

*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

ASSET/INVENTORY

RETAIL

MANUFACTURE

MINING

LOGISTICS

TRUCKS

PEOPLE

LIVESTOCK

LIBRARY

ACCESS/PARKING

take the  
next step  
with  
EsSEN RFID



THE COMPANY

DEPLOYMENTS

PARTNERS

HARDWARE DEVICES

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	<a href="#">US Patent No. 8237570</a> Indian Patent No. 260235 along with 50+ Trademarks/Copyrights
CEO	Mr. Apurva Parekh

# IPR

US Patent No. 8237570  
dated August 7, 2012

Indian Patent No. 260235  
Dated April 11, 2014



US008237570B1

(12) **United States Patent**  
**Parekh**

(10) **Patent No.:** **US 8,237,570 B1**  
(45) **Date of Patent:** **Aug. 7, 2012**

- (54) **INTEGRATED, HIGH EFFICIENCY RFID UHF READER/ANTENNA**
- (75) Inventor: **Apurva Jayantilal Parekh, Maharashtra (IN)**
- (73) Assignee: **EsSEN Energy Conversion Devices Pvt. Ltd., Bombay (IN)**
- (\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 543 days.
- (21) Appl. No.: **12/153,216**
- (22) Filed: **May 15, 2008**

**Related U.S. Application Data**

- (60) Provisional application No. 60/929,118, filed on Jun. 13, 2007.
- (51) **Int. Cl.**  
**G08B 13/14** (2006.01)
- (52) **U.S. Cl.** ..... **340/572.7; 340/693.1; 340/693.4; 340/333**
- (58) **Field of Classification Search** .... **340/572.1–572.9, 340/333, 693.4, 693.1; 343/700 R**  
See application file for complete search history.

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*Primary Examiner* — Hoi Lau

(57) **ABSTRACT**

Invention discloses a highly efficient integrated physical Reader with dual circular bi-static antenna device comprising an integral DC to DC converter 3, built in to supply power to the reader, wherein desired power, 48V is supplied from the switch 7, to the magnetic transformer 1, an integral RJ 45 female connector 2, to separate the power; the separated power from the magnetic transformer 1, is fed in to the DC to DC converter 3, which steps it down around 8 volts and then fed to a regulator, providing +5 V as output; which is further fed to the reader to drive the dual circular bi-static antenna to receive or transmit the signals; wherein the said system is assembled within the Antenna enclosure, which eliminates severe distance limitation and deterioration in signal strength imposed by the RF cable.

**10 Claims, 2 Drawing Sheets**

## SOME OF OUR CLIENTS



Case studies downloadable on clicking select logos

# RFID DEPLOYMENTS

## INDIA



- DELHI**  
Inventory Management  
Automobile Panel Tracking  
Delegate Tracking
- DEHRADUN**  
Vehicle Tracking
- VARANASI**  
Raw Material Process Tracking
- KOLKATA**  
IT Services
- SUNDERGARH/JHARSUGUDA**  
Mining  
Vehicle Tracking
- BILASPUR**  
Mining
- RAIPUR**  
Steel Plant
- BHOPAL**  
Library Management
- INDORE**  
Highway Toll Plaza
- KOTA**  
Access Parking
- AHMEDABAD**  
Transport Management
- HAZIRA**  
Vehicle Tracking
- SURAT**  
Jewellery Tracking
- MUMBAI**  
Hospital Management  
Warehouse Inventory  
Fertilizer Tracking  
Personnel Tracking  
Delegate Tracking  
Access Parking  
Yard Tracking  
Truck Tracking
- PUNE**  
Construction  
Metal Tracking
- KOLHAPUR**  
Truck Tracking
- NAGPUR**  
Security Management
- GOA**  
Mining  
Supply Chain Optimization
- HYDERABAD**  
Delegate Tracking  
Asset Management
- VISAKHAPATNAM**  
Defence  
Refractory Logistics
- GULBARGA**  
Agriculture  
Farm Vehicle Tracking
- BENGALURU**  
Parking Management  
Asset Tracking
- CHENNAI**  
Shipyards  
Asset Tracking
- COIMBATORE**  
Solar Panels  
Personnel Tracking  
Vehicle Tracking  
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
- BAHRAIN**  
Mobile Dining App  
Vehicle Tracking
- OMAN**  
Asset Management  
Hospitality  
Student Tracking
- QATAR**  
Logistics  
Asset Tracking
- SAUDI ARABIA**  
Livestock Tracking
- UNITED ARAB EMIRATES**  
Oil & Gas  
Asset Tracking  
Student Tracking  
Hospitality

