NVIDIA PREFERRED PARTNER

3D VISIONLABS

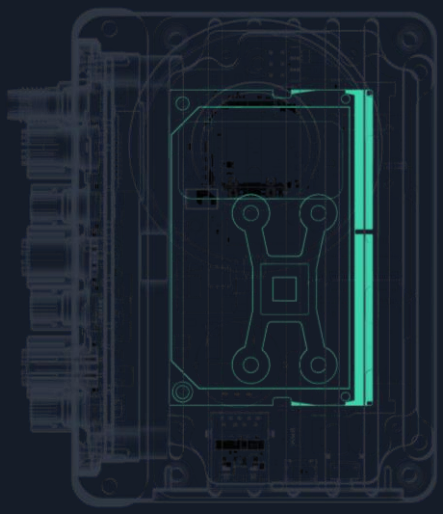
C7

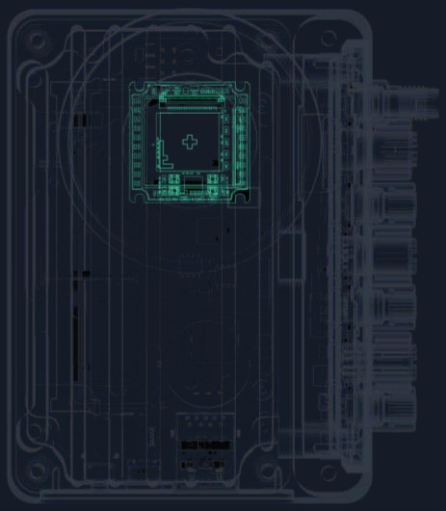
Edge Camera Module

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.



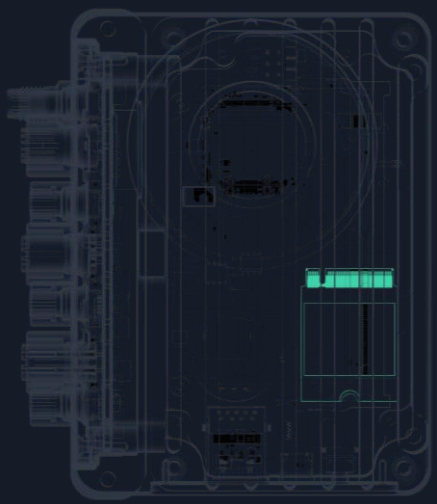


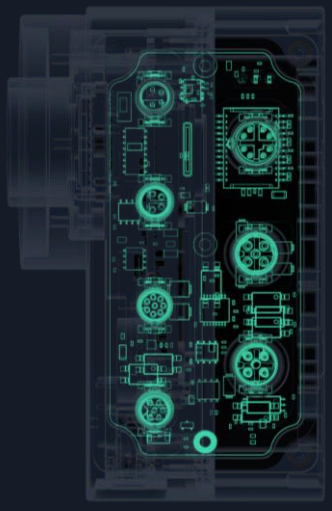
GET THE BEST OUT OF YOUR IMAGES

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 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 to store large amounts of data or for using complex neuronal networks, C7 offers you fast expandable storage options. Just pick the right choice out of **on-board NVME SSD** variations **up to 1 TB**.





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	2472 x 2064 (5.1 MP)	4096 x 3000 (12.3 MP)	5328 x 3672 (24.6 MP)
Sensor Size	6.77 mm x 5.66 mm (Type 1/1.8")	11.22 mm x 8.22 mm (Type 1.1")	14.58 mm x 12,60 mm (Type 1.2")
Max. Source Framerate	81 FPS	42 FPS	20 FPS
Pixel Pitch	2.74 µm		
Quantum Efficiency	73.2 %	73.2 %	72,1 %
Absolute Sensitivity Threshold	3.55	3.55	3.85
Saturation Capacity	9 500	9 500	9 272

Note: Parameters may be used for reference only. All features and specifications are subject to change without notice.

