// ALVIUM 1500 C

Powerful camera modules for embedded vision

Alvium 1500 C is a revolutionary MIPI CSI-2 camera series that makes the performance of an industrial camera accessible to the embedded vision community. Equipped with industrial-grade CMOS sensors from ON Semiconductor, these cameras deliver superior image quality and high frame rates. Independent of the camera model, the standardized driver ensures quick integration and the flexibility to change camera models easily. Furthermore, with Alvium 1500 MIPI CSI-2 camera modules, it is possible to precisely control single image acquisition using an external hardware trigger or via a software command. Precise frame rate control is also available in all models.

Key facts

// MIPI CSI-2 interface
// Resolutions up to 5 megapixels
// Global and Rolling Shutter sensors
// Up to 119 frames per second at full resolution
// On-board image corrections

Alvium 1500 C

mipi

Camera model	Sensor	Mega-pixels	Resolution	Sensor format	Shutter mode	Max. frame rate in fps	Pixel size in µm	Mono/color/ NIR
C-050	ON Semi PYTHON 480 CMOS	0.5	808 × 608	Type 1/3.6	Global	117	4.8 × 4.8	• / • / -
C-120	ON Semi AR0135CS CMOS	1.2	1280 × 960	Type 1/3	Global	52	3.75 × 3.75	• / • / -
C-210	ON Semi AR0521SR HD CMOS	2.1	1928 × 1088	Type 1/3.6	Rolling	119	2.2 × 2.2	• / • / -
C-500	ON Semi AR0521SR CMOS	5.0	2592 × 1944	Type 1/2.5	Rolling	68	2.2 × 2.2	• / • / -

Hardware options	
// Bare Board / Open Housing	// C-Mount / CS-Mount / S-Mount
Dimensions L × W × H in mm	
// 13 × 26 × 26 (Bare Board)	

// ALVIUM 1800 C

Industrial-grade cameras for advanced embedded vision

The powerful Alvium 1800 C MIPI CSI-2 camera series gives embedded system developers access to Sony's high-performance image sensors popular in the machine vision industry. These offer excellent image quality and doubled frame rates compared to similar Alvium 1500 C models. Independent of the camera model, the standardized driver ensures quick integration and the flexibility to change camera models easily. Furthermore, with Alvium 1800 MIPI CSI-2 camera modules, it is possible to precisely control single image acquisition using an external hardware trigger or via a software command. Precise frame rate control is also available in all models.

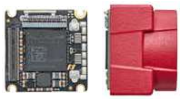
Key facts

// MIPI CSI-2 interface
// Resolutions up to 19.7 megapixels
// Global and Rolling Shutter sensors
// Up to 289 frames per second at full resolution
// On-board image corrections

Alvium 1800 C

Camera model	Sensor	Mega-pixels	Resolution	Sensor format	Shutter mode	Max. frame rate in fps	Pixel size in µm	Mono/color/ NIR
C-040	Sony IMX287 CMOS	0.4	728 × 544	Type 1/2.9	Global	289	6.9 × 6.9	• / • / -
C-158	Sony IMX273 CMOS	1.6	1456 × 1088	Type 1/2.9	Global	153	3.45 × 3.45	• / • / -
C-240	Sony IMX392 CMOS	2.4	1936 × 1216	Type 1/2.3	Global	126	3.45 × 3.45	• / • / -
C-319	Sony IMX265 CMOS	3.2	2064 × 1544	Type 1/1.8	Global	53	3.45 × 3.45	• / • / -
C-507	Sony IMX264 CMOS	5.1	2464 × 2056	Type 2/3	Global	34	3.45 × 3.45	• / • / -
C-508	Sony IMX250LLR/LQR CMOS	5.1	2464 × 2056	Type 2/3	Global	65	3.45 × 3.45	• / • / -
C-1236	Sony IMX304 CMOS	12.4	4112 × 3008	Type 1.1	Global	22	3.45 × 3.45	• / • / -
C-1240	Sony IMX226 CMOS	12.2	4024 × 3036	Type 1/1.7	Rolling	41	1.85 × 1.85	• / • / -
C-2050	Sony IMX183 CMOS	19.7	5376 × 3672	Type 1	Rolling	26	2.4 × 2.4	• / • / -

Hardware options	
// Bare Board / Open Housing	// C-Mount / CS-Mount / S-Mount
Dimensions L × W × H in mm	
// 13 × 26 × 26 (Bare Board)	



// ALVIUM 1800 U

Entry into high-performance imaging

Alvium 1800 U is the camera series that allows you to enter high-performance imaging with ALVIUM® Technology for industrial applications. Equipped with the latest generation of Sony and ON Semiconductor sensors, these small and power-efficient cameras deliver high image quality and frame rates in a robust industrial housing. With its USB3-Vision-compliant interface and industrial-grade hardware, it is your workhorse for different machine vision applications whether it is on a PC-based or an embedded system.

Key facts

// USB3 Vision interface
// Resolutions up to 20.2 megapixels
// Global, Global Reset, and Rolling Shutter sensors
// Up to 289 frames per second at full resolution
// Near-infrared model

Alvium 1800 U

Camera model	Sensor	Mega-pixels	Resolution	Sensor format	Shutter mode	Max. frame rate in fps	Pixel size in µm	Mono/color/ NIR
U-040	Sony IMX287 CMOS	0.4	728 × 544	Type 1/2.9	Global	289	6.9 × 6.9	• / • / -
U-050	ON Semi PYTHON 480 CMOS	0.5	808 × 608	Type 1/3.6	Global	117	4.8 × 4.8	• / • / -
U-120	ON Semi AR0135CS CMOS	1.2	1280 × 960	Type 1/3	Global	52	3.75 × 3.75	• / • / -
U-158	Sony IMX273 CMOS	1.6	1456 × 1088	Type 1/2.9	Global	153	3.45 × 3.45	• / • / -
U-240	Sony IMX392 CMOS	2.4	1936 × 1216	Type 1/2.3	Global	126	3.45 × 3.45	• / • / -
U-319	Sony IMX265 CMOS	3.2	2064 × 1544	Type 1/1.8	Global	53	3.45 × 3.45	• / • / -
U-500	ON Semi AR0521SR CMOS	5.0	2592 × 1944	Type 1/2.5	Rolling	68	2.2 × 2.2	• / • / -
U-501m NIR	ON Semi AR0522 CMOS	5.0	2592 × 1944	Type 1/2.5	Rolling	68	2.2 × 2.2	- / - / •
U-507	Sony IMX264 CMOS	5.1	2464 × 2056	Type 2/3	Global	34	3.45 × 3.45	• / • / -
U-508	Sony IMX250LLR/LQR CMOS	5.1	2464 × 2056	Type 2/3	Global	65	3.45 × 3.45	• / • / -
U-1236	Sony IMX304 CMOS	12.4	4112 × 3008	Type 1.1	Global	22	3.45 × 3.45	• / • / -
U-1240	Sony IMX226 CMOS	12.2	4024 × 3036	Type 1/1.7	Rolling, Global Reset	29	1.85 × 1.85	• / • / -
U-2050	Sony IMX183 CMOS	20.2	5496 × 3672	Type 1	Rolling, Global Reset	17	2.4 × 2.4	• / • / -

Hardware options		
// Bare Board / Open Housing / Closed Housing	// C-Mount / CS-Mount / S-Mount	// USB standard connector / USB 90° connector
Dimensions L × W × H in mm		
// 13 × 26 × 26 (Bare Board)