiency

Available in specialized varieties, each customized for specific read objectives:

- Tracking People
- Vehicle Access
- Livestock Tracking
- Bulk Cartons and Pallets
- Liquid Containers
- Metallic Objects and Storage Racks
- Container Cargo
- Equipment and Machinery
- Special Tags for Documents, Laundry and Solar Panels

EsSEN RFID Tags provide full value for money, through higher performance, better reliability and greater efficiency



HIGH PERFORMANCE RFID TAGS

Click product logos or images for more information

PERSONNA™

For tracking people
 EPC Global Class-1 Gen-2 compliant
 Read distance: 45 ft.
 Tag size: 85 mm x 55 mm x 0.8 mm
 ID Card carried on person



PARKA™

For vehicle tracking
 EPC Global Class-1 Gen-2 compliant
 Read distance: 45 ft.
 Tag size: 90 mm x 65 mm x 0.8 mm
 Mounted inside car windshield



GENERA™

For cartons, cases, pallets, etc.
 EPC Global Class-1 Gen-2 compliant
 Read distance: 45 ft. (fixed reader)
 Read distance: 12 ft. (handheld)
 Tag size: 85 mm x 55 mm x 0.8 mm
 Adhesive affixing



HIGH PERFORMANCE RFID TAGS

Click product logos or images for more information

METALLICA™

For machinery, racks, containers, etc.
EPC Global Class-1 Gen-2 compliant
Read distance: 25 ft. (fixed reader)
Read distance: 12 ft. (handheld)
Tag size: 102 mm x 38 mm x 8 mm
Rivet mounting; adhesive affixing



μMETALLICA™

For metal casings, hardware, etc.
EPC Global Class-1 Gen-2 compliant
Read distance: 25 ft. (fixed reader)
Read distance: 8 ft. (handheld)
Tag size: 79 mm x 16 mm x 3 mm
Rivet mounting; adhesive affixing



MICRA™

For jewellery
EPC Global Class-1 Gen-2 compliant
Read distance: 3 ft.
Tag size: 32 mm x 12 mm x 0.8 mm
Plastic wire looping



HIGH PERFORMANCE RFID TAGS

Click product logos or images for more information

ACQUA™

For laundry
EPC Global Class-1 Gen-2 compliant
Read distance: 25 ft. (fixed reader)
Read distance: 12 ft. (handheld)
Tag size: 100 mm x 27 mm x 6 mm
Cable/string tied



BOVINA™

For livestock tracking
EPC Global Class-1 Gen-2 compliant
Read distance: 25 ft. (fixed reader)
Read distance: 12 ft. (handheld)
Tag size: 80 mm x 68 mm x 2.5 mm
Ear tagging by press punch



LIBRA™

For documents, files, books, etc.
EPC Global Class-1 Gen-2 compliant
Read distance: 10 ft.
Tag size: 80 mm x 10 mm x 0.3 mm
Adhesive affixing



SOLANNA™

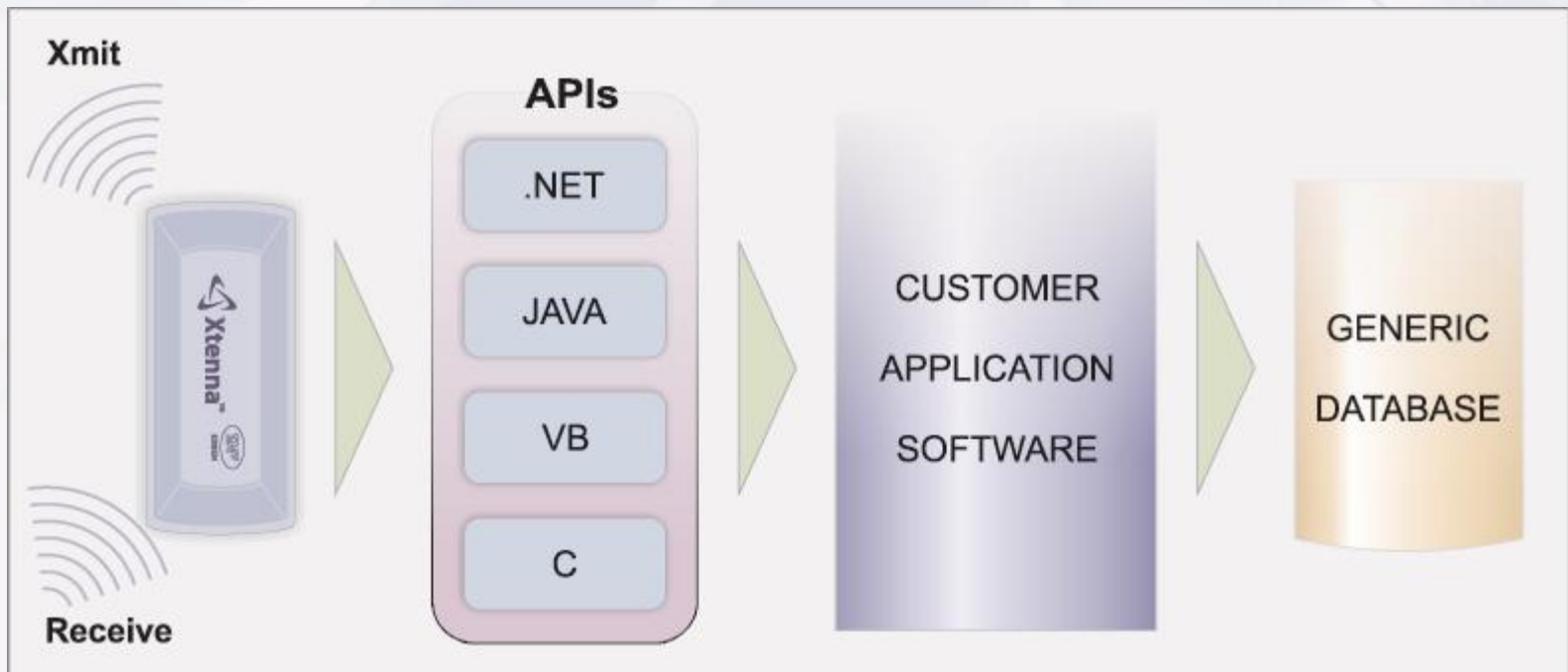
For solar panels
EPC Global Class-1 Gen-2 compliant
Read distance: 12 ft.
Tag size: 86 mm x 28 mm x 0.3 mm
Adhesive affixing



