

# Long-range RFID products

## Vehicle Identification and Access Control



# About TagMaster

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TagMaster develops and markets the best quality RFID products available today, products that are flexible to use as well as efficient and reliable. The unique DNA of TagMaster products is characterized of long read range and low cost of maintenance.

TagMaster's system is easy to install and the high product quality secures a low cost of ownership. The unique DNA of TagMaster products is characterized of long read range and low cost of maintenance.

TagMaster has a long history in long-range RFID. We have introduced RFID technology to new markets and into a variety of applications in some of the most demanding environments around the world.

TagMaster is represented worldwide through a network of partners with over 3000 installations within our most common application areas.

Our products are manufactured in close collaboration with partners to enable both scalable production capacity and standards according to ISO 9000 certification.

TagMaster's in-house Research & Development team carries out our new product developments as well as customization of existing products for specific applications.

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## Our Application areas

Reliability and a high level of functionality is the basis for our business success but also the success of our partners around the world. This means "top of the line" Automatic Vehicle Identification technology for secure and reliable access in high speed and with a long-reading range.

TagMaster supports RFID systems, associated with three major application areas:

### Parking & Access

AVI, (Automatic Vehicle Identification) is the solution for secure and convenient hands-free access control.

TagMaster's system is often used for commercial and corporate parking areas, gated communities, airport- and hospital access etc.

### Traffic Management

Traffic Management technology helps to identify and prioritize vehicles so that traffic can be monitored to avoid traffic jams and to create lanes of free flow for authorized vehicles such as emergency services and public transport. In many countries, vehicle access to city centres are also strictly controlled by a barriers or hydraulic bollards. TagMaster's system is used to allow access for authorized vehicles only.

### Industrial AVI

TagMaster's system can also be used to add further value to a client's business. For example, a TagMaster reader can be linked to a fuel pump or weighing scales, where the weight and ID-tag data of the vehicle are transmitted to a central host. By weighing the vehicle before and after loading/unloading, the weight is automatically entered into the system. The information can then be used for invoicing, time stamps or waste control management.



# Application area Access/Security

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## Improved gate automation in Ashdod Port in Israel

The Port of Ashdod, Israel's main container and general cargo port, is processing 60% of the country's marine imports and exports. The gate site area is one of the largest in the world.

The TagMaster system is used in the HARMONY GATEWAY, provided by Afcon. The HARMONY GATEWAY handles incoming and outgoing port traffic in a completely automated, "pass-through" mode that is faster, more efficient and more reliable than ever before. Other benefits are enhanced security to meet stringent HLS requirements, minimal manpower and reduced overall cost. The combination of

advanced automation hardware from TagMaster and state-of-the-art software provides a comprehensive solution for ports across the globe to effectively manage increasing traffic flow and stricter security concerns while improving port productivity.

The system was installed by Afcon Control & Automation.

Product used for the installation:

LR-6XL Readers

MarkTag Classic



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## Access Control in Bordighera Port in Italy

At this busy port, access for incoming and outgoing vehicles to the port must be controlled. Within this area another passage to a restricted area must also be controlled for the incoming vehicles. Thanks to the RFID system from TagMaster there is no need to push any button or stop driving. The vehicle is automatically identified and, if authorized, allowed to pass the barrier. Another advantage is the anti-pass-back functionality which was specifically requested by the customer. The anti-pass-back functionality assures that no more than one vehicle could enter with the same tag.

The system eliminates congestion in the gate area. Other benefits are more efficient and easier maintenance, the new system also saves user time and cost for both visitors and employees. The system provides the entire zone with a sense of modern and high efficiency and represents a strong improvement for the security. Furthermore this solution makes it possible to save manpower costs, as the system is totally automated.

The system was installed by Generale Sistemi.

Product used for the installation:

LR-6 Readers

MarkTag MeM



# Application area Revenue Parking

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## Parking & Building Access all in one integrated solution, in California, US

The system is in operation at a leading real estate firm with managing multipurpose, office, R&D and industrial properties in Southern California. The system consists of an integration of a seamless AVI system using TagMaster's products. A streamlined approach that provides easy parking and building access using one card for both vehicles and people access control while maintaining compatibility with the existing Lenel and HID infrastructure.

Prior to installation, only building access was controlled. There were no controls in existence for parking access. With no gates, anyone could drive in and park. One other consequence was that tenants and their customers could not find the parking spaces they were expecting.

