Smart Fleet Tracking and Management

AVNET

Avnet Reference Architecture

Edge Intelligence	Cloud Connection	Cloud Services	Cloud Intelligence	Mgmt Experience
Avnet's solution helps you manage and monitor each vehicle in your fleet with a variety of sensors, OBD2 integration and cameras.	Each vehicle is equipped with an edge gateway that gathers data from the onboard systems and uploads it via cellular to the cloud.	Microsoft's Azure provides the solution with a scalable and secure back-end for all your data and for our cloud solution components.	Avnet's AI-as-a-Service analyzes routes and driver behavior while our rules tests engine checks alerts your team about error conditions.	Your team uses our web-based application to map and manage your vehicles, routes and drivers to optimize results and increase profits.

Vehicle types:
TRANSPORT VEHICLES
CONSTRUCTION VEHICLES
UTILITY VEHICLES
CITY / SCHOOL VEHICLES
ANY VEHICLE, BUS, TRAILER

Edge Intelligence
- GPS LOCATION SENSOR
- OBD2 VHICLE STATUS READ MODULE
- ACCELERO-METER
- COLLISON SENSOR
- INSIDE CAB TEMPERATURE SENSOR
- INSIDE CAB HUMIDITY SENSOR
- FRONT-FACING DASH CAM
- REAR-FACING DASH CAM

Cloud Connection
- WIFI, BLE OR PROPRIETARY RF WIRELESS
- CELLULAR CONNECTION TO CLOUD
- EDGE GATEWAY
- OFFLINE STORAGE FOR RESILIENCE
- CAPTURE AND UPLOAD DATA EVERY 5 MIN

Cloud Services
- AZURE IOT HUB
- AZURE BLOB STORAGE
- AZURE COSMOS DB
- STREAM ANALYTICS
- AZURE SQL DB
- AZURE EVENT HUB
- RULE PROCESSING ENGINE

Cloud Intelligence
- ROUTE OPTIMIZATION ANALYSIS
- DRIVER BEHAVIOR ANALYSIS
- AZURE MACHINE LEARNING
- AZURE VM WITH WIN/IIS
- ANALYZE REQ'D MAINT VIA OBD2
- RESPOND TO COLLISION DETECTION
- DETECT IF VEHICLE EXITS GEOFENCE
- AZURE LOGIC APPS

Mgmt Experience
- VIEW FULL FLEET ON A GLOBAL MAP
- REVIEW WEATHER ON KEY ROUTES
- WEB / MOBILE APPS
- REVIEW LOGS, ROUTES AND DRIVER PERF
- CONFIGURE TRUCKS AND DRIVERS
- CONFIGURE ROUTES AND GEOFENCES
- ALERT FLEET AND SERVICE MANAGEMENT

Roles:
OPERATIONS MANAGER
FLEET MANAGER
FIELD SERVICE ENGINEER

Legend:
Customer component | Microsoft product | Azure service | Partner component