# RFID DEPLOYMENTS

## ASIA PACIFIC



### INDONESIA

- Library Management
- Warehouse 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



## HARDWARE DEVICES

### UHF LONG-RANGE INTEGRATED RFID ANTENNA/READER

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

Xtenna™

Xtenna PLUS™



### UHF NEAR-RANGE RFID READER

(Read range: 2 cm to 1 metre)

Xtenna Proximity™



### UHF HAND-HELD INTEGRATED RFID DEVICES

(Read range: 5 cm to 6 metres)

Handy Scanna™

Handy Scanna PLUS™



### UHF HYBRID INTEGRATED RFID ANTENNA/READER

(Read range: upto 5 metres)

Xtenna Hybrid™



### UHF PORTAL RFID READER

(Read range: upto 5 metres)

Porta™



### UHF BUILT-IN APPLICATION RFID DEVICES

Bibliotenna™



## HARDWARE DEVICES

### LONG-RANGE WI-FI RADIO MASTS

(Range: upto 25 km)

ERF-211E

ERF-711E

**ERF-211E**

**ERF-711E**

### GPS/GSM/GPRS REMOTE TRACKING DEVICES

Strada™

**STRADA™**

### ISM BAND TAG RECEIVER AND CARGO TAGS

(Read range: upto 20 metres)

Logistra™

**LOGISTRA™**

### ISM BAND ANTENNA DEVICES

(Pickup range: upto 100 metres)

Experia™

**EXPERIA™**

## HARDWARE

Click product logos or images for more information

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)

### UHF LONG-RANGE INTEGRATED RFID ANTENNA/READER

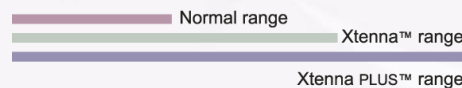


Read range:  
upto 10 metres using Passive UHF tags

### UHF NEAR-RANGE RFID 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

## 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)

## UHF HAND-HELD INTEGRATED RFID DEVICES



- Read range: 5 cm to 6 metres
- Exynos Quad core 1.5 Ghz Processor
- Built-in 4.8" VGA touch screen display
- Built-in WiFi / Bluetooth connectivity
- Built-in GPS connectivity
- Built-in GPRS connectivity with 3G
- Android based platform
- Continuous use time of 8 hours
- Data storage 2 GB internal memory with 16 Gb SD card



Additional Features:

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



Click product logos or images for more information

## HARDWARE

Click product logos or images for more information

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)

### UHF HYBRID INTEGRATED RFID 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

### UHF PORTAL RFID 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.

## 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)

## UHF BUILT-IN APPLICATION RFID 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

Click product logos or images for more information



Click product logos or images for more information

## HARDWARE

EsSEN's long-range Wi-Fi radio masts are a multi-function scalable wireless solution for secure, heavy traffic point-to-point and multi-point services such as large file transfers and multimedia streaming from remote outdoor locations

Providing enterprise level seamless Wi-Fi network connectivity for all possible applications

### LONG-RANGE WI-FI RADIO MASTS

#### ERF-211E

Powerful RF interface 2.4GHz  
Configurable in 4 different operation modes: Access Point, Client Bridge, Client Router and WDS, along with advanced multi-function mode combinations  
IEEE802.11n compliant 2T+2R high speed data transmit upto 300 Mbps  
Maximum multiple authentication and encryption security  
Certified IP67 protection



#### ERF-711E

Two powerful independent RF interfaces 2.4GHz and 5GHz  
Each interface configurable in 3 different modes: Access Point, Client Bridge and WDS, and in 5 multi-function mode combinations  
IEEE802.11n compliant 300 Mbps data rate on both RF bands  
Maximum multiple authentication and encryption security  
Certified IP68 protection



## HARDWARE

EsSEN's Strada™ vehicle-fitted device is a GPS/GSM/GPRS tracking platform that enables live online tracking and mapping of vehicles from a remote location

