

## **MV-GE1000**

**4-Channel GigE Frame Grabber** 







## Introduction

MV-GE1000 GigE frame grabber supports GigE protocol. The frame grabber's 4 GigE interfaces can be connected to 4 cameras at most. It has on-board memory to process images, which reduces CPU loads substantially. The frame grabber supports decompressing HB (High Bandwidth) images of Hikrobot's cameras without losses.

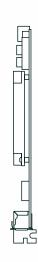
## **Available Model**

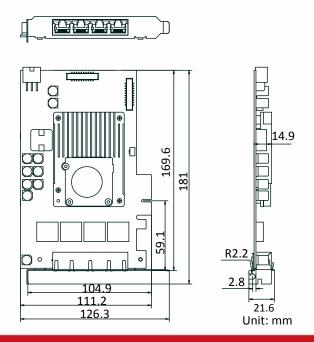
MV-GE1004

## **Dimension**



- Supports GigE Vision protocol with each GigE interface accessing up to 1 Gbps data transfer speed.
- Supports PoE with each channel providing 15 W at most.
- Various indicators indicate frame grabber status in real time.
- Adopts multiple I/O connectors for input and output.
- Provides SDK for secondary development.
- Complies with Genlcam standard.









Memory         1 GB DDR3-RAM         Host interface         Interconnect       PCI-E gen2 × 4         Delivery bandwidth       1720 MB/s (max. transmission bandwidth), 1600 MB/s (sustained transmission bandwidth)         Indicator       1         Camera interface         Standard       GigE Vision         Interface       RJ45 × 4         Power output       PoE, each channel provides 15 W at most         Camera type supported       GigE industrial camera         Camera quantity supported       4 at most         Camera connection speed       1 Gbps         Stream       4         Stream indicator       4 pairs         Processing feature       Pixel format       Mono 8/10/10p/12/12p, Bayer 8/10/10p/12/12p, YUV422Packed, YUV422_YUYV_Packed, RGB 8, BGR 8 HB (High Bandwidth) enabled: Mono 8, Bayer 8         Jumbo frame       9 KB         GPIO         I/O Type       Provides 24 I/O connectors, including opto-isolated input × 4 (4.5 VDC to 28 VDC), opto-	Model	NAV CE1004
On-board memory         1 GB DDR3-RAM           Host interface           Interconnect         PCI-E gen2 × 4           Delivery bandwidth         1720 MB/s (max. transmission bandwidth), 1600 MB/s (sustained transmission bandwidth)           Indicator         1           Camera interface           Standard         GigE Vision           Interface         RJ 45 × 4           Power output         POE, each channel provides 15 W at most           Camera type supported         6 GigE industrial camera           Camera quantity supported         4 at most           Camera connection speed         1 Gbps           Stream         4           Stream indicator         4 pairs           Processing feature           Pixel format         Mono 8/10/10p/12/12p, Bayer 8/10/10p/12/12p, YUV422Packed, YUV422_YUVV_Packed, RGB 8, BGR 8           Hill (High Bandwidth) enabled: Mono 8, Bayer 8           Jumbo frame         9 KB           GPIO         Provides 24 I/O connectors, including opto-isolated input × 4 (4.5 VDC to 28 VDC), opto-isolated output × 4 (4.5 VDC to 28 VDC), RX422 input × 4, TX422 output × 4, TTL input × 4, and TTL output × 4           Connector         Female header           Electrical feature         Female header           Electrical feature         Working temperature:		MV-GE1004
Interconnect   PCI-E gen2 × 4   Delivery bandwidth   172 0 MB/s (max. transmission bandwidth), 1600 MB/s (sustained transmission bandwidth)   Indicator   1   1   1   1   1   1   1   1   1		1 CD DDD3 DAM