SOFTWARE API

EsSEN RFID provides Software APIs for its Xtenna™ devices to developers who wish to build or integrate their own applications to the hardware

These *free license APIs are integrators that act as an interface between the Xtenna™ RFID hardware device and the front end application



** conditions apply*

RFID MIDDLEWARE CONNECTIVITY

ENTERPRISE MIDDLEWARE PLATFORM CONNECTIVITY

EsSEN RFID offers enterprise-wide seamless end-to-end connectivity through *free-license software components that connect and communicate between Xtenna™ RFID hardware, enterprise middleware platforms and the application layer

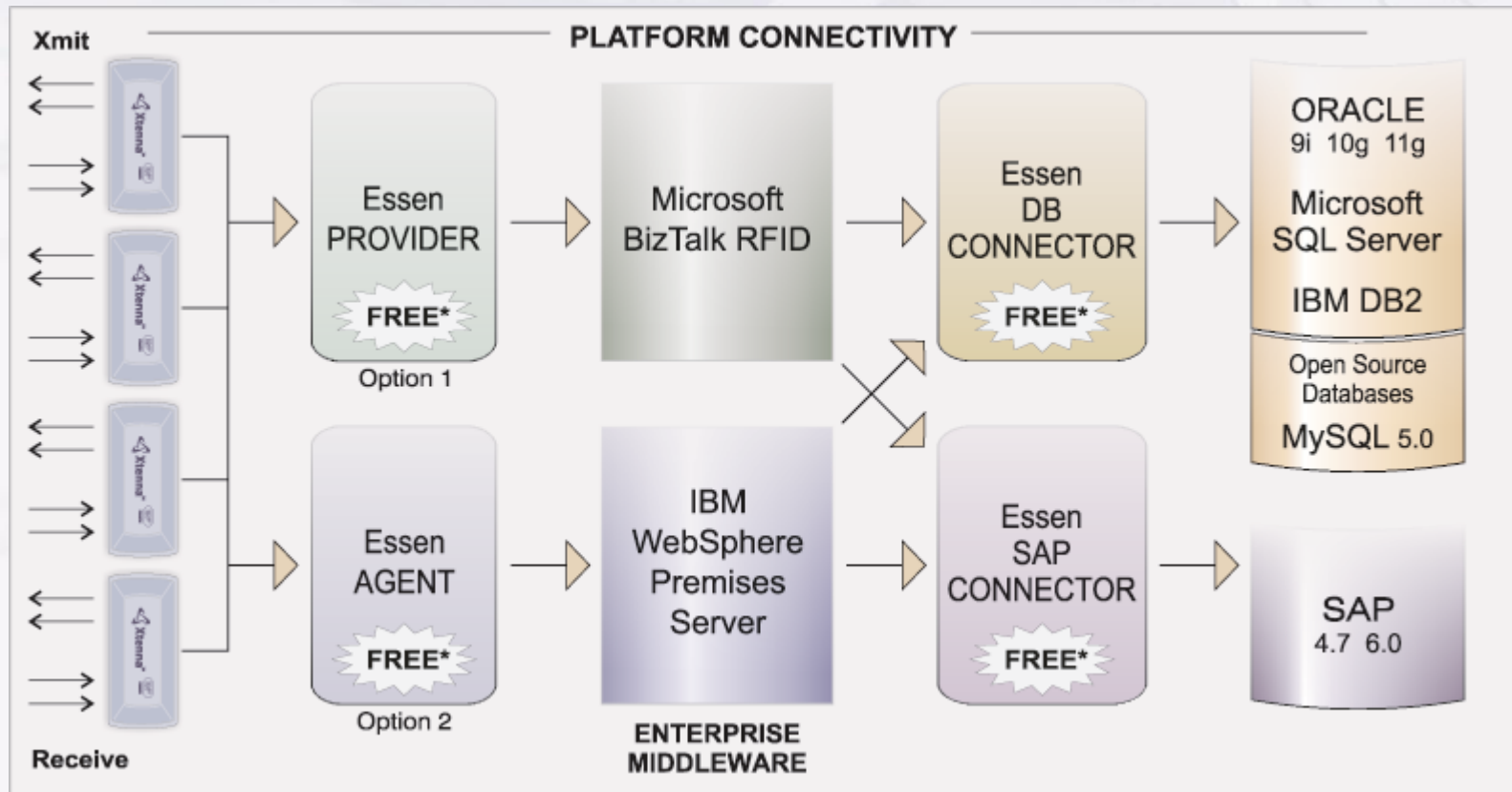
EsSEN RFID's components for middleware platform connectivity consist of **BizTalk RFID – PROVIDER** and **WebSphere Premises Server – AGENT** for existing enterprise middleware platforms from Microsoft and IBM respectively

