PASSENGER INFORMATION SYSTEM (PIS)

Keeping Passengers Informed

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A complete system solution that delivers real-time updates and offers value-added information onboard trains as well as in stations.

Using a combination of text, pictures and video formats, the Passenger Information System (PIS) provides travel and safety information, announcements, and commercial messages directly to transit passengers, enhancing the overall commute experience.

PIS includes:
- Train Traveller Information System (TTIS)
- Passenger Announcement and Communications System (PACS)
- Wireless System (WS)
- Video Surveillance System (VSS)
- Automated Real-Time Passenger Counting System (ARPC)

**TRAIN TRAVELLER INFORMATION SYSTEM (TTIS)**
The TTIS is an integrated suite of electronic information and entertainment, bringing the latest real-time passenger information, entertainment videos and commercial advertisements to passengers. The information includes station identification, train arrival and departure times, live and ad-hoc messages, as well as public content such as places of interest, daily public events and the weather. The system provides a web browser interface and predefined templates for content creation and display customisation.

- LCD Dynamic Route Map Display and Public Information
- LED Displays in Train Interior and Exterior
- LCD Display for Public Content and Entertainment
- Media Player and Video Distributor
- Content Creation Terminal

**PASSENGER ANNOUNCEMENT AND COMMUNICATIONS SYSTEM (PACS)**
The Trainborne PACS is an integrated solution providing both communication and public announcement solutions on the train. Communication channels are enabled between the passengers, train driver and Operator Control Centre (OCC). Public announcements from the train driver and the OCC, as well as automated station information announcements are managed by this system. The system sits on an Internet Protocol (IP) network and employs digital Voice Over IP technology for audio streaming, to achieve superior voice quality with no single point of failure. This system is designed to connect with legacy equipment and systems using serial interfaces like RS-485 & RS-232, CAN bus, MVB, dry contacts and other proprietary protocols like IPTCOM, CIP etc.

- Train Communication and Control Unit
- Public Address Control Unit
- Train Operator Control Panel
- Award Winning Passenger Emergency Communications Unit

**WIRELESS SYSTEM (WS)**
The Trainborne WS provides a seamless means of data transfer between the Train and Trackside systems via WiFi connectivity. The Wireless system adopts the latest transmission standard IEEE 802.11n/ac MIMO, providing reliable mobile wireless broadband connectivity with high throughput rates, supporting applications such as Train Signalling, Video, and PIS systems. The WS supports all common Ethernet standards and protocols, providing seamless integration with all Train and Station systems.

- Trainborne Wireless Clients
- Trackside Wireless Access Points
- Trackside Wired Backbone Network
- Wireless Controllers

**VIDEO SURVEILLANCE SYSTEM (VSS)**
The Trainborne VSS enhances public safety by allowing security monitoring at the OCC. Live video from inside and outside the train is streamed to the train driver console as well as to the OCC. These video streams are recorded by a Networked Video Recorder at all times during train operations. The surveillance system is completely digital and sits on an IP network.

- IP Camera
- Network Video Recorder
- TVSS Gateway
- IP Train Video Display

**AUTOMATED REAL-TIME PASSENGER COUNTING SYSTEM (ARPC)**
The ARPC provides passenger loading information on a train with up to 98% accuracy. The system sends real-time information on passenger capacity of each car and train to operators. With this information, passengers waiting at a station platform will know which areas are less crowded, resulting in more effective crowd management. At the same time, operators are able to efficiently and dynamically regulate the train schedules to meet passenger demand.

- 3D Camera