Rapidise's IP camera portfolio is built upon advanced Qualcomm System on Chips (SoCs), which are specifically engineered to provide robust processing power and high-bandwidth connectivity necessary for deploying real-time video intelligence directly at the edge.

The key specifications and capabilities of these camera platforms, particularly the **Surveillance AI Camera Based on QCS 6490**, detail how they achieve high-performance edge computing:

1. Key Hardware and Software Specifications

The sources detail two primary camera platforms: the high-performance QCS 6490 Surveillance AI Camera and the Tejas Edge Camera.

A. Surveillance AI Camera Based on Qualcomm QCS 6490

This product is a remote-connected video sensing/surveillance product featuring state-of-the-art functionality.

Specification	Detail	Sources
Processor	Qualcomm **QCS 6490 SOC**	
AI Performance (NPU)	The QCS 6490 platform offers high computational power with a dedicated **Neural Processing Unit (NPU)** capable of **12 TOPS** (Trillions of Operations Per Second)	
Camera Design	Supports **3-cameras** for different angles of viewing and wide-angle viewing	
Camera Sensor	**OV13B10 Camera Sensor**	
Operating System	**Android 9.0**	
Wireless Connectivity	Comprehensive wireless capability including **Wi-Fi, Cellular (4G)**, and **BLE** (Bluetooth Low Energy)	
Cellular Module	Telit **4G LTE Module** (LE910C4-WWX)	
Power/Wired Interface	Utilizes **POE Injector** for power, and includes wired ports like **4-USB 3.0 Ports** and **2-USB 2.0 Ports** for future external cameras	

Communication Protocol	Uses **MQTT** for communication	

B. Tejas Edge Camera (Qualcomm 625)

The Tejas™ Camera is a cutting-edge AI-enabled solution, utilizing a slightly different set of specifications:

- **Processor:** Quectel SC600T (**Qualcomm 625**).
- **Operating System: Android 9.0**.
- **Camera Sensor: Sony iMX335** (STARVIS Technology) with 5MP resolution.
- **Connectivity:** Carries wireless technology provisions including **LTE, WiFi, and BLE**, along with inbuilt GPS, Microphone, and Speaker.
- **Storage:** 16GB eMMC Non-volatile memory and 2GB LPDDR3 memory.

2. Enabling High-Performance Video Intelligence at the Edge

The combination of the powerful hardware platforms and specific camera features allows Rapidise to execute complex video analytics locally, achieving true **AI on Edge**.

High Computational Capacity

The processing foundation, such as the **Qualcomm QCS 6490**, is crucial because its **12 TOPS NPU** capability provides the enormous computational speed required to run demanding machine learning algorithms without relying constantly on cloud processing. This dedicated hardware supports core expertise areas such as **Computer Vision** and **Edge Computing & AI**.

Multi-Sensor Data Capture and Processing

The ability to support **three cameras** (3-cameras for different angles/wide-angle viewing), combined with advanced Image Signal Processing (ISP) architectures (like the **Triple ISP** on related RISE modules), ensures the camera can capture detailed data across multiple fields of view simultaneously. Rapidise's expertise includes **ISP pipeline customization** and **3A Tuning (Auto Exposure, Auto White Balance, Auto Focus)**, ensuring that the high-resolution sensor data (e.g., OV13B10) is optimized for the downstream AI analysis.

Local AI Application (Telep AI Model Library)

The edge hardware runs the **Telep AI Model Library**, which provides hardware-agnostic, ready-to-use machine learning algorithms. This includes critical Security & Surveillance functions executed at the edge, such as:

- **Intrusion detection**
- **Gun Detection**
- **Violence Detection**
- **Facial Recognition System**
- **Vehicle Classification** and **License Plate Recognition (ANPR)**

Reliable Power and Connectivity

The inclusion of **POE Injector** support ensures that the high-power computing components, like the QCS 6490, receive reliable power over the Ethernet connection, which is essential for continuous, high-performance operation in surveillance environments. Furthermore, the combined **Wi-Fi + Cellular (4G) + BLE** connectivity allows for flexible deployment, high-bandwidth video streaming back to the cloud, and reliable data uplink using the MQTT protocol. The ability to support FOTA (Firmware Over the Air) updates via this connectivity ensures the device's software and AI models remain current and optimized.

The IP camera portfolio acts like an instantaneous reflex: instead of sending raw sensory data (video feed) all the way up to the brain (cloud) for slow processing, the local computing power (the **12 TOPS NPU**) handles the complex recognition tasks immediately where the event occurs, only sending highly condensed intelligence or alerts back to the central nervous system.