EsSEN also provides a **Database Connector** and **SAP Connector** to communicate with databases and ERP applications, and connect the middleware platforms to these enterprise systems

This ensures seamless end-to-end connectivity between Xtenna™ RFID and existing deployments of middleware and databases/applications, through a single value-enhancing solution

RFID MIDDLEWARE CONNECTIVITY

ENTERPRISE MIDDLEWARE PLATFORM CONNECTIVITY



* conditions apply

ESSEN'S OWN RFID MIDDLEWARE PLATFORM

XTENNA STUDIO™ - FULL SCALE RFID MIDDLEWARE

Enterprise level RFID Middleware that manages the flow of RFID data from Xtenna™ devices to the application layer

Designed to be a robust, scalable and easy to configure middleware platform that can be easily maintained

BENEFITS OF XTENNA STUDIO™

No license fee costs*

Supports Windows platform

Faster processing time

Remote diagnostics/management features

Multiple connectivity plug-ins available

Streamlined operations

Reduced costs and higher ROI

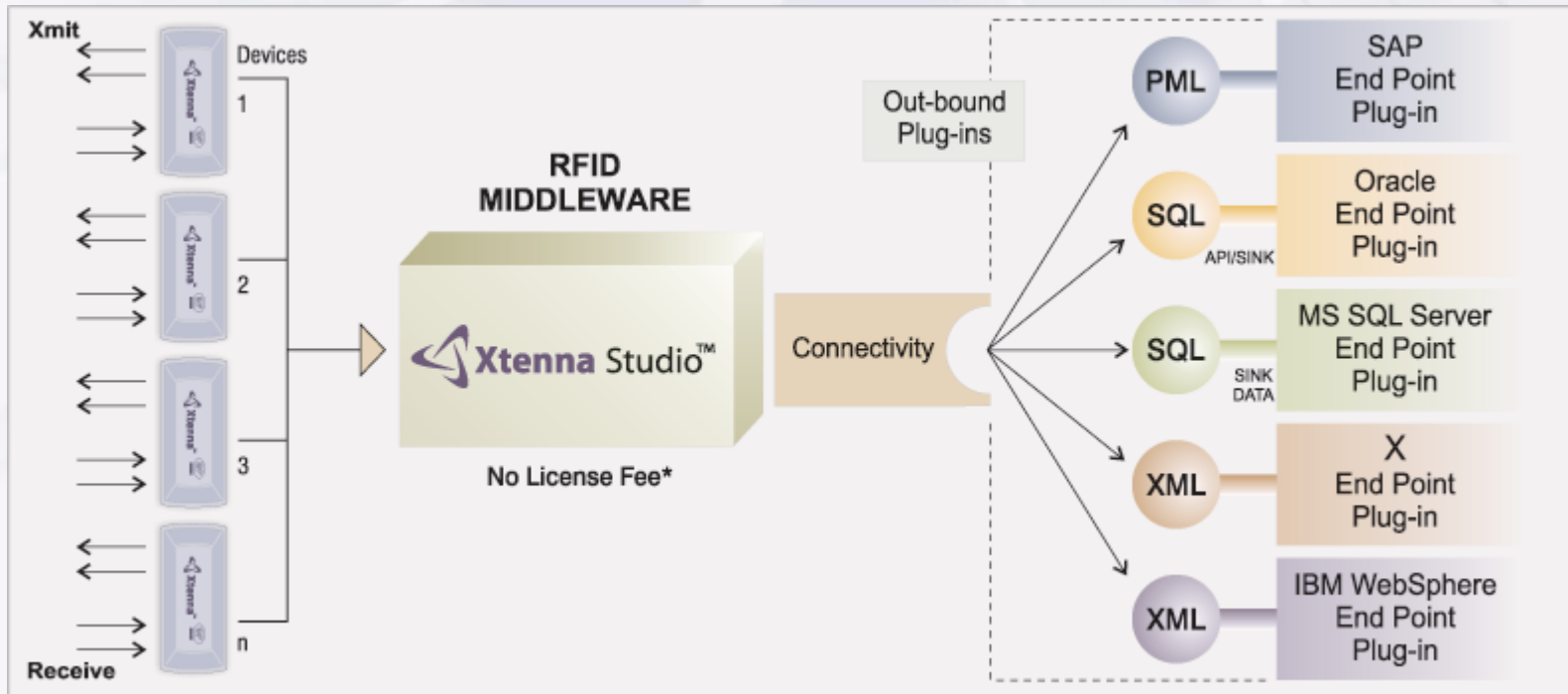
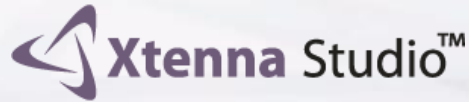
Full scale RFID middleware platform - licensing of other RFID middleware platforms is not required

Has the native ability to administer Xtenna™ RFID devices remotely

Seamless operation and remote monitoring of mission critical functions through alerts

Can be easily integrated with existing server environments

ESSEN'S OWN RFID MIDDLEWARE PLATFORM



* conditions apply

ESSEN RFID APPLICATIONS

INTEGRATED SOLUTIONS

EsSEN RFID provides integrated RFID-based solutions in diverse areas such as Supply Chain Management, Inventory Verification, Personnel Tracking, Access Control, Smart Cards, Electronic Toll Collection, Vehicle Tagging, Livestock Tagging, Library Management, Document Tracking, Automated Proof of Delivery, Real Time Location of Goods and Product Security

