

## Task -1

### Team- 2

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#### TDA2x ADAS System-on-Chip

S. No.	Block Available	Purpose	Significance
1	ARM Cortex-A15 MP Core	General-purpose processing	High-performance CPU core for running the operating system and application code
2	ARM Cortex-M4 Core	Real-time processing	Efficient handling of real-time tasks and sensor data processing
3	Digital Signal Processor (DSP)	Signal processing	High-performance signal processing for computer vision and radar applications
4	Embedded Vision Engine (EVE)	Image and vision processing	Accelerated processing for image recognition, object detection, and tracking
5	Image Signal Processor (ISP)	Image pre-processing	Enhances image quality for better analysis and recognition
6	Graphics Processing Unit (GPU)	Rendering graphics	Renders high-quality graphics for displays and visualizations
7	Video Accelerator	Video decoding and encoding	Efficient video processing for streaming and recording
8	DDR Memory Controller	Memory management	Manages data transfer between the SoC and external DDR memory
9	Interconnect Fabric	Data routing between blocks	Ensures high-speed communication between various blocks of the SoC
10	Ethernet and CAN Interfaces	Networking and communication	Supports vehicle networking and data exchange with other systems
11	PCIe Interface	Peripheral component interconnect	High-speed connection to external devices and expansion cards
12	SATA Interface	Storage device connection	Enables connection to external storage devices
13	USB Interface	Universal Serial Bus connectivity	Facilitates connections to USB devices
14	GPIO, I2C, SPI, UART	General-purpose I/O and	Various communication and control functions

		communication interfaces	
15	Security Module	Data security and encryption	Provides secure boot, data encryption, and protection against unauthorized access
16	Power Management	Power distribution and regulation	Manages power consumption and distribution for efficient operation