Rapidise develops several advanced dashcam solutions, primarily leveraging Qualcomm processors and its proprietary **RISE platforms**.

Based on the source material detailing distinct product engagements and specifications, Rapidise offers **three primary core dashcam/AI Box solutions**:

1. **Dual Camera Dashcam** (QCS5430 / RISE X1 Platform).
2. **Dual DashCam** (SM6225 / RISE Y1 Platform).
3. **DashCam + LTE Edge AI Box** (QCM6125/SC668S-WF).

These solutions share common architectural elements built on advanced hardware, sensor integration, and edge AI capabilities.

Detailed Outline of Key Modules and Build

The overall build of these dashcam solutions can be broken down into four key integrated modules: the Processing/AI Core, the Camera Unit/Sensors, the Connectivity Module, and the Application/Safety Software.

1. Processing and AI Core Module

This module forms the brain of the device, handling computing, operating system management, and performing Edge AI analysis.

Solution / Platform	Processor	Architecture Details	Operating System
Dual Camera Dashcam	**Qualcomm QCS5430** (RISE X1 Platform)	8 Core CPU, 3.5 TOPS NPU, 4GB LPDDR5	Android 13
Dual DashCam	**Qualcomm SM6225** (RISE Y1 Platform)	8 Core CPU, 2 TOPS NPU, 4GB LPDDR5	Android 13
LTE Edge AI Box	**Qualcomm QCM6125** (RISE C1 Platform) OR **SC668S-WF**	8 Core CPU, Hexagon DSP, 1 TOPS NPU (for C1 variant)	Android

Key Hardware Integrations: The hardware design capabilities include Hardware Architecture design, Electrical Schematic Design, Multilayer PCB Layout Design, and High-Speed Board Design.

2. Camera Unit and Sensor Module

The camera unit is typically a compact, integrated component, supporting both internal and external monitoring.

Component	Build Details and Integration

Camera Unit	Consists of an integrated **compact 2-camera unit** (front and in-cabin). The cameras used often feature **4MP** resolution for both in-cabin and road-facing recording. Camera Module Assembly is handled in an **ISO Class 6 Clean Room**.
Inertial Measurement Unit (IMU)	Integrated as a system component in the QCS5430 and SM6225 dashcams. IMU-based algorithms are critical for detecting events like sudden braking and rapid acceleration or for supporting driver monitoring and safety.

3. Connectivity and Telematics Module

This module ensures real-time communication, location tracking, and interfacing with the vehicle's internal network.

Component	Build Details and Integration
Wireless Communication	All solutions include **Wi-Fi** and **Bluetooth**. LTE (4G) is included in the QCS5430 solution and available in variants of the SM6225 solution. The LTE Edge AI Box focuses heavily on **LTE (4G) Communication** for emergency calls.
Positioning	**GPS** (GNSS) is a standard system component in the QCS5430 and SM6225 platforms.
Vehicle Interfacing	**CAN Connectivity** is implemented across the QCS5430 and SM6225 dashcam solutions. This allows the device to collect CAN Data for driver behavior algorithms based on throttle, steering, and braking.

4. Software, AI, and Safety (SOS) Module

This module encompasses the intelligence (AI/ML) operating at the edge and the critical user interaction features, such as emergency services.

Feature/Function	Build Details and Algorithms

Edge AI Software (ADAS/DMS)	The software stack includes embedded capabilities on **Linux** and **AOSP**. AI/ML algorithms are applied for computer vision. Specific applications include **Drowsiness Detection**, **Mobile Distraction**, **Front Collision Alert**, and **Lane Departure Warning**. DMS algorithms are integrated to deliver driver monitoring and safety.
SOS and E-Call System	The DashCam + LTE Edge AI Box is specifically designed for an **advanced emergency call system**. It is built with **Voice Call Functions** (Microphone and Speaker) and a **Dedicated SOS Button**. This system automatically connects to an emergency call center when a vehicular accident is detected, supporting immediate communication and **Video Data Transmission**.
Cloud Integration	Devices integrate with **cloud servers** using Cloud Engineering platforms like **AWS, Azure, and GCP**, and enable IoT Dataflow Architecture for data access and management. FOTA (Firmware Over the Air) updates are supported.

Note on Automotive Standards

While the SM6225 solution is specifically targeted for deployment in the **Indian regions**, and Rapidise develops relevant applications like License Plate Recognition, the sources **do not explicitly mention compliance with the AIS140 standard** for any of the dashcam products listed.