EsSEN's Logistra™ is an ISM band tag receiver optionally available within Strada™ that tracks cargo tags present inside the moving vehicle

### GPS/GSM/GPRS REMOTE TRACKING DEVICES

# STRADA™



Satellite + broadband GPRS  
Fully OBD II compliant  
Supports 3 simultaneous sensors  
for optional external accessories



**FUEL SENSOR**  
(Optional External Accessory)  
Remote monitoring of  
fuel consumption in real-time

### ISM BAND TAG RECEIVER AND CARGO TAGS

# LOGISTRA™

Interval tag receiver within the Strada™ device for ISM band tracking of 2.4G tags attached to assets

Multi-use heavy-duty cargo tags with long lasting built-in battery

Tag size: 104 x 34 x 8 mm  
Tag weight: 45 g



Click product logos or images for more information

Click product logos or images for more information

## ISM BAND ANTENNA DEVICES

EsSEN's Experia™ is a mounted antenna device in the ISM band that provides interactive messages and sales promotion to cellphones within its pickup range

Providing an enhanced shopping experience through location based bargains directly to potential customers

### EXPERIA™



Mounted device with antennas  
Operates over free-to-use ISM band  
100 metre cellphone pickup range  
Cellphone opt-in through NFC,  
Bluetooth or QR code scanning

### The Enhanced Shopping Experience

Location based bargains to potential customers within range of point-of-sale

Coupon generation and customization by mall owner

Offer messages and coupons directly to customers' cellphones

Customer opt-in confirmation

Coupon forwarding to other cellphones outside range

Coupon validation by merchant from customer's cellphone through QR code and coupon code

Merchant account management for mall owner

Client account functions for individual merchants within mall premises

## 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

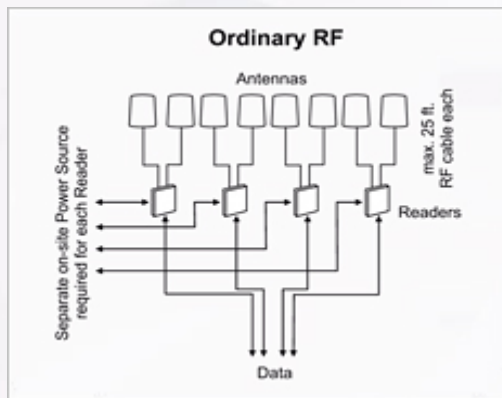
CAT-6 cable does not get factored in at all as a cost component during implementation on account of its **relatively cheap price**