After gaining convenient, quick and reliable hands-free garage parking access, tenants use the same card to enter the building by presenting it at designated proximity readers. Parking facility control and management has been substantially improved, which is expected to generate higher rates in both tenant retention and new tenancy due to enhanced benefits in parking availability and convenience.

The system was installed by TagMaster North America Inc.



Product used for the installation:  
LR-6XL Readers  
TagMaster ID-tags

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## Parking and vehicle management at China Union Pay, Shanghai, China

The Head Quarters of China UnionPay is located in the financial district of Shanghai CBD. A fully automatic LPR system was installed when the complex was built a few years ago. To increase the security level, while not reducing the traffic throughput during peak hours, Cytel added the latest TagMaster LR-3 readers to seamlessly integrate long-range reading technology to the existing LPR system. With double verification on tags and license plates, the security greatly enhanced levels on both access controls to the property as well as the protection of the company vehicles against unauthorized usage.

China UnionPay has a large fleet of company vehicles. Before the TagMaster system was installed, the organisation was unable to control the vehicle usage properly, since there was no identification of drivers apart from the record of entry and exit time of a particular vehicle. With TagMaster products, the system can tell exactly which vehicle and tag combination entered or left the property and at what time. The successful installation has overcome the problems that hindered the organisation for many years and it is an excellent example for companies with similar problems of vehicle management.

The system was installed by Cytel.



Product used for the installation:  
LR-3 Readers  
MarkTag Classic

# Application area Traffic Control

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## City Access Control using RFID and Bollards in Spain

TagMaster system provides a flexible and adoptable solution for built-up urban areas where the customer requires a minimum impact to the existing street and building environment. Pedestrians and bicycles can easily pass through, while vehicle access is controlled, permitting only authorised vehicles to pass through automatically and any unauthorised access is prohibited.

The TagMaster long-range RFID reader is used to control both the traffic lights and the automatic bollards. A detection loop is used to further ensure the safe operation of the bollard movements. If required, voice communication can also be established via the Control Centre Audio and Video transmission system to the Control Centre. Different user groups are given different access schedules depending on their profiles. Automatic time intervals can be set for free access (pole down) mainly for load/unload vehicles. TagMaster's system is used to allow access only for authorized vehicles and allows the driver convenient and safe access.

This solution provides an environmentally friendly and efficient way of controlling vehicle access to city centres.

The system was installed by SIMEC.

Products used:

LR-6 Readers

SIMEC software

MarkTags and ScriptTags.



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## Green flow

In many cities there is a need to limit the traffic and to make sure that vehicles like buses and emergency services always get a green light. The TagMaser long-range readers are mounted well ahead of the traffic-lights and when the vehicles, with the authorized tag, passes by, the traffic signal will change to a green light.

TagMaster's system is fast and easy to install without the interference that closing off streets and redirecting traffic would cause.

Recommended products:

LR-6XL Readers

MarkTag MeM



# Application area Industrial AVI

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## Weighbridges and Fleet Management in Thailand

TagMaster was selected in order to enable the Automatic Vehicle Identification (AVI) system to a logistical plant for coal delivery to form a completely new logistic system which enhances delivery efficiency and ensures correct deliveries.

Many improvements were made by starting to use the TagMaster RFID system which enhances delivery efficiency and ensures correct deliveries. The managing process of the vehicles at the coal delivery can now be handled at high speed and with a high level of reliability while decreasing manual labour costs at the weighbridges.

Before installing the RFID system the driver needed to give information about the vehicle to the weighbridge officer. After that the driver would manually receive information regarding the coal storage area and the volume of coal to be loaded or unloaded. The high quantities of trucks created long queues and it was a time consuming process. Additionally the large number of transactions

required an automated delivery system and billing of documents.

TagMaster readers have been installed at the weighbridges, the coal storage area and at the entrance of the destination plants. The approximately 1000 trucks have all been permanently equipped with TagMaster ID tags. Upon arrival trucks are correctly identified without human intervention and the information of each tag is passed on to the host administrative system which links to the shipping documents and facilitates the financial processes.

The system was installed by Id Identify RFID in Bangkok.