Interconnect         PCI-E gen2 × 4           Delivery bandwidth         1720 MB/s (max. transmission bandwidth), 1600 MB/s (sustained transmission bandwidth)           Indicator         1           Camera interface           Standard         GigE Vision           Interface         RJ45 × 4           Power output         PoE, each channel provides 15 W at most           Camera type supported         GigE industrial camera           Camera quantity supported         4 at most           Camera connection speed         1 Gbps           Stream         4           Stream           A pairs           Processing feature           Pixel format         Mono 8/10/10p/12/12p, Bayer 8/10/10p/12/12p, YUV422Packed, YUV422_YUVV_Packed, RGB 8, BGR 8		1 GB DDR3-RAIM
Delivery bandwidth         1720 MB/s (max. transmission bandwidth), 1600 MB/s (sustained transmission bandwidth)           Indicator         1           Camera interface           Standard         Gig€ Vision           Interface         R145 × 4           Power output         PoE, each channel provides 15 W at most           Camera type supported         Gig£ industrial camera           Camera quantity supported         4 at most           Camera connection speed         1 Gbps           Stream         4           Stream indicator         4 pairs           Processing feature           Pixel format         Mono 8/10/10p/12/12p, Bayer 8/10/10p/12/12p, YUV422Packed, YUV422_YUVV_Packed, RGB 8, BGR 8           HB (High Bandwidth) enabled: Mono 8, Bayer 8         But be supposed by the supposed by t	-	DOLE 2 4
Indicator 1  Camera interface Standard GigE Vision Interface RJ45 × 4  Power output PoE, each channel provides 15 W at most Camera type supported GigE industrial camera Camera quantity supported 1 Gbps Stream 4  Stream a 4  Stream indicator 4 pairs  Processing feature  Pixel format Mono 8/10/10p/12/12p, Bayer 8/10/10p/12/12p, YUV422Packed, YUV422_YUVV_Packed, RGB 8, BGR 8, HB (High Bandwidth) enabled: Mono 8, Bayer 8  Spream 9 SKB  Septom Volume Provides 24 I/O connectors, including opto-isolated input × 4 (4.5 VDC to 28 VDC), pto-isolated output × 4 (4.5 VDC to 28 VDC), RX422 input × 4, TX422 output × 4, TTL input × 4, and TTL output × 4  Connector Female header  Electrical feature  Power consumption Typ. 10 W (without PoE)  Mechanical  Dimension 181 mm × 126.3 mm × 21.6 mm (7.1" × 5.0" × 0.9")  Temperature Working temperature: 0 °C to 60 °C (32 °F to 140 °F)		
Camera interface       Standard     GigE Vision       Interface     RJ45 × 4       Power output     PoE, each channel provides 15 W at most       Camera type supported     GigE industrial camera       Camera quantity supported     4 at most       Camera connection speed     1 Gbps       Stream     4       Stream indicator     4 pairs       Processing feature       Pixel format     Mono 8/10/10p/12/12p, Bayer 8/10/10p/12/12p, YUV422Packed, YUV422_YUVV_Packed, RGB 8, BGR 8         HB (High Bandwidth) enabled: Mono 8, Bayer 8       Jumbo frame     9 KB       Frovides 24 I/O connectors, including opto-isolated input × 4 (4.5 VDC to 28 VDC), opto-isolated output × 4 (4.5 VDC to 28 VDC), RX422 input × 4, TX422 output × 4, TTL input × 4, and TTL output × 4       Connector     Female header       Electrical feature       Power consumption     Typ. 10 W (without PoE)       Mechanical       Dimension     181 mm × 126.3 mm × 21.6 mm (7.1" × 5.0" × 0.9")       Temperature     Working temperature: 0 °C to 60 °C (32 °F to 140 °F)       Storage temperature: -20 °C to 70 °C (-4 °F to 158 °F)       Humidity     10% to 95% RH, non-condensing       General       Client software     MVS       Operating system       32/64-bit	-	