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EDGE COMPUTE

JETSON ORIN SERIES

ACTIVE

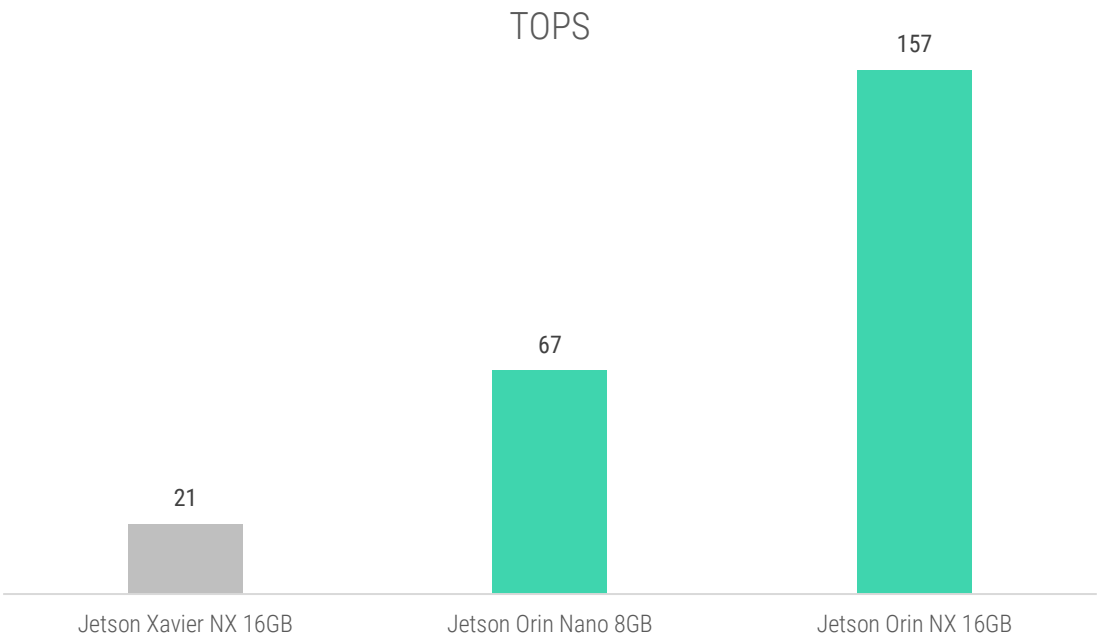
	-ON8	-ONX16
Edge Processor	NVIDIA® Jetson Orin Nano™ 8 GB	NVIDIA® Jetson Orin NX™ 16 GB
CPU	6-core Arm® Cortex®-A78AE Max. Frequency: 1.7 GHz	8-core Arm® Cortex®-A78AE Max. Frequency: 2.0 GHz
GPU	1024-core NVIDIA® Ampere™ Max. Frequency: 1020 MHz	1024-core NVIDIA® Ampere™ Max. Frequency: 1173 MHz
RAM	8 GB 128-bit LPDDR5 Unified Memory	16 GB 128-bit LPDDR5 Unified Memory

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

AI PERFORMANCE



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OPERATING CONDITIONS

ENVIRONMENTAL REQUIREMENTS	
Protection Class	IP67 (using optional Lens Protection Kit)
Operating Ambient Temperature	-5 °C – +30 °C @ 100% computational load -5 °C – +40 °C @ 50% computational load (not condensating)

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MECHANICS

MECHANICAL CHARACTERISTICS	
Lens-Mount	C-Mount
Cooling	passive
Dimensions	107.8 mm x 95.0 mm x 67.0 mm
Weight	630 g
Mounting	proprietary mounting (4 x M4)

EXTERNAL INTERFACES*

	DESCRIPTION	
24V DC	24 V DC (± 10%) / 2 x 3 A / M8 (4-pole)	power supply for ECM and other connected devices
FLASH	24 V DC / 24 V digital output (trigger-out) / M12 (5-pole)	power supply & control of illumination (flash or continuous)
SIGNAL	24 V DC, 4 x digital output / M12 (5-pole)	control of industrial stack lights
TRIGGER	24 V DC / 24 V Trigger input / M8 (4-pole)	input and power supply for trigger devices (e.g., light barrier, switch)
PLC	3 X potential-free switching contacts / M 8 (6-pole) / max. 30 V / 1.5 A	potential-free contact for communication with PLC
RS-232	24 V DC / TxD out / TxD In / M8 (8-pole)	power supply and control of code reader
ETH	Ethernet, 10/100/1000 BASE-T, Gigabit Ethernet / M12 (8-pole)	

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

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