RETAIL



INVENTORY

MANUFACTURE



LOGISTICS

PEOPLE



LIVESTOCK

LIBRARY



ACCESS/PARKING

ESSEN RFID APPLICATIONS

Click demo links or images

FLASH DEMOS

Retail

<http://www.essenrfid.com/retail-flash-demo.htm>

Manufacturing

<http://www.essenrfid.com/manufacture-flash-demo.htm>

Logistics

<http://www.essenrfid.com/logistics-flash-demo.htm>

Livestock

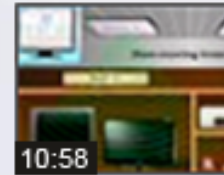
<http://www.essenrfid.com/livestock-flash-demo.htm>

Library

<http://www.essenrfid.com/library-flash-demo.htm>

Access /Parking

<http://www.essenrfid.com/accessparking-flash-demo.htm>



Retail



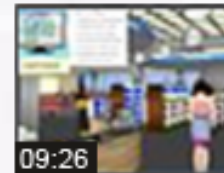
Manufacture



Logistics



Livestock



Library



Access/Parking

ESSEN RFID APPLICATIONS

APPLICATION DOMAIN REFERENCES

Retail

<http://www.essenrfid.com/Mailer/retail-flash-demo.pdf>

Inventory

<http://www.essenrfid.com/Mailer/inventory-flash-demo.pdf>

Manufacturing

<http://www.essenrfid.com/Mailer/manufacture-flash-demo.pdf>

Logistics

<http://www.essenrfid.com/Mailer/logistics-flash-demo.pdf>

People

<http://www.essenrfid.com/Mailer/persontracking-flash-demo.pdf>

Livestock

<http://www.essenrfid.com/Mailer/livestock-flash-demo.pdf>

Library

<http://www.essenrfid.com/Mailer/library-flash-demo.pdf>

Access /Parking

<http://www.essenrfid.com/Mailer/accessparking-flash-demo.pdf>

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Thank you for your interest in

EsSEN RFID

For more information on EsSEN RFID
and our entire range of products and
solutions, please visit our website at

<http://www.essenrfid.com>

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