Standard         GigE Vision           Interface         RJ45 × 4           Power output         PoE, each channel provides 15 W at most           Camera type supported         GigE industrial camera           Camera quantity supported         4 at most           Camera connection speed         1 Gbps           Stream         4           Stream indicator         4 pairs           Processing feature           Pixel format         Mono 8/10/10p/12/12p, Bayer 8/10/10p/12/12p, YUV422Packed, YUV422_YUYV_Packed, RGB 8, BGR 8		1
Interface	Camera interface	
Power outputPoE, each channel provides 15 W at mostCamera type supportedGigE industrial cameraCamera quantity supported4 at mostCamera connection speed1 GbpsStream4Stream indicator4 pairsProcessing featurePixel formatMono 8/10/10p/12/12p, Bayer 8/10/10p/12/12p, YUV422Packed, YUV422_YUYV_Packed, RGB 8, BGR 8 HB (High Bandwidth) enabled: Mono 8, Bayer 8Jumbo frame9 KBGPIOProvides 24 I/O connectors, including opto-isolated input × 4 (4.5 VDC to 28 VDC), opto-isolated output × 4 (4.5 VDC to 28 VDC), RX422 input × 4, TX422 output × 4, TTL input × 4, and TTL output × 4ConnectorFemale headerElectrical featurePower consumptionTyp. 10 W (without PoE)MechanicalMechanicalDimension181 mm × 126.3 mm × 21.6 mm (7.1" × 5.0" × 0.9")TemperatureWorking temperature: 0 °C to 60 °C (32 °F to 140 °F) Storage temperature: -20 °C to 70 °C (-4 °F to 158 °F)Humidity10% to 95% RH, non-condensingGeneralMVSClient softwareMVSOperating system32/64-bit Windows 7/10	Standard	GigE Vision
Camera type supportedGigE industrial cameraCamera quantity supported4 at mostCamera connection speed1 GbpsStream4Stream indicator4 pairsProcessing featurePixel formatMono 8/10/10p/12/12p, Bayer 8/10/10p/12/12p, YUV422Packed, YUV422_YUVV_Packed, RGB 8, BGR 8 HB (High Bandwidth) enabled: Mono 8, Bayer 8Jumbo frame9 KBGPIOI/O TypeProvides 24 I/O connectors, including opto-isolated input × 4 (4.5 VDC to 28 VDC), opto-isolated output × 4 (4.5 VDC to 28 VDC), RX422 input × 4, TX422 output × 4, TTL input × 4, and TTL output × 4ConnectorFemale headerElectrical featurePower consumptionTyp. 10 W (without PoE)MechanicalMechanicalDimension181 mm × 126.3 mm × 21.6 mm (7.1" × 5.0" × 0.9")TemperatureWorking temperature: 0 °C to 60 °C (32 °F to 140 °F) Storage temperature: -20 °C to 70 °C (-4 °F to 158 °F)Humidity10% to 95% RH, non-condensingGeneralMVSClient softwareMVSOperating system32/64-bit Windows 7/10	Interface	RJ45 × 4
Camera quantity supported       4 at most         Camera connection speed       1 Gbps         Stream       4         Stream indicator       4 pairs         Processing feature       Mono 8/10/10p/12/12p, Bayer 8/10/10p/12/12p, YUV422Packed, YUV422_YUYV_Packed, RGB 8, BGR 8	Power output	PoE, each channel provides 15 W at most
