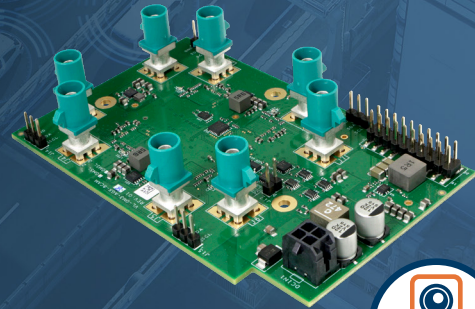


VL-GM2-8CAM-AGX-ORIN

- Easily connect up-to 8 GMSL2 cameras to Nvidia AGX Orin platform
- Supports Frame-sync / Time-Sync protocol
- Readily available Software driver + VizionSDK
- Ideal for AMR, Robotics, UAV, and automotive applications



Information

Deserializer	MAX96716A
Frame Sync Support	Sync mode / non-Sync mode support

Interface

Support Camera Quantity	Up to 8 Cameras
Camera Connector	FAKRA SMB Jack Z-Code
DIO Connector	120-Pin Jetson Camera Connector 20-Pin Expansion

Power Specifications

Power Connector	Molex 430450412
Power Input	10V~30V DC
Power Consumption	Depending on Configuration

Software Support

Platform Support	NVIDIA Jetson AGX Orin
Operation Systems	Linux
SDK	VizionViewer™ / VizionSDK

