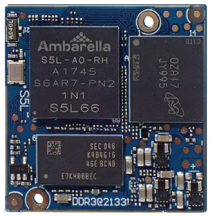
SoM Comparison Sheet

oclea
by Tekniqua

S5L

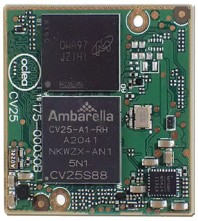
Designed for professional, consumer, and battery-powered IP cameras, offering 4K HDR, multi-streaming, advanced low-light performance, and dual video inputs.



CPU	Quad-core Cortex A53 @ 1GHz
Video	Up to 4Kp30 + 720p30 / H.264/H.265 encoding
ISP	Up to 480MPixel/s
Flash	8GB
DRAM	1GB
I/O	USB2.0, HDMI, I2C, SPI, GPIO, SDIO
Connectivity	Ethernet

CV25

Powering the next generation of affordable and intelligent home monitoring and professional surveillance solutions on the edge, combining advanced image processing, high-resolution video encoding, and CVflow® computer vision.



Advanced AI-accelerator - CVFlow™

CPU	Quad-core Cortex A53 @ 1GHz
Video	Up to 4Kp30 + 480p30 / H.264/H.265 encoding
ISP	Up to 400MPixel/s
Flash	8GB
DRAM	2GB
I/O	USB2.0, HDMI, I2C, SPI, GPIO, SDIO
Connectivity	Ethernet

CV22

Combining advanced image processing, 4KP30+ video encoding, powerful CVflow® computer vision performance, and a full suite of cybersecurity features to enable the next generation of intelligent IP camera designs.

Advanced AI-accelerator - CVFlow™

CPU	Quad-core Cortex A53 @ 1GHz
Video	Up to 4Kp30 + 1080p30 / H.264/H.265 encoding
ISP	Up to 540MPixel/s
Flash	1GB
DRAM	2GB
I/O	USB2.0, HDMI, I2C, SPI, GPIO, SDIO
Connectivity	Ethernet, Dual-band WiFi & BT V5

CV2

Designed for high-performance surveillance cameras with advanced computer vision features, industry-leading image processing, stereovision capabilities, and 4KP60 video encoding.

Coming Soon Q3 2022

Advanced AI-accelerator - CVFlow™
Built-in Stereo Vision disparity engine

CPU	Quad-core Cortex A53 @ 1GHz
Video	Up to 4Kp60 or 8Kp15 / H.264/H.265 encoding
ISP	Up to 840MPixel/s
Flash	16GB
DRAM	4GB
I/O	USB2.0, HDMI, I2C, SPI, GPIO, SDIO
Connectivity	Ethernet

Ambarella Benefits

Low Power

Ambarella processors consistently outperform competitive solutions in power efficiency - sometimes by 5x or more - while delivering equal or superior results.

Image quality

One of the hallmarks of Ambarella processors is our image processing pipeline. Encompassing everything from HDR to EIS to dewarping, our state-of-the-art ISP ensures that every frame of every video is exquisite, improving safety and enhancing the viewing experience.

Computer vision

Our vision processors were designed using more than twenty-five years of pioneering research in environmental perception. The result? Cameras with an extraordinary degree of onboard intelligence, including the ability to classify objects, interpret gestures, recognize faces, track people of interest, identify obstacles, and more.

Functional Safety

As an AI silicon company offering SoCs for applications such as ADAS and autonomous driving, Ambarella has implemented an array of internal processes and procedures to ensure that our functional safety-certified products comply with ISO 26262.

Stereovision

Stereo processing transforms the world from a flat 2D plane into a full 3D environment. This not only provides a richer, denser representation of the target scene, but also allows the detection of generic obstacles that the system hasn't been trained to recognize, making navigation safer and more effective for warehouse robots, autonomous vehicles, and more.

Compression efficiency

Cameras are quickly becoming ubiquitous—with multiple devices in our vehicles, homes, workplaces, and intersections—generating massive amounts of data. Our compression technologies dramatically reduce data transmission size, slashing storage costs and bandwidth usage.

Autonomy

From drones to robots, from taxis to long-haul semi trucks, Ambarella's vision processors were designed to revolutionize the way we work and travel. Our hardware platforms deliver the flexibility required to implement all levels of automation, including partial, conditional, high, and full autonomy.

Partners

Ambarella® AI envisioned™

ams OSRAM

FRAMOS

paravision

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