

C7

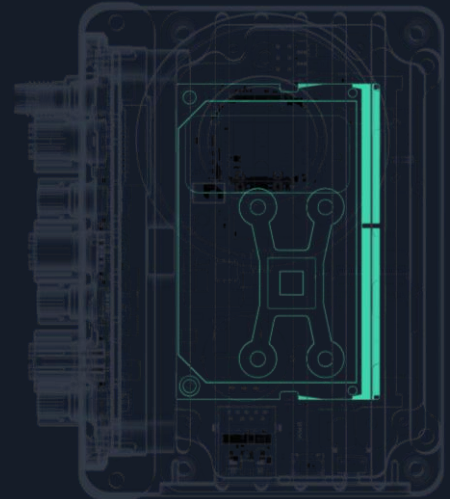
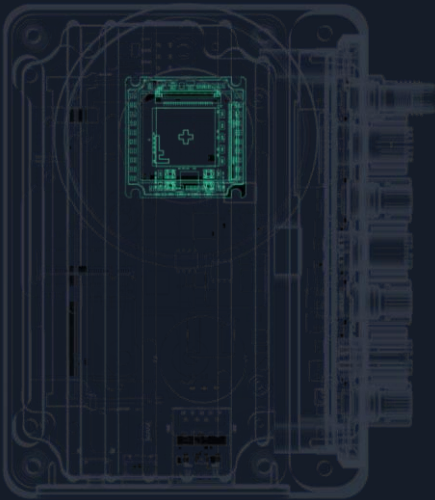
Edge Camera Module



DATASHEET

INTEGRATED EDGE AI – POWERFUL & EFFICIENT

Meet our new **Edge Camera Module C7** with integrated NVIDIA® Jetson™ AI-supercomputer. C7 comes with the Jetson module pre-installed and pre-configured with our custom-built **Ferndale OS** for industrial applications. Everything is ready-to-use, giving you the freedom to focus on your vision solution – running powerfully and efficiently, directly on the compact device.

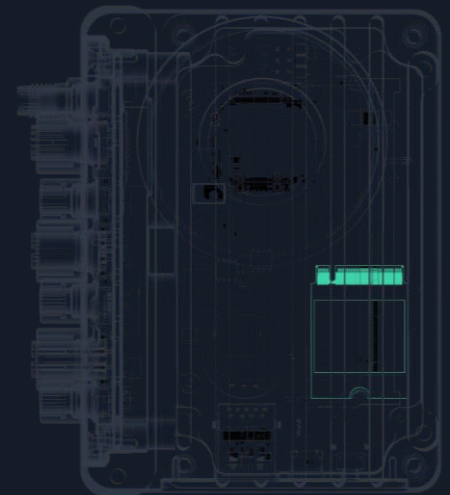
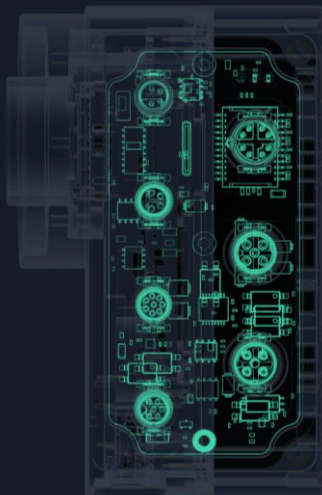


GET THE BEST OUT OF YOUR IMAGES

You cannot detect what you do not see. That's why we choose **Sony Pregius S** high-quality industrial image sensors. With high resolutions **up to 24.6 Megapixels** also large fields of view can be analysed. High frame rates and global shutter give you the best results even in dynamic processes.

LARGE & SUPERFAST STORAGE

Do not let storage limit your solution. Whether you store large amounts of data or run complex neural networks, C7 writes to a fast on-board NVMe SSD. The standard configuration ships with **256 GB**. Larger capacities **up to 1 TB** are available on request – talk to our sales team.



C7 – 7 INTERFACES – EVERYTHING YOU NEED

Get ready to maximize capabilities in industrial vision solutions. Inspired by experts in logistics and production automation **versatile interfaces** are integrated in the device to create high functional turnkey-solutions and reducing system complexity at the same time.

