

TagMaster

Product Catalogue



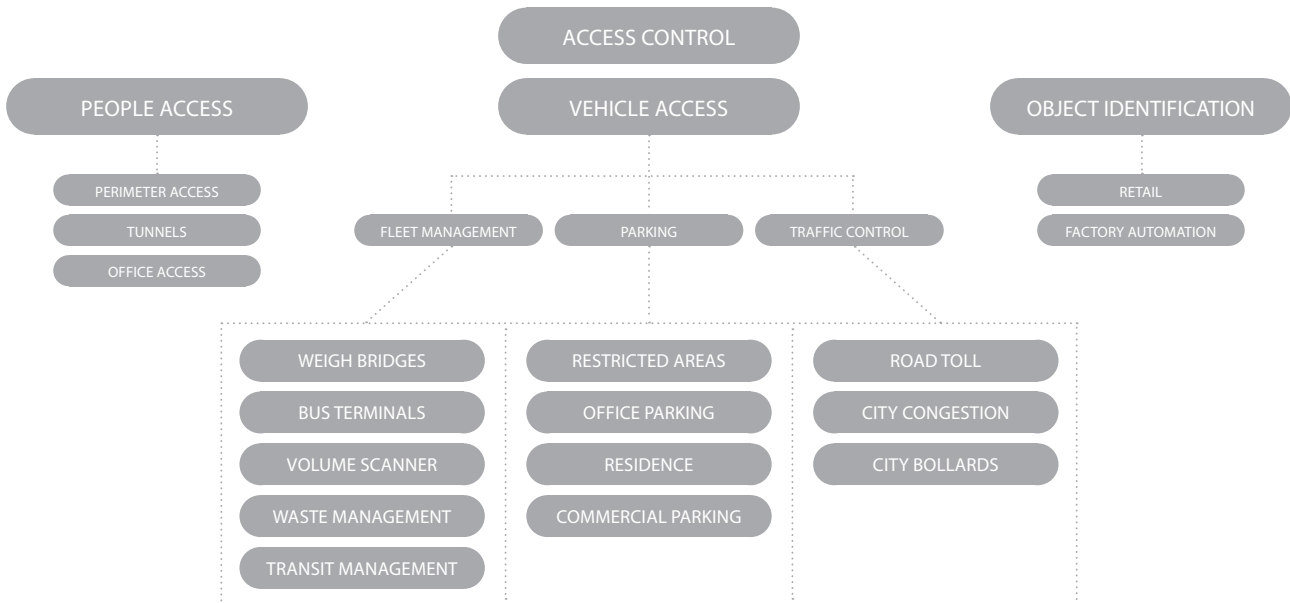
LR-series

Long range identification solutions for access applications
using RFID in demanding environment

Reliable solutions for access applications

TagMaster develops and manufactures leading edge products for advanced long-range Radio Frequency Identification (RFID) systems and information services associated with rail bound transportation, automatic vehicle identification, object identification and people access. Products that combine best of breed performance, rich functionality and high reliability, with a low total cost of ownership.

TagMaster products are used in a number of different application areas. Below, some of the key target application categories are described.



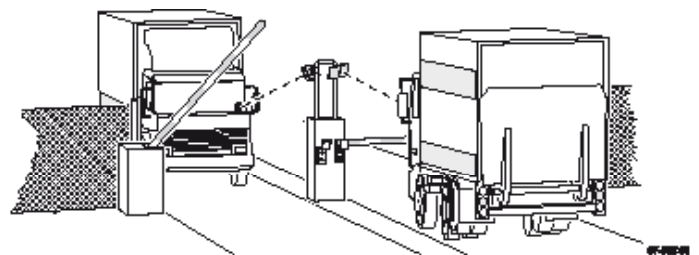
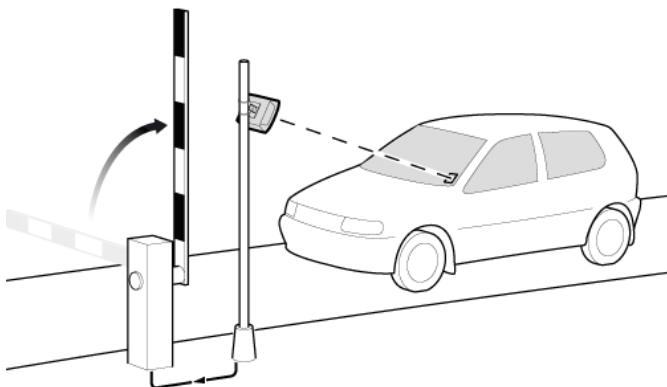
Automatic Vehicle Identification (AVI)

In this area vehicles are identified in parking situations, Traffic control systems or in different types of Fleet management solutions. The reader is typically installed near a gate, barrier or bollard, identifying vehicles using ID-tags mounted inside or outside the vehicle.

