

Introduction

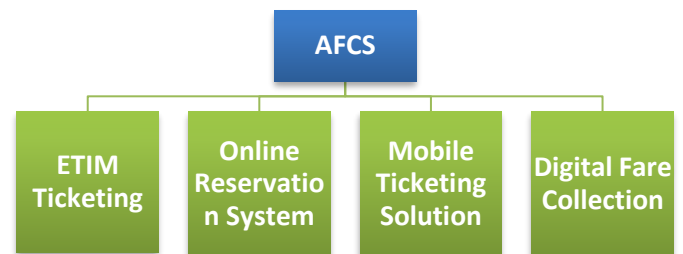
Automated Fare Collection Systems (AFCS) software represents a transformative leap in the management of fare transactions within public transportation networks. As a cornerstone of modern transit technology, AFCS revolutionizes traditional ticketing processes by introducing advanced automation and contactless payment options. This sophisticated software is integral to enhancing the efficiency, accuracy, and overall user experience of fare collection across diverse modes of transportation, such as buses, trains, and trams. By seamlessly integrating with online platforms, supporting multiple payment methods, and providing centralized management capabilities, AFCS software not only streamlines operational processes but also empowers transportation authorities with valuable data insights for informed decision-making. With features like real-time transaction processing, robust security measures, and scalability, AFCS software is at the forefront of creating a more seamless and user-centric public transportation experience.

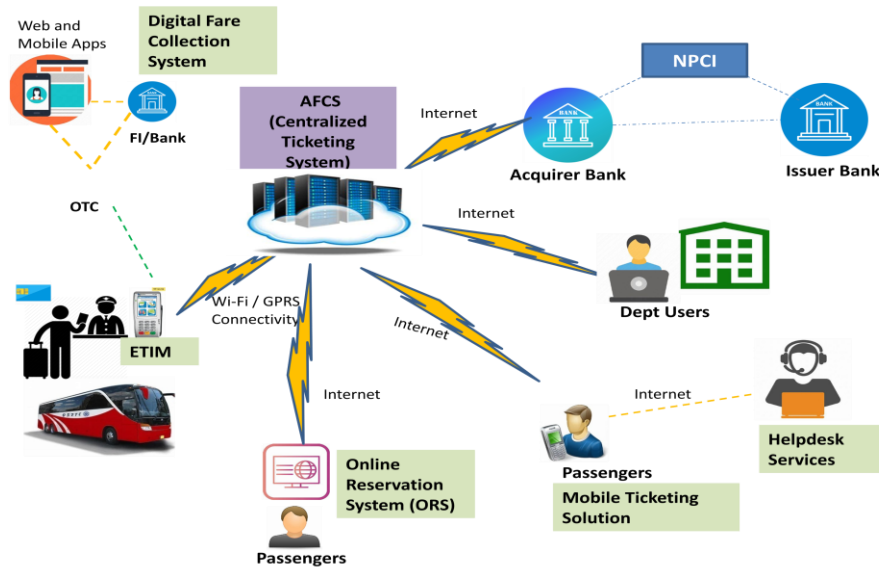
Uses

1. Streamlining fare transactions and ticket issuance in public transportation.
2. Enabling convenient and secure contactless payment methods for passengers.
3. Facilitating real-time data analysis for optimizing ridership patterns and operational efficiency.
4. Integrating with online reservation systems to enhance the overall digital transit experience.
5. Improving operational efficiency by automating and centralizing fare collection processes.
6. Providing immediate updates to the central system to prevent revenue leakage and ensure responsiveness.
7. Offering robust data security measures to protect sensitive transaction information and uphold privacy standards.

Features

- Multi-modal integration for seamless connectivity across various transportation modes.
- Contactless payment options, including smart cards, mobile wallets.
- Real-time transaction processing to ensure immediate updates and prevent revenue leakage.
- Centralized management capabilities for monitoring and control from a central location.
- Robust data security measures to protect sensitive transaction and passenger information.
- User-friendly interfaces for passengers and operators, promoting ease of use.
- Customization and scalability to adapt to specific needs and accommodate growing transit networks.
- Integration with online platforms for convenient journey planning, booking, and payment.
- Comprehensive data analysis tools for optimizing ridership patterns and enhancing operational efficiency.
- Immediate issuance of transit cards with minimal KYC requirements for quick and hassle-free access.
- 24x7 call center services for technical support and query resolution for mobile ticketing solutions.





Technical Specifications:

S. no.	Parameter	Remarks
A	GENERAL	
1	Centralized and Integrated Solution	Ajeevi Automated Fare Collection System
2	Technology Used	COTS (Commercial Off the Shelf) Technology
3	Access Features	RBAC Model (Role-based access and control)
4	Architecture	N-tier scalable architecture ,modular design ,robust software
5	Framework	.NET Core Framework ,ASP.Net MVC
6	Database	SQL Server 2016 and above, Mongo DB, Posgre SQL
7	Operating System	Windows/Open Source Linux
8	Frontend	JavaScript, JQuery, React JS, Angular, HTML, Bootstrap, Razor Pages
9	IOT Hub Integration	Kafka, Rabbit MQ, Socket Programming, Web APIs
10	Application Availability	High availability and DR replicability

11	Single-Sign On facility	Available
12	Audit Trail	Ability for logging, audit, and tracking of any changes carried out on the database
13	Interoperability Standards	Can be integrated with any other application through web APIs(Push or Pull)
14	Security Features	1. Security design with well-designed identity management system, security of physical and digital assets, data and network security, backup and recovery and disaster recovery system. 2. Support for security features such as W3C specifications, Information access/transfer protocols SOAP,HTTP/HTTPS, etc 3. API Integration allowed post authentication
15	External Communication	Through SMS Gateway and SMTP Integration
16	Web Enabled Solution	Yes
17	Services for GIS Integration	Google Maps, ESRI Map, Any other available open map
18	GIS Features	Geomapping, Geotagging, POI, Geofencing through Geo JS ON and drawing tool
19	Deployment Features	SaaS Model, On-Premise Model, BOOT Model
20	Cloud Deployment	Amazon AWS, Microsoft Azure
21	Information Security	ISO 27001 certified System
22	Operations	ISO 9001 Certified
General Features		Display information in a user-friendly format with intuitive and interactive visualizations.
		Enable users to capture and export the current display through electronic reports in MS-Excel, PDF, and Web formats.
		Provide diverse visual elements such as charts, maps, calendars, gauges, images, tables, and alerts in dashboards and reports.
		Incorporate view-management tools, allowing users to move, reorder, enlarge, shrink, open, and close visual elements with intuitive interactions.
		Allow users to filter and sort presented data based on various attributes for enhanced data analysis.
		Enable efficient searching through visual elements displaying extensive data entries like tables and lists.
		Support drill-down functionality for users to navigate through large datasets easily and quickly based on defined time periods and user-defined search criteria.