Thales electronic ticketing solutions are in operation in more than 100 cities around the world. Every day, over 100 million transactions are processed by our systems worldwide.

www.thalesgroup.com/security-services


As the world's major urban centres expand, keeping citizens mobile is becoming a major challenge for municipal authorities. Road traffic is increasing rapidly, leading to growing congestion and pollution in city centres. Public transport is one of the most economical and environmentally sensitive policy options for solving the mobility equation in urban areas – and a fare collection system that is easy to use and secure is one of the keys to success. It can provide city authorities with the additional leverage they need to convince citizens to leave their cars at home and take public transport.

Thales is stepping up to these challenges with a comprehensive fare collection solution that helps transport operators achieve their goals. The multimodal, multi-operator ticketing system makes public transport more seamless and more attractive for passengers, and more efficient for everyone concerned. Today, electronic ticketing systems herald a new era of secure, efficient revenue collection for the transport sector.

Five reasons to choose Thales

Know-how
Thales has provided ticketing systems for 40 years. Our solutions are fully proven around the world, meeting all the fare collection requirements of bus, tram, metro and train operators.

High Security
Security solutions that are extensively proven in the banking sector ensure maximum protection of data exchanges within the fare collection system: Thales electronic ticketing solution combine distributed PKI (Public Key Infrastructure) and encryption to guarantee maximum protection of equipment and data as well as non-repudiation of all collected transactions.

Open, Interoperable System
Thales fare collection solutions are the most efficient pathway to the full-scale deployment of an interoperable, multimodal transport system. For new programmes or upgrades to existing systems, the Thales open system approach allows existing as well as new operators to join the multimodal scheme easily and cost-effectively.

Innovation
Thales continuously invests in research and development, helping to ensure that Thales fare collection systems incorporate the latest technological innovations. The company is currently investing in the next generation of fare media, for example, developing solutions that will bring the benefits of mobile ticketing to the public transport sector.

Trusted Partner
Combining experience and technological leadership, Thales is able to deliver the most ambitious and challenging projects. The Netherlands and Denmark, for example, have selected Thales for their nationwide ticketing solutions, enabling passengers to travel across the country with a single card.

Thales Transportation Systems
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e-Ticketing System: multimodal, multi-operator, public transport ticketing system

### Fare Product Management
Fare media application, auto-reload, renewals, loyalty, refund, travel pattern, fraud, blacklist management.

### Customer Management
Registration, profile, subscribed services, complaints, travel hot list, web services.

### Equipment & Maintenance
Remote equipment monitoring, fault analysis & maintenance, device administration.

### Security & Key Management
Certificate authority, encryption, key and certificate distribution, access control, device administration, equipment parameters.

### Financial Reporting
Invoicing and debt collection, payment processing and banking interface, asset management, vendor and supplier management.

### Clearing & Settlement
Transaction validation, financial statements, revenue apportionment & fee computation, settlement.

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**Central Processing System**

The Central Processing System is a modular ticketing system designed for all modes of transport and networks of any size. It can handle many types of fare media – contactless cards, tickets and tokens – and is flexible enough to accommodate the most advanced fare structures (flat rate, zone-based, distance-based, etc.). The Central Processing System can operate the ticketing system remotely from one central point or from workstations located in each metro station or bus depot.

**Revenue Clearing System**

Based on an open system architecture, the Integrated Transit Hub allows authorities to migrate smoothly to an interoperable, multimodal, multi-operator fare collection solution. New service providers can be incorporated seamlessly at any time, without needing to make any major changes to their systems.

**Front End Equipment**

As the primary interface between passengers and transport operators, front end equipment is key to the passenger experience. Thales offers its own range of front end equipment and is sustaining its investments in this area to offer customers the optimum balance between ease of use, cost-effectiveness and reliability. Thales onboard and in-station product lines include a wide range of devices for sales, validation and control.

**Contactless Fare Media**

Thales fare collection systems support the most popular contactless fare media standards: Mifare 1/4K, DESFire, Calypso and Felica. The unique Thales multi-standard reader makes it possible to use several types of fare media in the same system, with fast validation to ensure maximum passenger flow and uses high security technology for an enhanced protection against fraud.