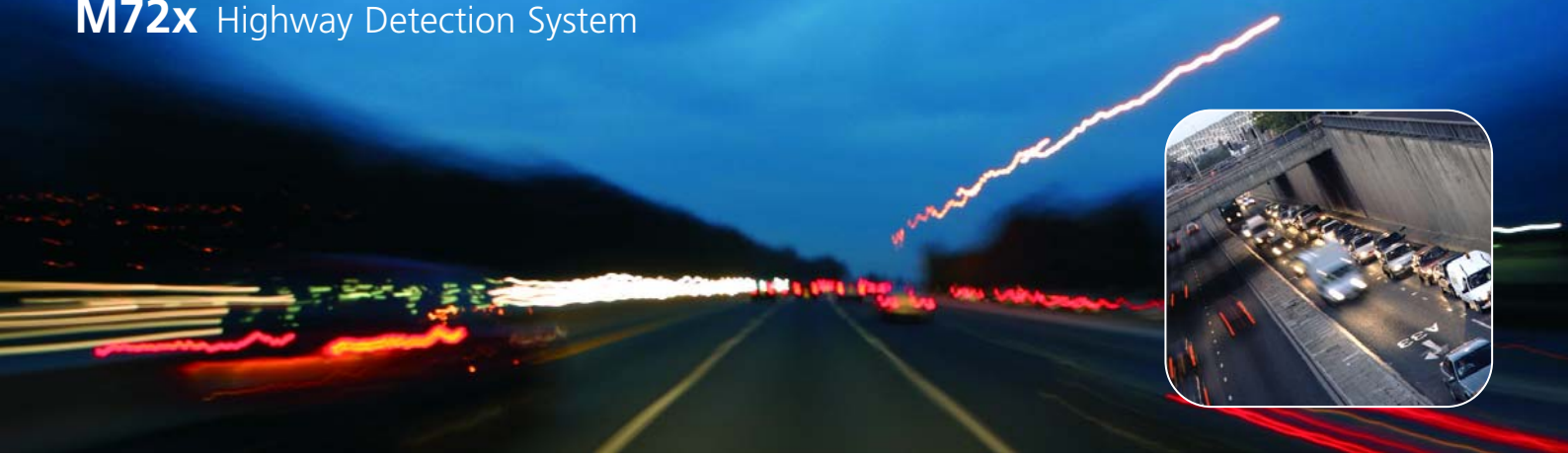




ITS Systems

M72x Highway Detection System



Golden River's technology is at the heart of many Intelligent Transportation systems (ITS) for urban/interurban motorways/interstates where accurate, reliable and economical detection systems are required.

Marksman M72x motorway and interstate ITS Detection systems

The Marksman M72x is an integral detection engine designed to replace the ageing roadside controllers with a fully integrated device for 'fit and forget' detection, highly reliable and accurate data processing and incorporating fast and reliable Ethernet communications. Housed in an industry standard 19" rack mount enclosure the unit is just 2U high or just over 80mm. Single printed circuit board design, surface mount technology and highly advanced processor technology ensure that the unit performs well in dense configurations at the roadside. When integrated with the Communications Control Centre installation it provides a highly reliable and automated solution to today's sophisticated ITS projects.

Marksman M72x Loop Detector

The M72x ITS sub system provides 16 loops for detection and reports individual vehicle parameters including full Vehicle by Vehicle (VBV) recording capabilities and up to 10 million records can be stored in its non-volatile memory as standard. Vehicle type classification along with speed, length (interval or VBV formats) ensuring traffic planners and road operators have the most detailed and accurate records to hand for their statistical and long-term analysis.

Secure and Reliable - No Data Loss

Data security and reliability is a key demand from operators collecting data from sophisticated ITS projects. The Marksman M72x range includes facilities to provide a high level of user and system authentication and security checks to ensure that data cannot be tampered with nor corrupted, as the data is being processed in the outstation or transmitted back to base at the installation. The protocol is machine-to-machine and allows advanced automatic error correcting to be performed if communications links prove unstable.

NTP time server support ensures that the data is time stamped to a very high degree of accuracy and more importantly that the time synchronisation integrity between outstations on the same network can be easily and accurately maintained.



Key features

- Highly secure and reliable detection engine
- NTP Time Protocol
- 16 Channel integral loop detector
- Exceptional speed and classification accuracy
- Vehicle by Vehicle data including count, speed, length, headway and gap
- Interval survey, 3 Intseps either plus or multiplication
- TCP/IP Ethernet communications or Modem options
- Advanced health monitoring
- Integral 5 day battery operation
- -20 to +70°C operation
- Certified to CE directives



The M72x range is supplied with 128MB of data storage allowing significant backup storage in the event of a communications failure so that data will never be lost. More significantly, industry standard data flash cards are used which allow ready expansion in the future and provide "non volatile" storage automatically saving any data that has been recorded in the event of a power failure. The integral battery will even maintain the device recording operation for 5 days after power failure; having usefully sent a message to the instation alerting you to the power fault before shutting down communications.

Ethernet TCP/IP

Ethernet and TCP/IP technologies are replacing dedicated and custom communications systems at a rapid rate. Considerable savings in equipment cost, maintenance and training are available when TCP/IP is adopted. The M72x range provides Ethernet based TCP/IP communications as standard allowing robust, reliable and fast communication of data and configuration to and from the unit. This ensures that operators can retrieve the vast amounts of data now available quickly and reliably. With automatic checking and self correcting protection; data will not go missing.

Construction and general features

The sensor loops connect with simple but easy to wire plug connectors (supplied) which connect at the rear of the chassis. The Ethernet connector also fits at the rear, alongside the AC mains connection.

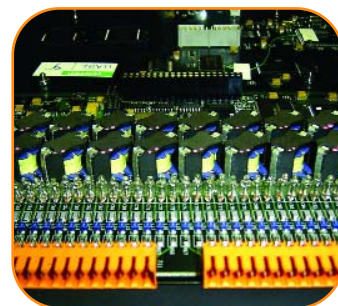
At the front, a familiar DB9 RS232 connection is provided for local access. A set of LED's indicate the status of communications to the instation, event and vehicle generation.

The entire unit only consumes approximately 2 watts and generates very little waste heat, therefore reducing A/C requirements.

As with all Golden River equipment, the devices meet and are certified for all the appropriate standards.

Communications Control Centre

The M72x range includes advanced health monitoring features that allow the operation and performance of the equipment to be monitored in real time. The Communications Control Centre instation is automatically alerted to sensor and power faults; time synchronisation errors and if the configuration has been modified at the roadside. When connected to the instation the device provides data on the health and performance of the sensors and the equipment which can be used to determine incipient failures or anomalies in operation and assist operators with planned maintenance visits.



The M72x Detection System