



Plextek

BlightER

Asset Management System

Plextek has developed a low-cost high performance asset tracking system for accurate short and medium range asset/personnel location and identification. The system comprises of many lightweight, low power tags that can transmit their ID and location to a central base station.

The tag utilises a sensitive GPS receiver to give an accurate position and proprietary low power ultra narrow band telemetry technology that can transmit this location and the ID of the tag to a digital receiver module. Each tag ID and location is overlaid onto a map of the area displayed on a standard PC or laptop. Each receiver is capable of handling up to 1000 tags and the system is designed to operate on sites of up to 10Km radius.

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Electronics Design and Consultancy



The applications for the system are varied and can include:

- Detection of people, vehicles and assets in airports and other secure areas
- Battlefield simulation monitoring
- IFF system when combined with other sensors – e.g. GSR
- Security staff tracking with panic button facility
- Emergency services staff location monitoring

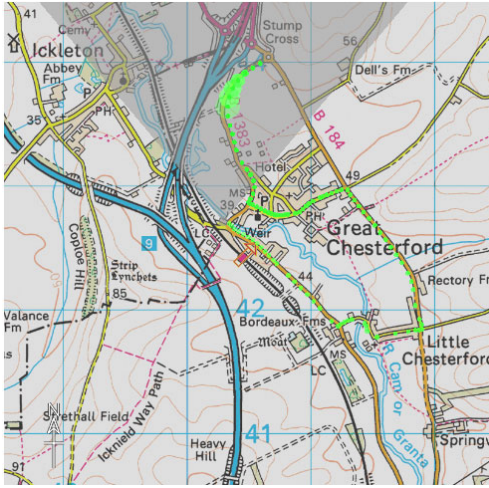
The Tag

The tag is available for personnel use in the form of a mobile phone sized clip-on unit. For vehicle and asset tracking, a magnetic-mount or permanently attached tag is available. Both the personnel and mag-mount units include rechargeable batteries.

Main features of the tag include:

- Light weight and compact - Utilises state of the art technology to provide an integrated solution that can be comfortably worn, carried in a pocket, or discreetly mounted on vehicles or other objects..
- Accuracy - Outdoor accuracy better than $\pm 5m$
- Low power – When running from a battery the unit can operate for over 12 Hours between charges
- Up to 10 Km range - with 'line of sight'
- Always on – No on/off switch
- Movement sensor – Allowing 'sleep function' or alert status.

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- Frequent updates – Up to 10 / minute determined by tag speed
- Resilient to environment – IP67 and impact tested.
- Panic Button – Option available for an instant alert giving unit ID, alert code and location.

Base Station

The Base-station is a compact desktop or vehicle mounted unit that can handle up to 1000 tags simultaneously. There are external connections for VHF and GPS antennas. With the Base station being at a fixed location and having its own GPS receiver, differential GPS can be used giving higher system accuracy. The unit has an Ethernet port for connection into Plextek's display system or other security systems. A vehicle mounted unit allows mobile security staff to monitor local tags whilst on the move.

Charging Station

An intelligent charging system is available that can simultaneously charge up to 50 tags. During charge the GPS remains active enabling the tags are kept up to date with both almanac and ephemeris position information thus allowing instantaneous position fix upon use.

The charging system allows all portable tags to be recharged ready for the next shift.

Asset Management Display

A simple graphical user interface has been developed to allow the operator to control the system and view the positions of all of the tags. The software has various levels of user access from very simple display only through to full system set up and configure. The system can be set up with user enabled pre-sets depending on the technical capability of the user.

System Integration

The asset management system is designed for ease of integration providing a list of asset identities and their location to larger integrated security systems or simply displayed as part of Plextek's Blihter security system. When used with the Blihter radar, the tag locations may be associated with the radar detections to resolve known personnel from intruders. Cameras and thermal imagers may then be used to track and identify any target of interest.

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