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

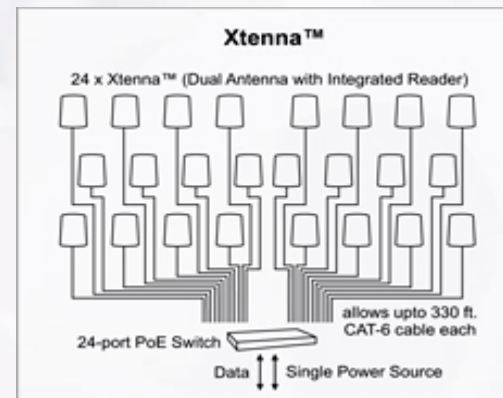
## ORDINARY RF - ANALOG

- 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

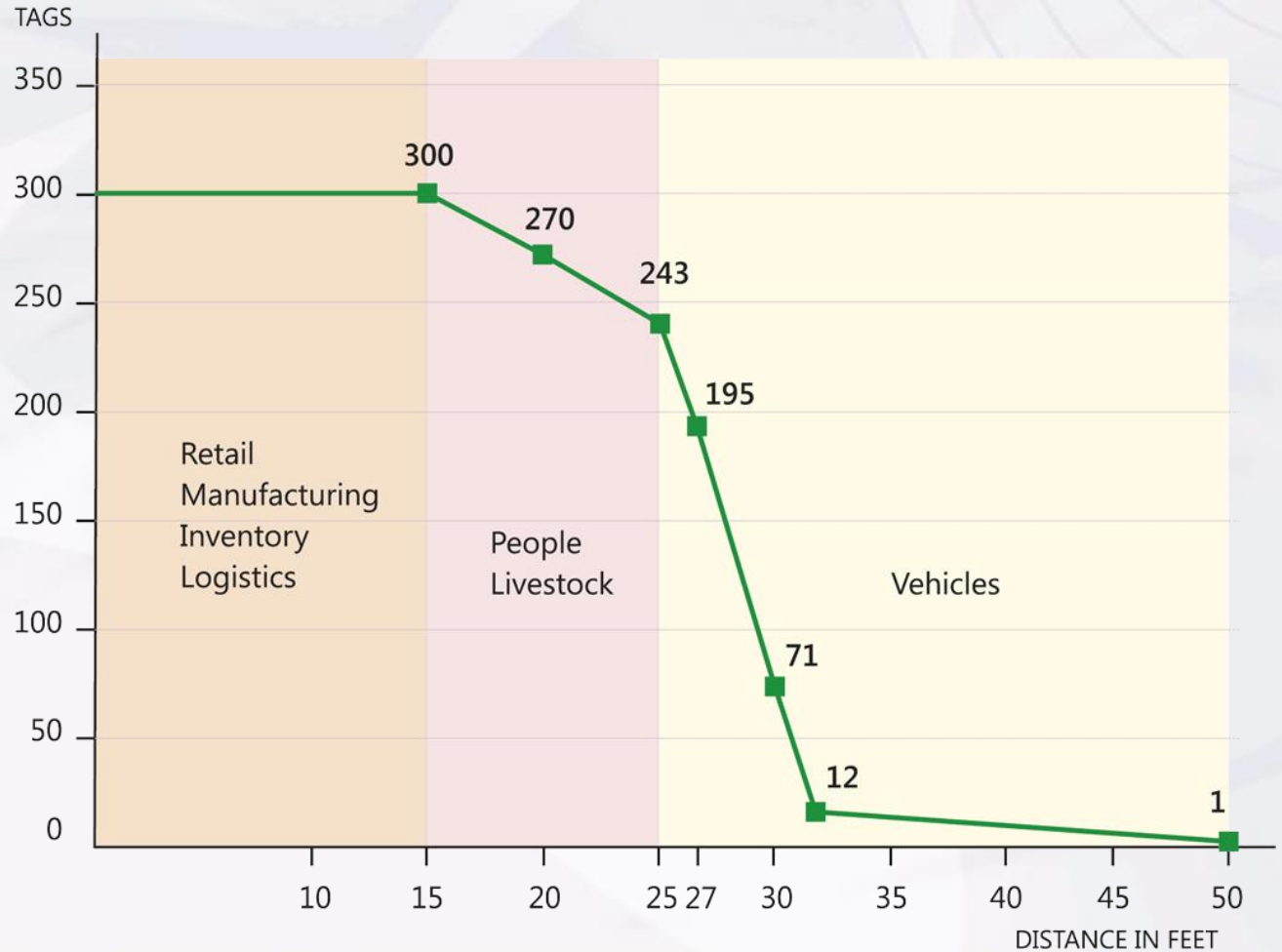
- Only requires inexpensive CAT-6 cable
- Distance between Xtenna and PoE switch can now be enhanced to 330 ft without loss
- Stable digital transmission
- Single CAT-6 cable can carry 48V DC power simultaneously along with data
- Reader, antenna and power supply in a single convenient integrated device