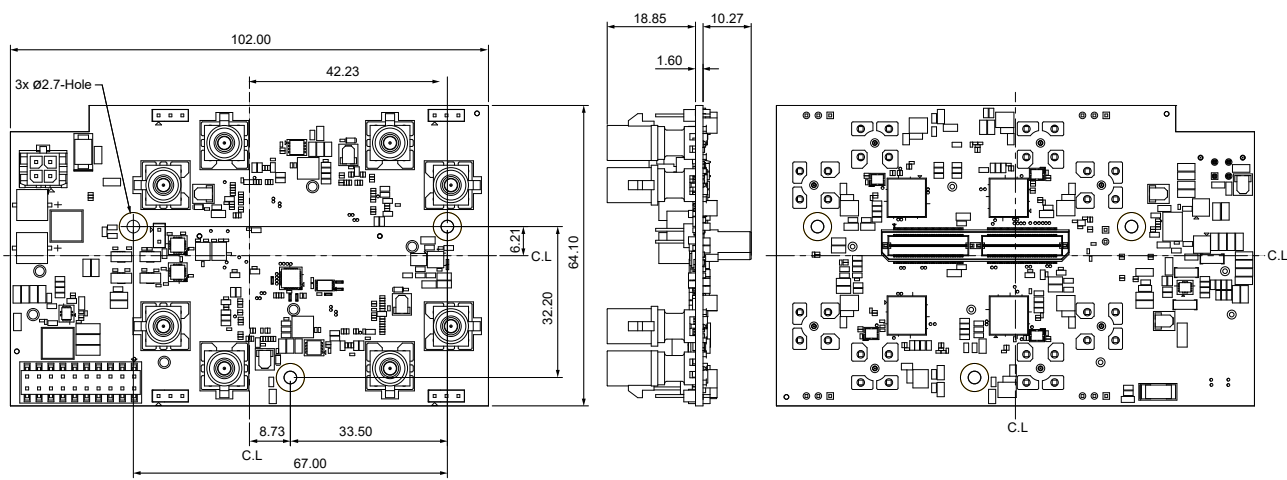
Environmental and Mechanical

Dimension	102 x 64.1 mm
Weight	68 grams
Operating Temperature	-30°C to +70°C

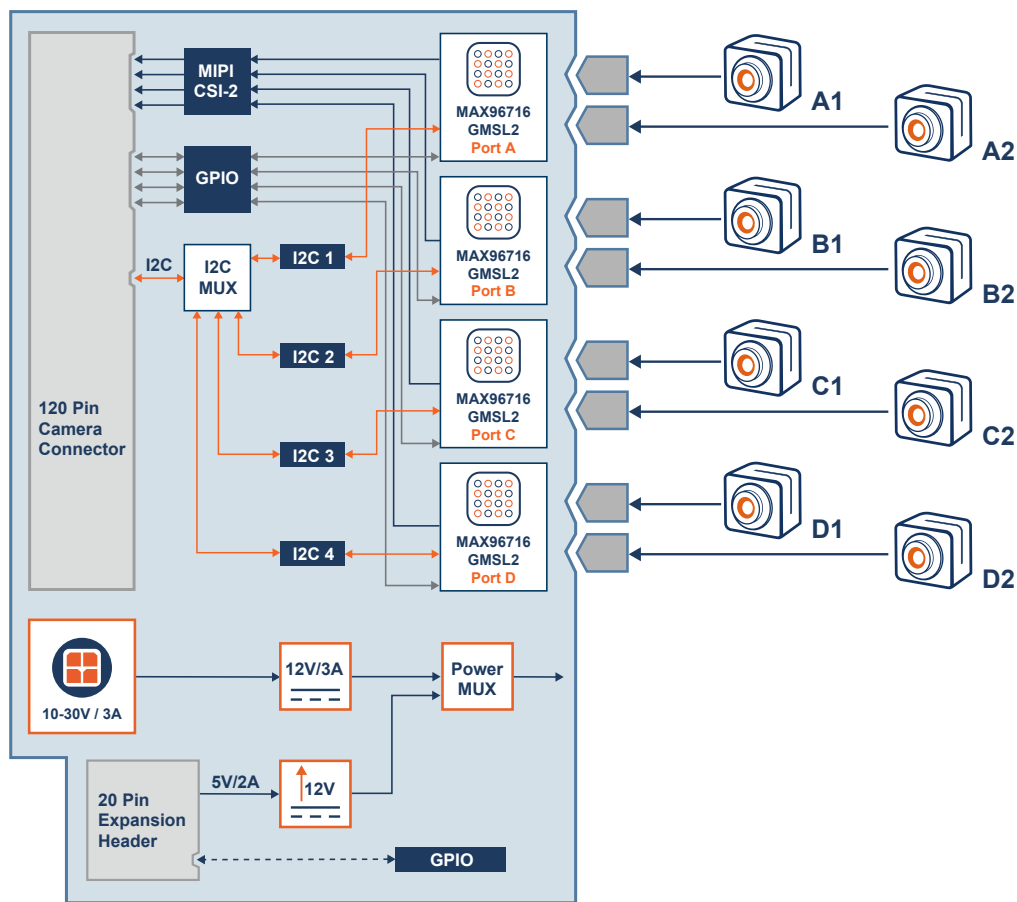
Commercial Information

Brand	TechNexion
Country of Origin	Taiwan
HTSN	8473.30.1180
ECCN	EAR99
REACH / RoHS	YES

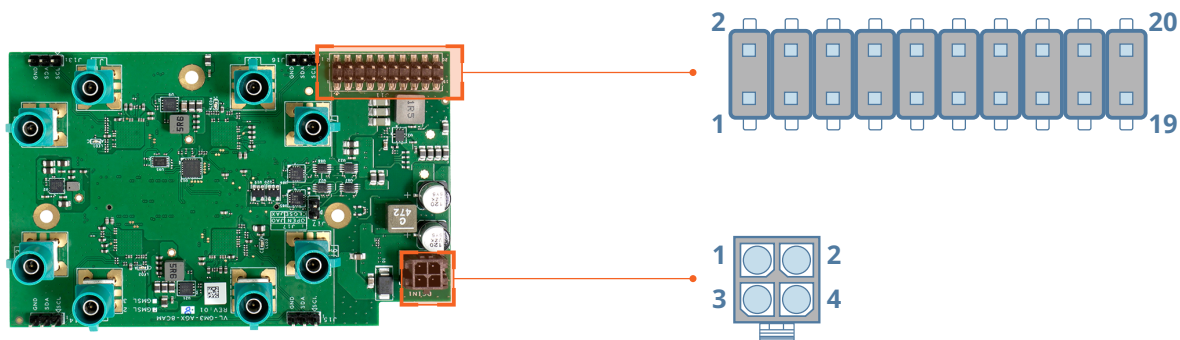
Dimensions (units in mm)