In parking installations the identity of the ID-tag is used to ensure the right to access the parking area. The read range is normally limited to 3-6 meters and the passage speed is limited. Different types of communication interfaces are being supported, depending on integration with other systems. Installations are made indoors or outdoors and in all climatic conditions.

Vehicles accessing a restricted area, such as a harbour or an industrial plant for security or safety reasons require a longer read range due to the size of the gate that controls the access. A sturdy product design may be needed in an industrial environment. Environmental and safety related certificates can be important.

In Road Tolls and City Congestion installations, a read range of up to 10 meters can be required and a passage speed of up to 250 km/h. The reader communicates with a management system that uses the ID-tag number and initiates possible revenue related activities. The highest level of read reliability using error detection coding is typically required.



People Access

These types of installations control access into a building such as an office building or a restricted area for perimeter defence. The read range is typically limited to a few meters and the passage speed is low. There are frequent demands for a capability to read more than one ID-tag at a time and a more flexible read lobe where the ID-tag position relative to the reader is more flexible. Hands free and convenient access may also be required.

Object Identification

In these installations the ID-tags are placed on an object that is to be identified when passing. This may be related to a production line in a Factory Automation installation or tracking objects inside a building. The read range is typically limited, as well as the passage speed.



Selected References

Commercial Parking



Trump Towers, Chicago, USA

The Trump Tower Chicago includes, from the ground up, retail space, a parking garage, a hotel and condominiums. Entrances and exits are equipped with TagMaster RFID readers to ensure that only authorized vehicles are granted access. Authorized vehicles and drivers have been equipped with TagMaster ID-tags.

With the system installed, the parking operations has become easier and more efficient through entry and exits using TagMaster's AVI systems. The installation with Tagmaster makes the system admin-friendly which is invaluable to anyone who maintains a large installation.

Products: LR Reader
MarkTag Classic

Residential parking



Kentish Court in Singapore

Kentish Court required an Automatic Vehicle Identification (AVI) system. They use a TagMaster long range reader installed at the entry barrier. The reader communicates with a card access controller system. Vehicles with the ID-tag attached to the windscreen are automatically identified when approaching the entry barrier. The reader sends the ID to the controller in Wiegand format where the authorization is checked.

The installation has reduced the work load for the security guards controlling authorized access and it has improved the vehicle through put at peak hours.

Products: LR Reader
MarkTag Classic

Fleet management



Waste handling in Spittelau, Vienna Austria

This waste plant serves a major part of the households in Vienna. When entering the plant, all trucks have to be accurately recorded, registered in a central database, weighed and directed to a specific tipping point.

TagMaster readers were installed in the plant and ID-tags were permanently fixed onto each truck, avoiding tagswapping between trucks. This made it possible to automatically get reliable vehicle identification and accurate load weight information into the system and to speed up the traffic flow. This has improved the route planning and has made it possible to achieve an optimal usage of the vehicle fleet.

Products: LR Reader
ScriptTag Classic
ScriptTag Outdoor

Object identification



Trolley tracking at Schiphol Amsterdam Airport

Schiphol Airport tax-free trolleys tended to be taken out of the shopping areas to other parts of the airport making it difficult to give a good service to other passengers looking for available trolleys.

A total of 5,000 trolleys are mounted with MarkTags enabling TagMaster readers to identify each trolley approaching exit doors and elevators. Each elevator is equipped with a reader, which prevents the doors from closing. When a shopping trolley approaches a sliding door, the door stays closed as long as the trolley is close to the door.

Products: LR Reader
MarkTag Classic

Restricted area



The steel mill in Cherepovets, Russia

This plant is a part of Severstal's Russian steel segment and is the second largest steel mill in Russia with more than 50,000 employees and production that accounts for about 10 % of all Russian steel.

The daily operation is characterized by a large volume of road and rail traffic entering and leaving the mill. With a new Automated Vehicle Identification System (AVI) the customer improved the overall traffic throughput and increased the level security at the same time.

Products: LR Reader
MarkTag Classic

Traffic control



Toll plaza Hanoi Highway Vietnam

Three Toll Plaza installations along Highway 1 between Hanoi and Ho Chi Min city use TagMaster Readers in automatic RFID controlled lanes. High read speed and the capability to limit and fine tune the reading lobe was important.