Product used for the installation:

LR-6XL Readers  
MarkTag Classic

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## Load Volume Scanner in New Zealand

TallyClerk Ltd is a New Zealand based TagMaster partner and manufacturer of Load Volume Scanners (LVS), a non-contact device for the measurement of bulk aggregates in trucks and trailers. The LVS uses lasers to measure load volumes without the need for weight-to-volume conversions or manual surveys. The LVS is fully automated, with automatic vehicle identification. TagMaster products provide this feature. TallyClerk has installations incorporating TagMaster RFID readers throughout New Zealand, Australia and the Pacific.

Manual vehicle identification requires drivers to stop and get out of their trucks. This takes time. By incorporating TagMaster RFID into the LVS design, vehicle identification is automatic and fast. Trucks do not need to stop. This means measurements can be fully automated and take only a few seconds. This allows LVS operators to greatly improve the efficiency of their truck movements. Vehicles drive below an elevated scan head at

slow speed during scanning. The vehicle identification electronics needed to be incorporated into the scan head and be able to operate several metres from the target. Every LVS unit now includes a TagMaster long-range RFID tag reader, installed facing downwards, on the bottom panel of the scan head, 5.1m from the ground. TagMaster ID-tags are mounted on the roof of the cab or on top of the sun-visor of the trucks, facing upward.

The LVS is a fully automated system, incorporating TagMaster RFID products and is typically used by quarries, mines, construction companies and landscape products manufacturers. The system was installed by TallyClerk.

Product used for the installation:

LR-6 and LR-6 XL  
MarkTag Outdoor



# TagMaster Products

## Our product lines includes:

Semi passive RFID Technology: 2,45GHz, LR-series.

Passive EPC GEN 2 Technology: ISO 18000-6c at 860-960 MHz, XT-series.

All TagMaster readers are built around a standard Linux operating system and has an open development platform. This enables integrators to develop and implement new applications using the TagMaster Software Development Kit.



### XT-3

The TagMaster XT-3 is a UHF reader optimised for vehicle access applications that require long-range identification up to 9 metres. With its "all-in-one" design including integrated antenna, the XT-3 is certified for

outdoor use and is easy to use and easy to install. The XT-3 have an antenna expansion capability. The reader is fully compliant with the EPC Gen 2 standard and reads any passive ID-tags compliant with this standard. IP 66.

### LR-3

The LR-3 pro is an "all in one" reader with integrated antenna for long read-range. The reader is easily configured using a standard web browser and is quick to install. The read-range is up to 5 meters and can be fine tuned

to perfection. Several types of interfaces are available: Ethernet (TCP/IP), RS232, RS485 and Wiegand-Magstripe. IP 66.

### LR-6

The LR-6 is a versatile all purpose RFID Reader with a read-range of up to 10 meters. It is an "all in one" reader with integrated antenna. The Reader can be configured and controlled via several interfaces; Ethernet

(TCP/IP), RS232, RS485 and Wiegand-Magstripe. IP 66.

### LR-6 XL

The LR-6XL has all the features as the LR-6 Reader and a read-range up to 14 meters (46). IP 66.

### ID-tags

TagMaster provides a wide selection of ID-tags for different type of installations. Below you will find information about the reading range at different combination of Readers and ID-tags. All 2.45 ID-tags have IP 54-67 sealing.

Reader	LR-3 pro	LR-6	LR-6 XL	XT-3
ID-tag:				
MarkTag Classic	3.5 (11)	6 (20)	10 (33)	
ScriptTag Classic	3.5 (11)	6 (20)	10 (33)	
MarkTag MeM	5 (16)	10 (33)	14 (46)	
MarkTag MeM duo	5 (16)	10 (33)	14 (46)	
MarkTag MaX tpe	5 (16)	10 (33)	14 (46)	
MarkTag Outdoor	3.5 (11)	6 (20)	10 (33)	
ScriptTag Outdoor	3.5 (11)	6 (20)	10 (33)	
Windshield ID-tag/UHF				9 (30)
ISO Card ID-tag/UHF				9 (30)

Reading range in metres and (ft).



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TagMaster's state of the art products are well known for high quality and cutting edge technology.

TagMaster is represented worldwide through a network of partners with over 3000 installations within the application areas. These application areas include Access/Security, Revenue Parking, Traffic Control, Industrial AVI and Rail-bound Transportation.

TagMaster was founded 1994 in Sweden and has its headquarter in Stockholm.

Contact us!

If you would like to know what TagMaster can do for your business, today and tomorrow, please contact us for a meeting.

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