# 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





Click product logos or images for more information

## HIGH PERFORMANCE RFID TAGS

### 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™

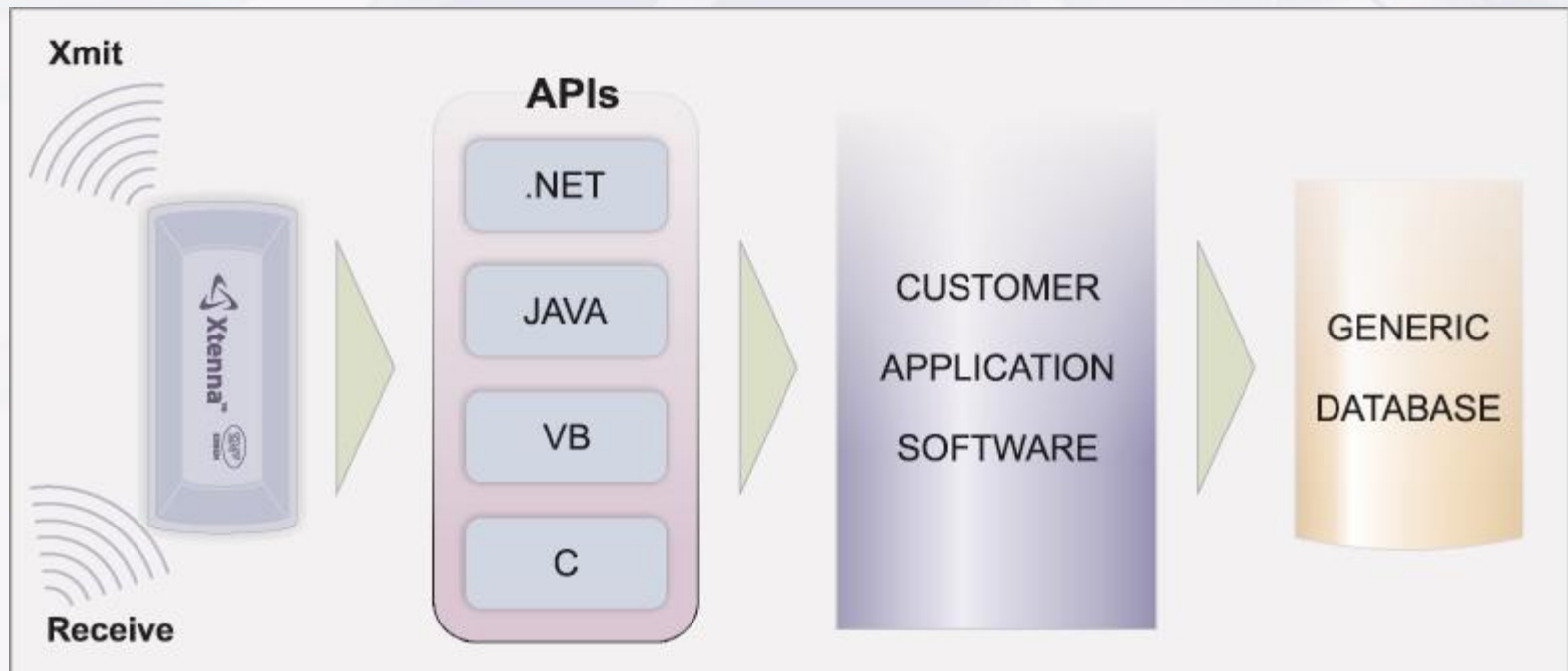
For solar panels  
EPC Global Class-1 Gen-2 compliant  
Read distance: 12 ft.  
Tag size: 86 mm x 28 mm x 0.3 mm  
Adhesive affixing



## 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

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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