The installation has increased the through put of vehicles and saves time for the drivers since they no longer have to stop and pay or check a ticket.

Products: LR Reader
MarkTag S Classic

World leading within RFID

TagMaster offers a wide range of connectivity options, designed to easily plug into any existing infrastructure. The set up is straightforward and simple. Our technology works in the ISM frequency band 2,45GHz, which has inherent benefits for access applications, such as:

- Highly directional and clearly defined reading lobe
- Dense reading area without any “dead spots”
- Tags are read at high speed, ensuring fail-safe reliability
- Extremely low output power:
 - No need to apply for a site license
 - Safe from harmful radiation
 - Unbeatable reliability
- License Free

Reader applications and reader software options functional overview

Function	Wise Man	Watch Man	Pass Man	Pass Man eas	TAGP	SDK
RS232	•	•	•			•
RS485	•	•	•			•
Ethernet					•	•
ConfiTalk	•	•				
Stand alone	•					•
Database	•					•
Logging	•					•
Externally controlled		•			•	•
Buzzer	•	•	•	•	•	•
LED-indicator	•	•	•	•	•	•
Relay	•	•	•	•	•	•
Data push			•	•	•	•
Loop trigger			•	•		
Wiegand/ Mag-stripe			•	26 bits only	•	•
Motion detection	•	•	•		•	•
High Performance Doppler					•	•
USB Auto Execute	•	•	•		•	•
USB Enabled	•	•	•		•	•
SD Memory Card	•	•	•		•	•

Future proof reader platform

All readers are built upon a standard Linux operating system and have an open development platform. The readers support several standard interfaces, including Ethernet (TCP/IP), RS232, RS485 and Wiegand/ Mag-stripe. The reader can be configured and controlled via the Ethernet or serial interfaces, either locally or remotely via an Internet connection. TagMaster offers a set of reader applications for easy integration.

PassMan Part. No. 612740
 This application enables integration of one or more readers into an existing access control system, using Wiegand or Mag-stripe communication protocols. The reader can also connect to a host computer, using other protocols. Tag-reads are sent out immediately to the host computer, without prior alert or poll. A loop detector can be connected to enable the reader only when a vehicle is present.

PassMan is also available in a eas-version, for LR-3 eas readers. The functionality is streamlined to facilitate start-up and configuration, primarily for access installations.

WatchMan Part. No. 612741
 This application is suited for identification systems where the readers are managed from a host computer that handles customized functionality. The tag-reads made by the reader are collected by the host computer, using a polling procedure.

WiseMan Part. No. 612742
 This application enables the reader to be used in a stand-alone mode. The built-in database makes it suitable for identification systems, requiring a reader with both information storage and decision making capabilities.

TAGP
 The TAGP protocol is used when none of the above specified applications are installed in the reader. TAGP enables communication with the reader and the access to its functionality via the Ethernet connection.

Software Development Kit (SDK)
 As an option the TagMaster Software Development Kit (SDK) contains the necessary tools required by system integrators to develop their own reader applications.

Long and defined reading lobe

TagMaster’s semi-passive ID-tags use the principles of “backscattering” to reflect the reader’s output signal, together with identification data from the tag. Each semi-passive tag is equipped with a small battery, which keeps the ID-tag awake but is not used to transmit its own signal. This enables a prediction of battery life, under normal conditions. No power is induced from the reader’s output signal, hence our technology’s low RF power output. The ID-tag can be read an unlimited number of times, without reducing the battery’s energy. The lifetime of the tag is therefore fully predictable when used under normal conditions. Each ID-tag has a pre-programmed 8-digit unique identity code from factory and a 32-bit checksum for automatic verification. This eliminates reading errors even with several ID-tags identified simultaneously.

The FHSS mode enables the reader to “hop” between frequencies within the specified band, ensuring smooth and stable operation in multi-reader environments and other RF intensive areas. The read range can be adjusted, to trim the detection area. The use of semi-passive ID-tags, coupled with our cutting edge high-frequency technology, helps to create a long, very clearly defined reading lobe, combined with an unprecedented performance and reliability.

