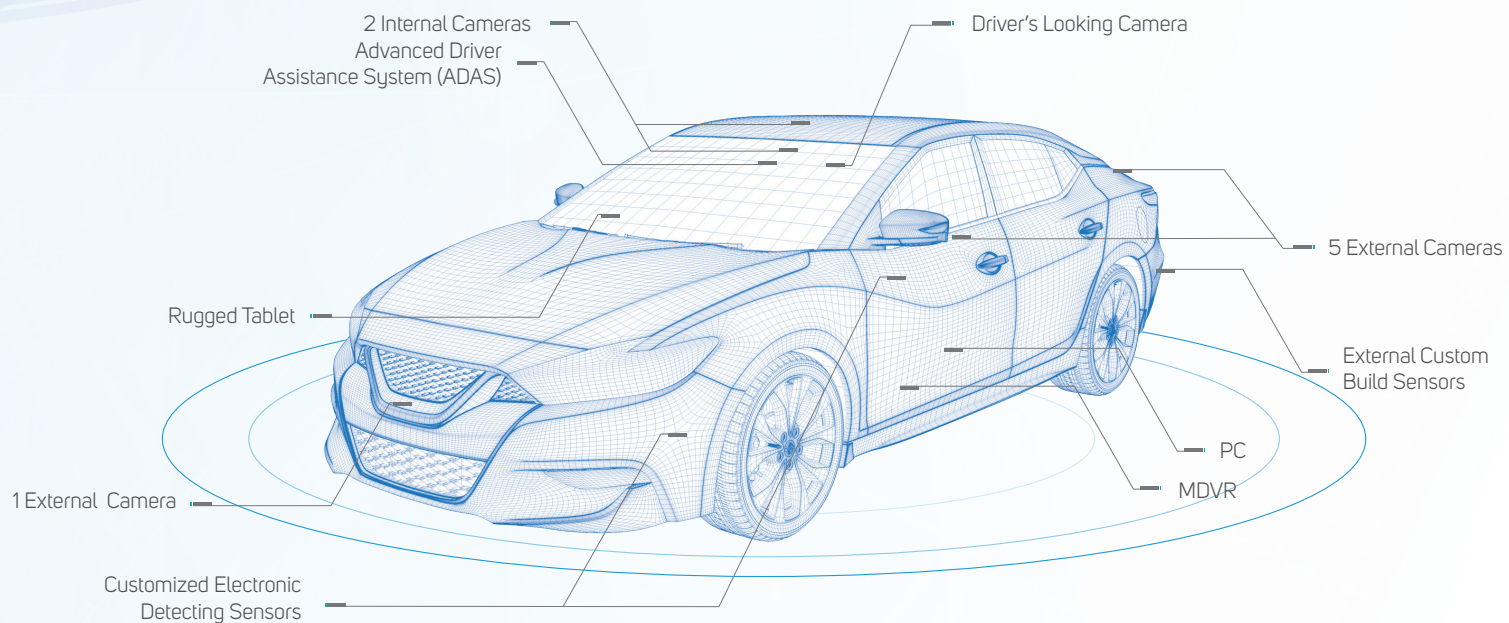


SMART DRIVING TEST



Smart Driving Test System (SDTS) is an integrated smart solution for automated driving behavior assessment with a scoring system and results based on pre-defined testing criteria. The SDTS captures every action a driver would take during a test trip, starting from seat/mirror adjustment to speeding, lane changing, leaving safe distances, compliance with traffic signs, and much more. It relies on state-of-the-art artificial intelligence technology in a customized test car equipped with advanced sensors and cameras. This introduces a new innovative concept of driving licensing, where automation and process standardization ensure accuracy, efficiency, evidence, and timely monitoring capabilities. While guaranteeing transparency and reduction of human error through the elimination of human interference.





Features

Full Automation

Fully automated process for evaluating driving behaviour based on pre-defined testing criteria.

Processing Unit

Centralized data unit that reads data inputs from all system components including devices , sensors , vehicle information (OBDII), ..etc, and then process the data through machine learning algorithms to extract the applicants testing faults.

Result Verification

Test findings are verified by examiners and operators to double check, accept, or reject.

ADAS

Advanced Driver Assist Systems (ADAS) is a state-of-the-art technology that uses image processing algorithms for recognition of road features to accurately assess the applicant's reactions and decisions.

KPIs & Data Analysis

The system produces different reporting of test numbers, test results, applicants' characteristics, hardware/ software health status ...etc.

Location Mapping & GIS

The system integrates with latest GIS technologies from Esri ArcGIS to be able to report and monitor the applicant's exact location in real-time.

Live Test Monitoring

The system allows supervisors to monitor the tests via 8 cameras installed in the test vehicle while switching between different viewing angles. Addition to the test findings located in the GIS platform and the location of the vehicle.

Results with Evidence

The system displays the applicant's score and test result with Pass/Fail status supported by video evidence of applicant's errors for future use and verification purposes.

Proprietary Hardware

The system uses Tatweer's engineered devices that is carefully designed with IO Box to enable interconnected system components communicating via a custom communication protocol and exchange telemetric in real time. Tatweer's Applicant Vision Monitoring System (AVMS) uses advanced AI algorithms to check applicant response.

Components

Test Vehicle

Fully equipped vehicle loaded with sensors and cameras to fully capture the driving behaviour with evidence.

Test Bus

Bus loaded with both attendance system and queuing system for applicants that provides information about the applicants turn in the queue. Information displayed on a large screen fitted in the bus console.

Control Room Platform

GIS-based integrated platform that automates the applicant's assignment to tests, assigns examiners/supervisors, runs the live tests, monitors the tests and the applicant's performance with live audio/video and evaluates the results of the tests.

Student Information System

A screen visible to the applicant while taking the test displaying important navigation information with voice instructions in the language selected by the applicant.

Dashboard

Interactive dashboard showing both real-time and historical data and KPIs, indicating number of tests, results, applicants' characteristics, common mistakes, geographical distribution, test duration ...etc.

Examiner System

Fully automated system for monitoring and verifying tests result designed to be used by the examiner who accompanies the applicant in the vehicle.