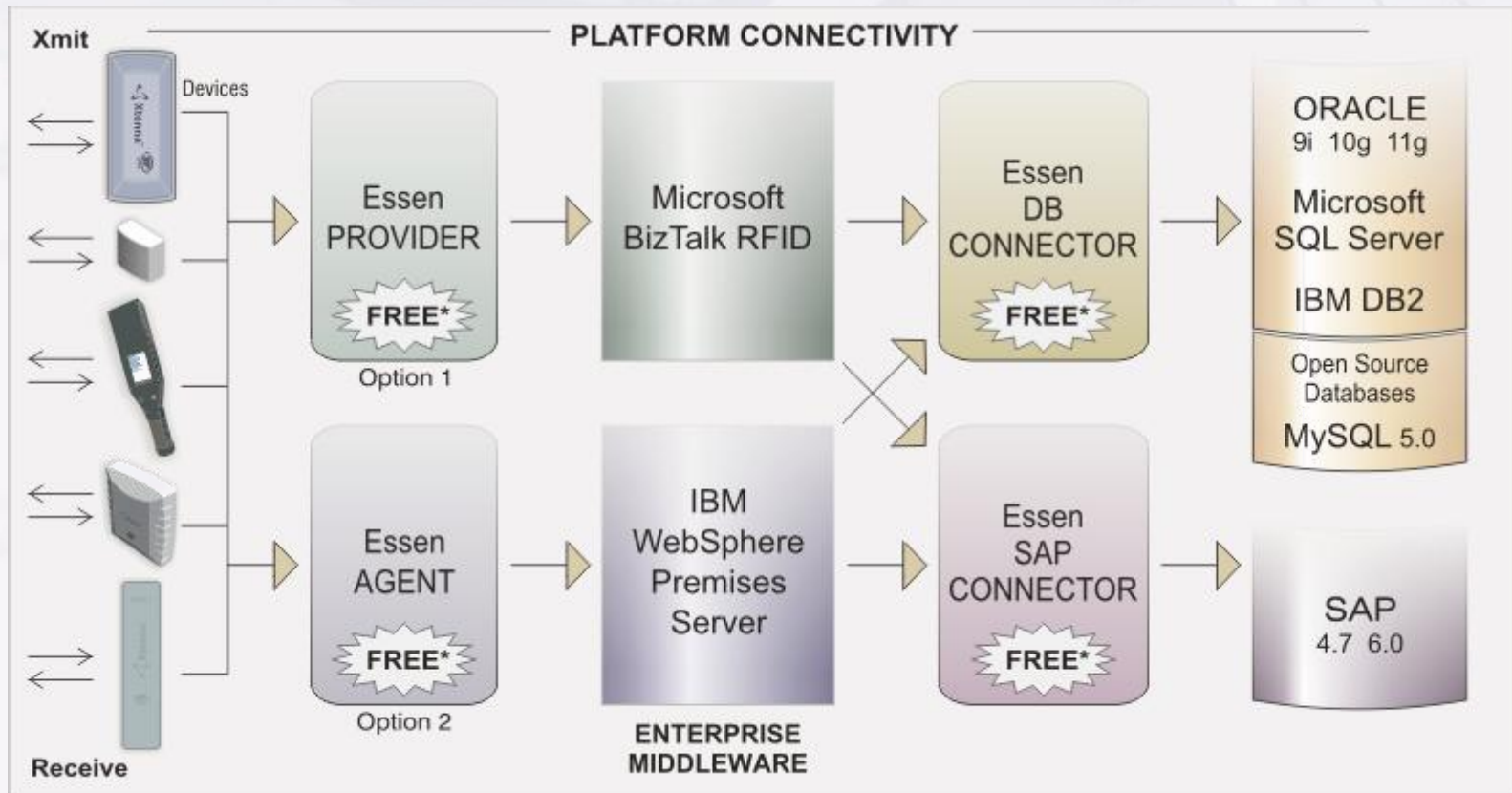
EsSEN RFID's components for middleware platform connectivity consist of **BizTalk RFID – PROVIDER** and **WebSphere Premises Server – AGENT** for existing enterprise middleware platforms from Microsoft and IBM respectively