Block Diagram



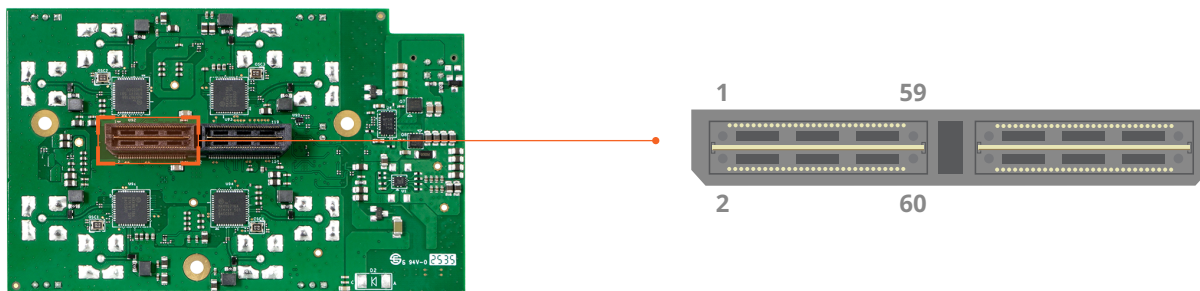
20 Pin Expansion Header Pinout / Power



No.	Name	Voltage	Description
01	NC	NC	Unused
02	VDD_5V	5V	Power
03	EVK_INTB3	3V3	GPIO, Activelow, Interrupt Output pin
04	VDD_5V	5V	Power
05	EVK_PDB3	3V3	GPIO, Active low, device is powered down
06	GND	GND	Ground
07	EVK_PDB1	3V3	GPIO, Active low, device is powered down
08	EVK_INTB4	3V3	GPIO, Active-low, Interrupt Output pin
09	GND	GND	Ground
10	EVK_PDB4	3V3	GPIO, Active low, device is powered down
11	EVK_INTB1	3V3	GPIO, Activelow, Interrupt Output pin
12	EVK_INTB2	3V3	GPIO, Active-low, Interrupt Output pin
13	EVK_PDB2	3V3	GPIO, Active low, device is powered down
14	GND	GND	Ground
15	NC	NC	Unused
16	NC	NC	Unused
17	NC	NC	Unused
18	NC	NC	Unused
19	FRAME_SYNC	3V3	GPIO, FRAME SYNC (PWM)
20	GND	GND	Ground

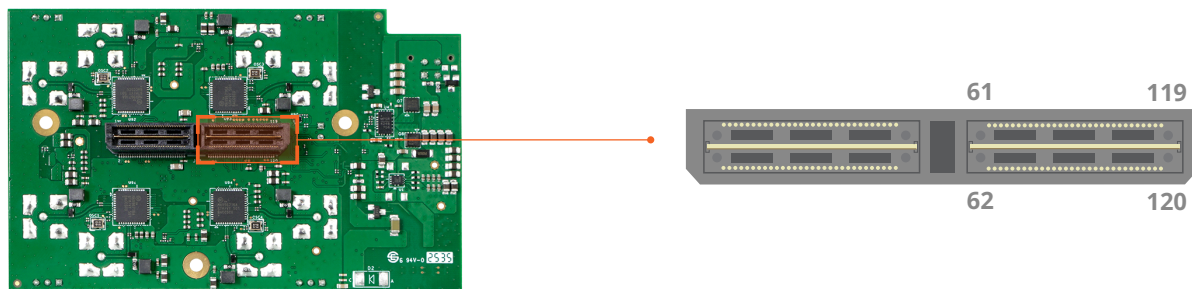
No.	Name	Voltage	Description
01	GND	GND	Ground
02	GND	GND	Ground
03	PWR_12V	12V	Power
04	PWR_12V	12V	Power

Jetson Camera Connector Pin Description



No.	Name	Voltage	Description	No.	Name	Voltage	Description
01	CSI0_D0_P		CSI 0 Lane 0	02	CSI0_DP2		CSI 0 Lane 2
03	CSI0_D0_N		CSI 0 Lane 0	04	CSI0_DN2		CSI 0 Lane 2
05	GND	GND	Ground	06	GND	GND	Ground
07	CSI0_D0_P		CSI 0 Clock	08	NC		NC
09	CSI0_D0_N		CSI 0 Clock	10	NC		NC
11	GND	GND	Ground	12	GND	GND	Ground
13	CSI0_D1_P		CSI 0 Lane 1	14	CSI0_DP3		CSI 0 Lane 3
15	CSI0_D1_N		CSI 0 Lane 1	16	CSI0_DN3		CSI 0 Lane 3
17	GND	GND	Ground	18	GND	GND	Ground
19	CSI1_D0_P		CSI 1 Lane 0	20	CSI1_D3_P		CSI 1 Lane 2
21	CSI1_D0_N		CSI 1 Lane 0	22	CSI1_D3_N		CSI 1 Lane 2
23	GND	GND	Ground	24	GND	GND	Ground
25	CSI1_CLK_P		CSI 1 Clock	26	NC		NC
27	CSI1_CLK_N		CSI 1 Clock	28	NC		NC
29	GND	GND	Ground	30	GND	GND	Ground
31	CSI1_D1_P		CSI1 Lane 1	32	CSI1_D3_P		CSI 1 Lane 3
33	CSI1_D1_N		CSI1 Lane 1	34	CSI1_D3_N		CSI 1 Lane 3
35	GND	GND	Ground	36	GND	GND	Ground
37	CSI2_D0_P		CSI 2 Lane 0	38	CSI3_D0_P		CSI 3 Lane 0
39	CSI2_D0_N		CSI 2 Lane 0	40	CSI3_D0_N		CSI 3 Lane 0
41	GND	GND	Ground	42	GND	GND	Ground
43	CSI2_CLK_P		CSI 2 Clock	44	CSI3_CLK_P		CSI 3 Clock
45	CSI2_CLK_N		CSI 2 Clock	46	CSI3_CLK_N		CSI 3 Clock
47	GND	GND	Ground	48	GND	GND	Ground
49	CSI2_D1_P		CSI 2 Lane 1	50	CSI3_D1_P		CSI 3 Lane 1
51	CSI2_D1_N		CSI 2 Lane 1	52	CSI3_D1_N		CSI 3 Lane 1
53	GND	GND	Ground	54	GND	GND	Ground
55	DVDD_CAM_LV		Unused camera supply pin	56	DVDD_CAM_LV		Unused camera supply pin
57	DVDD_CAM_LV		Unused camera supply pin	58	DVDD_CAM_LV		Unused camera supply pin
59	CSI2_D2_P		CSI 2 Lane 2	60	CSI3_D2_P		CSI 3 Lane 2