IMAGE SENSORS

	C7-G5	C7-G12	C7-G24
Image Family	Pregius S™		
Image Sensor	Sony IMX548	Sony IMX545	Sony IMX540
Shutter Type	Global Shutter		
Color	Mono (Color/Bayer available on request)		
Resolution	2464 × 2064 (5.1 MP)	4128 × 3008 (12.4 MP)	5328 × 4608 (24.6 MP)
Sensor Size	6.75 mm × 5.66 mm (Type 1/1.8")	11.31 mm × 8.24 mm (Type 1/1.1")	14.60 mm × 12.63 mm (Type 1.2")
Max. Source Framerate	81 FPS	40 FPS	21 FPS
Pixel Pitch	2.74 µm		
Quantum Efficiency	68 % @ 529 nm		



EDGE COMPUTE

JETSON ORIN SERIES

ACTIVE

	-ON8	-ONX16
Edge Processor	NVIDIA® Jetson Orin Nano™ 8 GB	NVIDIA® Jetson Orin NX™ 16 GB
CPU	6-core Arm® Cortex®-A78AE Max. Frequency: 1510 MHz*	8-core Arm® Cortex®-A78AE Max. Frequency: 1984 MHz*
GPU	1024-core NVIDIA® Ampere™, 32 Tensor Cores Max. Frequency: 625 MHz*	1024-core NVIDIA® Ampere™, 32 Tensor Cores Max. Frequency: 918 MHz*
RAM	8 GB 128-bit LPDDR5 Unified Memory	16 GB 128-bit LPDDR5 Unified Memory
Storage	256 GB NVMe SSD (standard) up to 1 TB on request	

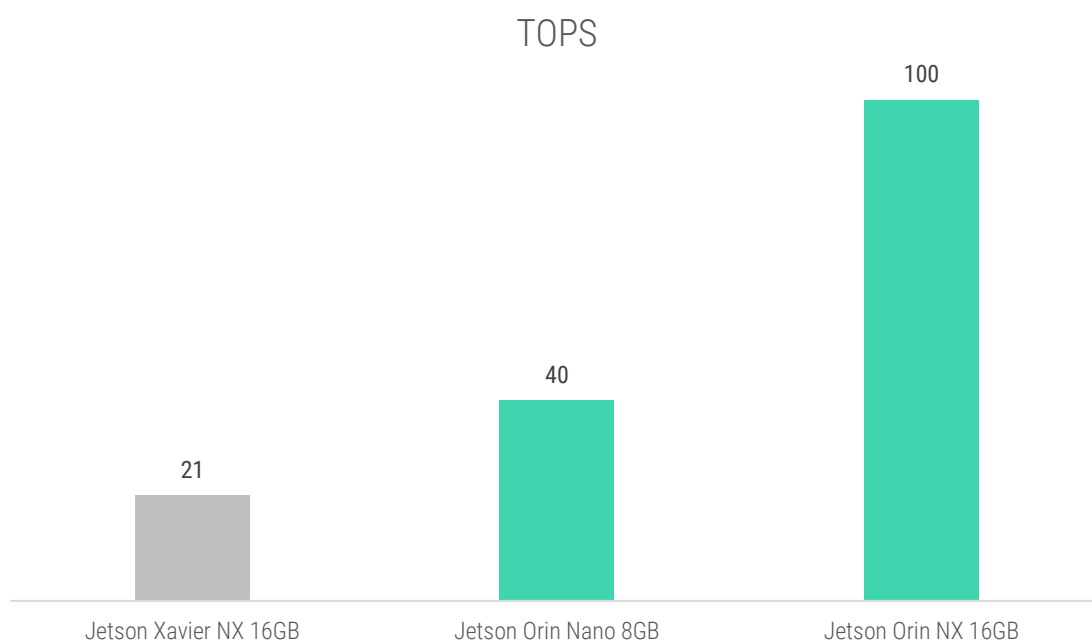
JETSON NANO & XAVIER NX

EOL

	-N4	-NX16
Edge Processor	NVIDIA® Jetson Nano™ 4 GB	NVIDIA® Jetson Xavier NX™ 16 GB
CPU	4-core Arm® Cortex®-A57 Max. Frequency: 1.43 GHz*	6-core NVIDIA Carmel Arm® v8.2 64-bit Max. Frequency: 1.9 GHz*
GPU	128-core NVIDIA® Maxwell™ Max. Frequency: 921 MHz*	384-core NVIDIA® Volta™ Max. Frequency: 1100 MHz*
RAM	4 GB 64-bit LPDDR4 Unified Memory	16 GB 128-bit LPDDR4x Unified Memory

* CPU, GPU max. frequencies are theoretical maximum values. Real-world values are limited by the thermal and power limitations under a given workload. Contact us if you need a benchmark for a certain application.

