

HYPER X™

Long Range Tagging Systems

HyperX™ is a long-range Vehicle Identification System with read distances ranging from 0.5 metres to 10 metres. It uses semi-passive read-only tags that utilise the power from the antenna for data communications and provides fast and reliable identification.

The basis of the identification system is to read data contained in a mobile memory device (i.e. electronic tag, badge or microchip card) from a distance. The data is then automatically transmitted to a controller or access management system, where it can be processed according to the user's requirements.

Hyper X™ can either be combined with a simple stand-alone controller such as the CRC100 to open a barrier for authorised vehicles, or can form part of an integrated access management system, where the data from the tag can be processed to monitor vehicle movement, etc.

Readers

Nortech offers a choice of readers to suit different applications and environments. The type of reader chosen will depend upon the defined identification area and the reading distance required. Readers can be easily mounted on walls, posts, barriers or included in a roadside pedestal. Vehicles can be detected passing through the detection zone, even at speed.



Compact Reader from the Hyper X™ Range

Tags

The tags contain a long-life battery to power the onboard electronics. The tags are semi-passive and the battery is not used for the generation of RF energy. The lifetimes of the tags are constant and independent of tag usage. The reading distance for all tags for any given reader is constant and independent of age.

Tags can be provided as lightweight cards for personnel or vehicle identification. They can be detected when carried in a pocket, on a belt or in a wallet, bag, briefcase, etc. (they can't be detected through the human body or through metal).

Special vehicle mount tags, suitable for harsh environments, are also available. These can be mounted directly against metal surfaces and are ideal for fleet management and railway applications.



Tag Options

Key Features

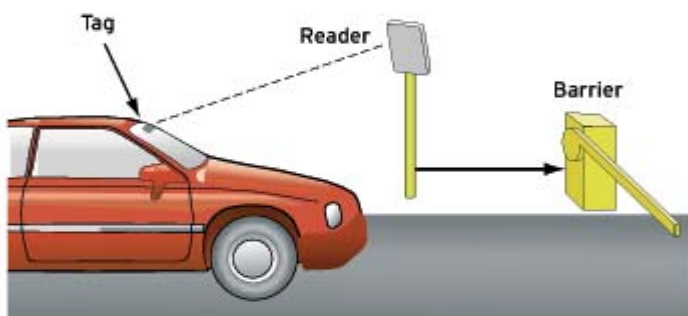
- Guaranteed read ranges from 0.5 metres to 10 metres
- Vehicle and personal identification
- 2.45 GHz microwave frequency reducing interference
- Easy installation
- Hands-free control
- Semi-passive tag - long life
- Tags can be programmed to customer requirements
- Immunity - relatively insensitive to environment
- Choice of interfaces (Clock & Data, Wiegand, RS232, RS485)
- Tag identification in any orientation
- Identification of vehicles at speed
- Multiple reader option - up to 30 readers can operate in close proximity

Applications

- Staff car parks
- Priority vehicle control
- Personnel access
- Industrial access control systems
- Fleet management
- Parking management
- Tolling systems
- Distribution centres
- Bus lane control
- Taxi-feeder systems
- Vehicle access control systems
- Railway systems
- Selective access, e.g. airports

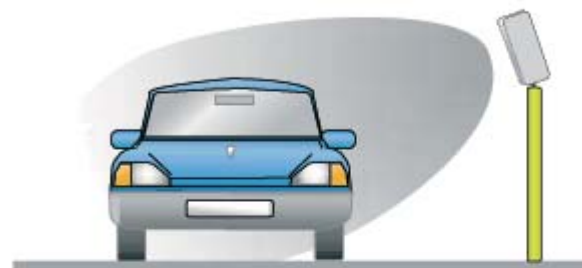
Overview of Hyper X™ Vehicle Detection

By fitting unique electronic tags to authorised vehicles and by mounting readers at suitable locations, the movement of these vehicles through controlled areas can be monitored and recorded. This is suitable for fleet management, vehicle and trailer management and for automatic toll control. Vehicles can be given priority access to special lanes or they can be allowed access to restricted areas such as company car parks. There is no need for the vehicles to stop or for any driver interaction with the system.



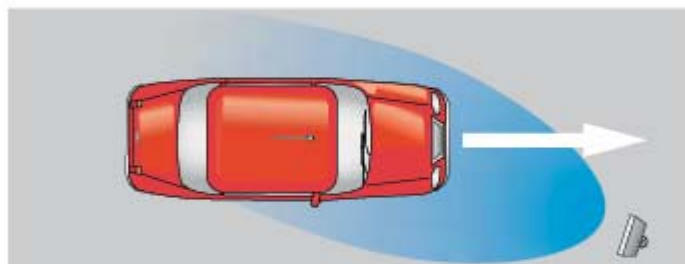
Simple Vehicle Access Application

Authorised drivers may carry a tag behind the windscreen of their vehicle so that it can be detected by the Hyper X™ reader as the vehicle approaches a barrier. The barrier will open to allow the authorised vehicle to pass. There is no need for the driver to stop and manually present the tag to the reader.



Directional Identification in Single Line Traffic

A single reader suitably placed at the side or above a traffic lane can detect vehicles moving within that lane. The reader range and identification zone geometry allows it to detect tags mounted behind the vehicle windcreens or fixed to the vehicle bodies as they pass by.



High-speed Detection of Moving Vehicles

Hyper X™ readers can detect vehicles moving at up to 100 kph so that vehicles can be monitored entering controlled areas such as toll roads, bus lanes, emergency vehicle access lanes, etc.

Other Hyper X™ Applications

Railways

Hyper X™ technology has been successfully used to monitor and manage the movement of trains and rolling stock on railway transport systems including freight transport and underground urban railways.

The tags and readers are robust and vibration-resistant and the antennas are unobtrusive and easy to install. With a high level of immunity to interference and high-speed detection, Hyper X™ is ideal for this type of application.

Readers specifically designed for railways are also available. These are mounted between the tracks so that they can read tags mounted on the underside of rolling stock.

Asset Tagging

Hyper X™ is an ideal system for controlling the movement of assets around a site as well as onto and off the site. Each asset is fitted with a discreet tag especially designed for this purpose. With readers mounted at suitable locations and linked back to a management system, any movement of the asset from one area to another can be monitored and recorded.

Logistics

The management of the movement and storage of trailers and transport containers can be greatly simplified by the use of Hyper X™ technology. Hyper X™ readers can be used to identify trailers and/or containers together with their attached tractor units as they enter and leave storage depots, docks, railway sidings, etc.