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

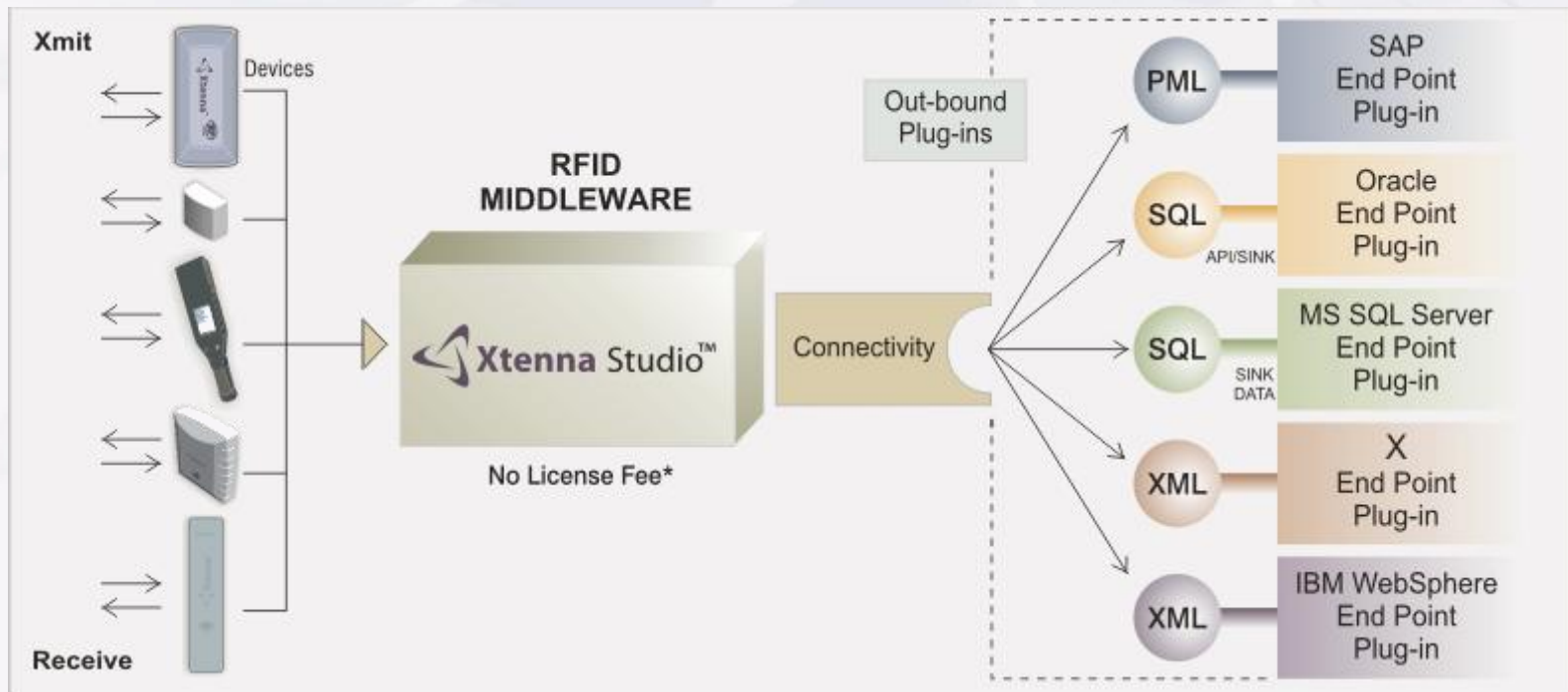
Full scale RFID middleware platform - licensing of other RFID middleware platforms is not required

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 Asset Tracking, Inventory Verification, Personnel Tracking, Visitor Management, Student Tracking, Boarding/Disembarking Tracking, Access Control, Smart Cards, Library Management, Club Management, Kiosk Ordering, Electronic Toll Collection, Truck Dispatch Management, Vehicle Tracking, Parking Management, Mining Ore Transportation, Livestock Management, Laundry Management, Document Tracking, Automated Proof of Delivery, Cargo Tracking, Real-time Location, Product Security, Production Process Tracking, Supply Chain Management, Warehouse Management, Distribution and Retail, Targeted Marketing

ASSET/INVENTORY



RETAIL

MANUFACTURE



MINING

LOGISTICS



TRUCKS

PEOPLE



LIVESTOCK

LIBRARY



ACCESS/PARKING

# ESSEN RFID APPLICATIONS

Click demo links or images

## FLASH DEMOS

### Asset/Inventory

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

### Retail

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

### Manufacturing

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

### Mining

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

### Logistics

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

### Trucks

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

### People

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

### Livestock

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

### Library

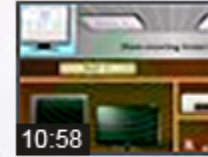
<http://www.essenrfid.com/library-flash-demo.htm>

### Access /Parking

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



Asset/Inventory



Retail



Manufacture



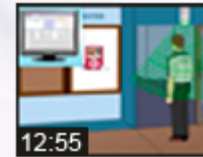
Mining



Logistics



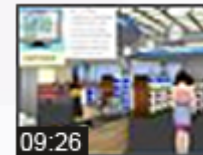
Trucks



People



Livestock



Library



Access/Parking

# ESSEN RFID APPLICATIONS

## APPLICATION DOMAIN REFERENCES

### Asset/Inventory

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

### Retail

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

### Manufacturing

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

### Mining

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

### Logistics

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

### Trucks

<http://www.essenrfid.com/Mailer/trucktracking-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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ASSET/INVENTORY



RETAIL



MANUFACTURE



MINING



LOGISTICS



TRUCKS



PEOPLE



LIVESTOCK



LIBRARY



ACCESS/PARKING

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