Reader models



LR-3 eas

Part No. 154200



- Compact reader for access solutions
- Read range – up to 5 meters
- Predefined set of functionality

LR-3 pro

Part No. 154400



- Compact reader for all types of installations
- Read range – up to 5 meters
- Runs all TagMaster reader applications and interfaces

LR-6

Part No. 154600



- Reader for all types of installations
- Extended read range option available
- Read range up to 10 meters
- Runs all TagMaster reader applications and interfaces

LR-6 XL

Part No. 154900



- Reader for all types of installations
- Read range up to 14 meters
- Runs all TagMaster reader applications and interfaces

Read Range in meters

Reader	LR-3 eas	LR-3 pro	LR-6	LR-6 XL
ID-tag				
MarkTag Classic	3.5	3.5	6	10
MarkTag S Classic	3.5	3.5	6	10
ScriptTag Classic	3.5	3.5	6	10
CombiTag Classic	3,5	3,5	6	10
MarkTag MeM	5	5	10	14
MarkTag MeM duo	5	5	10	14
MarkTag MaXtpe	5	5	10	14
MarkTag Outdoor	3.5	3.5	6	10
ScriptTag Outdoor	3.5	3.5	6	10

EAK

Part No. 184401/184402

The TagMaster Easy Access Kit (EAK) is a fast and easily installed all-in-one access solution. It contains all components needed for an access installation with a single entry and integrates easily to industry standard barriers, bollards, gates, etc. The kit is easy to use and to add or remove ID-tags in the database is done by using a standard web browser.

The EAK51 Package includes

- One LR-3 pro reader with a read range up to 5 meters
- One WiseMan reader application with 50 ID-tags pre-programmed in to the database
- 50 MarkTag MeM, 50 WinFix MeM
- One Universal Mounting Kit
- Power and Relay Cable (5 meter) pre-configured and connected

The EAK102 Package includes same as EAK51 but with 100 ID-tags with holders and two readers with mounting kit

ID-tag models

MarkTags – read only tags

MarkTag Classic Part No. 125500



- Access identification
- Medium read range
- 6 years nominal life time

MarkTag MeM Part No. 124000



- Access identification
- Long & wide read range
- 6 years nominal life time

MarkTag MaX tpe Part No. 128010



- Tamper evident vehicle identification
- Long read range
- 6 years nominal life time

Outdoor Part No. 135500



- Outdoor installation
- Medium read range
- 6 years nominal life time

ScriptTags – read & write tags

ScriptTag Classic Part No. 125100



- Access identification
- Medium read range
- 6 years nominal life time

Outdoor Part No. 135100



- Outdoor installation for vehicle identification
- Medium read range
- 6 years nominal life time

CombiTags – combine long range capacity with proximity standard

CombiTag MeM duo Part No. 124200



- A MeM equipped with an external cavity for proximity standard coils

Proximity standard coils supported



- eProx®
 - iCLASS®
- See separate ordering guide for further info.



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ID-tag accessories

For MeM tags

Part No. 193800/193900



- WinFix™ MeM is a transparent holder used for mounting to the inside of wind-screens. The holder is fixed in place with double sided tape and has a plastic spring that holds the ID-tag in position
- The holder can be placed on top of the dashboard when required
- Springclip

For Classic tags

Part No. 195100/195300/195400



- WinFix™ Classic is a transparent holder used for mounting ID-tags to the inside of wind-screens
- CardKeep is a black slide-in ID-tag holder/clip, which can be used as a badge
- CardTape is a double-sided transparent adhesive tape for permanent attachment of Classic and Outdoor ID-tags

ID-tag categories

Category	Tag characteristics	Dimensions
Creditcard sized	General purpose tags	86*54*3 mm
Small and handy	With a wider and longer read range for all types of applications	41*41*13 mm
Outdoor	Rugged version of the general purpose tag	91*59*8 mm
Permanent windscreen	Tamper evident with a longer read range, perfect for vehicle access	47*70*13 mm

Accessories

Reader accessories

Software Development Kit

Part No. 174000



- The SDK GEN4 is a Linux development environment that is used for developing customised Reader software applications for TagMaster RFID readers

Universal Mounting Kit

Part No. 193600



- The Universal Mounting Kit (UMK) includes brackets for both pole and wall (flat surface) mounting of the LR-series readers
- The UMK is designed for outdoor and indoor use

Power Cable, Serial Cable and Ethernet Cable



- Power cable (open end)
- Serial cable with a 9-pin D-sub connector
- Ethernet cable with an RJ45 connector
- High quality outdoor cables
- Complete with cable glands and integrated EMC protection

ConfiTrack

Part No. 175600

ConfiTrack is the administration program of the access system. It defines a user database with access profiles. The Access profile data is distributed to the readers local databases for fast stand-alone operation. Up to 15,000 tags/users can be stored in a reader database.

ConfiTrack is an easy-to-use hands free access control application for a Windows environment. It manages up to 8 access point readers, granting access to users carrying valid TagMaster ID-tags.

A report of the tag reading and validation is stored to be retrieved by the ConfiTrack application at any time. Access and alarm events are logged on disk files and reports from the logs are easily generated.