Jetson Camera Connector Pin Description



No.	Name	Voltage	Description	No.	Name	Voltage	Description
61	CSI2_D2_N		CSI 2 Lane 2	62	CSI3_D2_N		CSI 3 Lane 2
63	GND	GND	Ground	64	GND	GND	Ground
65	NC		NC	66	NC		NC
67	NC		NC	68	NC		NC
69	GND	GND	Ground	70	GND	GND	Ground
71	CSI2_D3_P		CSI 2 Lane 3	72	CSI3_D3_P		CSI 3 Lane 3
73	CSI2_D3_N		CSI 2 Lane 3	74	CSI3_D3_N		CSI 3 Lane 3
75	I2C3_CLK	1V8	I2C #3 clock	76	CSI1_INT	1V8	GPIO, Activelow, Interrupt Output pin
77	I2C3_DAT	1V8	I2C #3 data	78	CSI2_INT	1V8	GPIO, Activelow, Interrupt Output pin
79	GND	GND	Ground	80	GND	GND	Ground
81	NC		NC	82	NC		NC
83	NC		NC	84	CSI3_INT	1V8	GPIO, Activelow, Interrupt Output pin
85	NC		NC	86	CSI4_INT	1V8	GPIO, Activelow, Interrupt Output pin
87	NC		NC	88	NC		NC
89	NC		NC	90	CSI1_PWDN	1V8	GPIO, Active low, device is powered down
91	NC		NC	92	CSI3_PWDN	1V8	GPIO, Active low, device is powered down
93	CSI0_PWDN	1V8	GPIO, Active low, device is powered down	94	NC		NC
95	CSI2_PWDN	1V8	GPIO, Active low, device is powered down	96	NC		NC
97	NC		NC	98	NC		NC
99	GND	GND	Ground	100	GND	GND	Ground
101	NC		NC	102	VDD_1V8	1V8	1.8V Camera supply.
103	NC		NC	104	NC		NC
105	NC		NC	106	NC		NC
107	NC		NC	108	VDD_3V3	3V3	3.3V supply
109	NC		NC	110	VDD_3V3	3V3	3.3V supply
111	NC		NC	112	NC		NC
113	NC		NC	114	NC		NC
115	GND	GND	Ground	116	GND	GND	Ground
117	NC		NC	118	VDD_3V3	3V3	3.3V supply
119	SYS_PWR_EN	1V8	GPIO, System power enable, Active High	120	VDD_3V3	3V3	3.3V supply

Order Information

VL-GM2-8CAM-AGX-ORIN-xxxx

Option	Code	Description
Supported Camera	GM2	GMSL2 Camera
Max Camera Channels	8CAM	Supports up to 8 synchronized cameras
Platform	AGX-ORIN	Compatible with the NVIDIA Jetson AGX Orin platform
Custom ID	xxxx	Custom Part number ID

For customization, please contact your TechNexion sales representative.

Compatibility

Compatible with TechNexion GMSL2 cameras. Easily integrates with VizionSDK for multi-camera sync, image control, and development.



< 2 MP	5 MP	8 MP	10 ~ 20 MP
 AR0144 Global Color	 AR0521 Rolling Color	 AR0821 Rolling Color	 AR1335 Rolling Color
 AR0145 Global Color/Mono	 AR0522 Rolling Color/Mono	 AR0822 Rolling Color/Mono	 AR2020 Rolling Color/Mono
 AR0234 Global Color	 AR0524 Global Color/Mono	 AR0830 Rolling Color	
 AR0235 Global Color/Mono	 AR0544 Rolling Color/Mono		
 AR0246 Rolling Color			

Software Support

Compatible with VizionSDK — a cross-platform C++, Python SDK for Windows and Linux.



VizionSDK



VizionViewer™



Find all Software on
<https://www.technexion.com>

Software SDK Available

TechNexion
INNOVATORS OF TECHNOLOGY

For more information:
 www.technexion.com
 sales@technexion.com