AI PERFORMANCE[†]



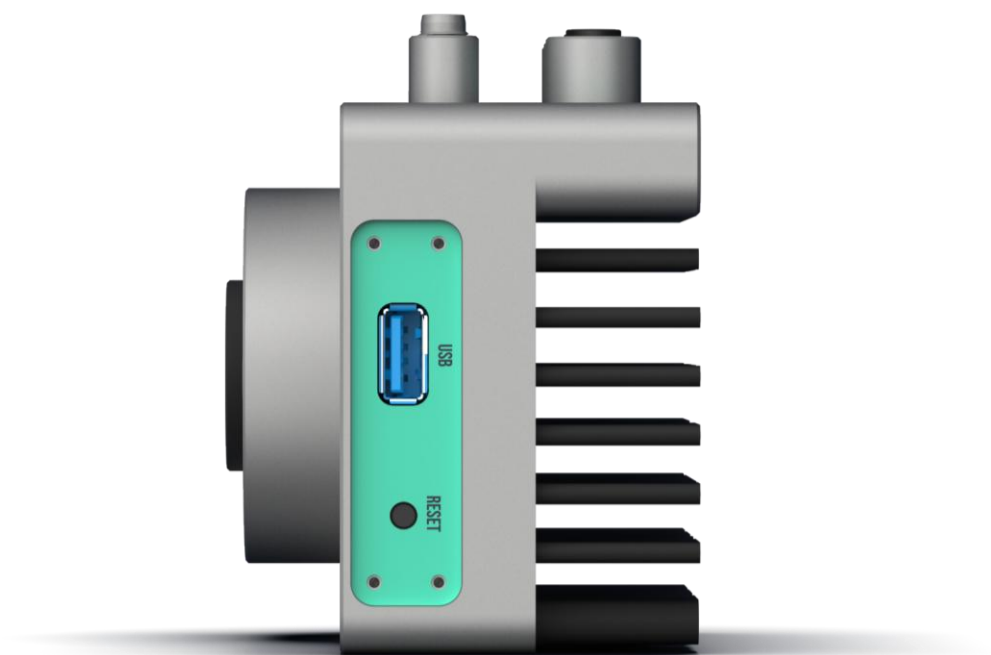
[†] MAXN_SUPER mode is not supported. All figures refer to the standard power modes.

OPERATING CONDITIONS

ENVIRONMENTAL REQUIREMENTS	
Protection Class	IP67 (using optional C7 Protection Kit, C7-PK)
Operating Ambient Temperature	-5 °C – +30 °C @ 100% computational load -5 °C – +40 °C @ 50% computational load
Permissible Humidity	< 95 % RH (non-condensing)

POWER

Supply Voltage	24 V DC $\pm$ 10 %
Current Rating	2 A (stand-alone) 5.5 A (continuous lighting) 6 A (pulsed lighting, duty cycle 50 %)
Max. Input Power	144 W



MECHANICS

MECHANICAL CHARACTERISTICS	
Lens-Mount	C-Mount
Cooling	passive
Dimensions	107.8 mm × 95.0 mm × 67.0 mm
Weight	630 g (without lens)
Mounting	proprietary mounting (4 × M4)

EXTERNAL INTERFACES*

DESCRIPTION		
24 V DC	24 V DC (± 10%) / 2 × 3 A / M8 male, A-coded (4-pole)	power supply for ECM and other connected devices
FLASH	24 V DC out max. 4 A / 84 W / 24 V digital output (trigger-out), isolated and non-isolated / M12 socket, A-coded (5-pole)	power supply & control of illumination (flash or continuous)
SIGNAL	24 V DC, 4 × digital output / M12 socket, A-coded (5-pole)	control of industrial stack lights
TRIGGER	24 V DC / 2 × 24 V trigger input (slow 150 Hz, fast 5 MHz) / M8 socket, A-coded (4-pole)	input and power supply for trigger devices (e.g., light barrier, switch)
PLC	3 × potential-free switching contacts / M8 socket, Amphenol Guided (6-pole) / max. 30 V / 1.5 A	potential-free contact for communication with PLC
RS-232	24 V DC / TxD out / RxD in / M8 socket, A-coded (8-pole)	power supply and control of code reader
ETH	Ethernet, 10/100/1000 BASE-T, Gigabit Ethernet / M12 socket, X-coded (8-pole)	primary interface for setup, operation and maintenance; web interface, API and Modbus/TCP

* **plug-compatible** with different standard devices (please contact [sales](#) for further information)