Camera connection speed       1 Gbps         Stream       4         Stream indicator       4 pairs         Processing feature       Pixel format       Mono 8/10/10p/12/12p, Bayer 8/10/10p/12/12p, YUV422Packed, YUV422_YUVY_Packed, RGB 8, BGR 8 HB (High Bandwidth) enabled: Mono 8, Bayer 8         Jumbo frame       9 KB         GPIO         I/O Type       Provides 24 I/O connectors, including opto-isolated input × 4 (4.5 VDC to 28 VDC), opto-isolated output × 4, TX422 output × 4, TTL input × 4, and TTL output × 4         Connector       Female header         Electrical feature         Power consumption       Typ. 10 W (without PoE)         Mechanical         Dimension       181 mm × 126.3 mm × 21.6 mm (7.1" × 5.0" × 0.9")         Temperature       Working temperature: 0 "C to 60 "C (32 "F to 140 "F) Storage temperature: -20 "C to 70 "C (-4 "F to 158 "F)         Humidity       10% to 95% RH, non-condensing         General         Client software       MVS         Operating system       32/64-bit Windows 7/10	Camera type supported	GigE industrial camera
Stream 4  Stream indicator 4 pairs  Processing feature  Pixel format Mono 8/10/10p/12/12p, Bayer 8/10/10p/12/12p, YUV422Packed, YUV422_YUVV_Packed, RGB 8, BGR 8 HB (High Bandwidth) enabled: Mono 8, Bayer 8  Jumbo frame 9 KB  GPIO  I/O Type Provides 24 I/O connectors, including opto-isolated input × 4 (4.5 VDC to 28 VDC), opto-isolated output × 4 (4.5 VDC to 28 VDC), RX422 input × 4, TX422 output × 4, TTL input × 4, and TTL output × 4  Connector Female header  Electrical feature  Power consumption Typ. 10 W (without PoE)  Mechanical  Dimension 181 mm × 126.3 mm × 21.6 mm (7.1" × 5.0" × 0.9")  Temperature Working temperature: 0 °C to 60 °C (32 °F to 140 °F) Storage temperature: -20 °C to 70 °C (-4 °F to 158 °F)  Humidity 10% to 95% RH, non-condensing  General  Client software MVS  Operating system 32/64-bit Windows 7/10	Camera quantity supported	4 at most
Stream indicator 4 pairs  Processing feature  Pixel format Mono 8/10/10p/12/12p, Bayer 8/10/10p/12/12p, YUV422Packed, YUV422_YUVV_Packed, RGB 8, BGR 8 HB (High Bandwidth) enabled: Mono 8, Bayer 8  Jumbo frame 9 KB  GPIO  I/O Type Provides 24 I/O connectors, including opto-isolated input × 4 (4.5 VDC to 28 VDC), opto-isolated output × 4 (4.5 VDC to 28 VDC), RX422 input × 4, TX422 output × 4, TTL input × 4, and TTL output × 4  Connector Female header  Electrical feature  Power consumption Typ. 10 W (without PoE)  Mechanical  Dimension 181 mm × 126.3 mm × 21.6 mm (7.1" × 5.0" × 0.9")  Temperature Working temperature: 0 °C to 60 °C (32 °F to 140 °F) Storage temperature: -20 °C to 70 °C (-4 °F to 158 °F)  Humidity 10% to 95% RH, non-condensing  General  Client software MVS  Operating system 32/64-bit Windows 7/10	Camera connection speed	1 Gbps
Processing feature  Pixel format  Mono 8/10/10p/12/12p, Bayer 8/10/10p/12/12p, YUV422Packed, YUV422_YUYV_Packed, RGB 8, BGR 8 HB (High Bandwidth) enabled: Mono 8, Bayer 8  Jumbo frame  9 KB  GPIO  I/O Type  Provides 24 I/O connectors, including opto-isolated input × 4 (4.5 VDC to 28 VDC), opto-isolated output × 4 (4.5 VDC to 28 VDC), RX422 input × 4, TX422 output × 4, TTL input × 4, and TTL output × 4	Stream	4
Pixel format  Mono 8/10/10p/12/12p, Bayer 8/10/10p/12/12p, YUV422Packed, YUV422_YUVV_Packed, RGB 8, BGR 8 HB (High Bandwidth) enabled: Mono 8, Bayer 8  Jumbo frame  9 KB  Provides 24 I/O connectors, including opto-isolated input × 4 (4.5 VDC to 28 VDC), opto-isolated output × 4 (4.5 VDC to 28 VDC), RX422 input × 4, TX422 output × 4, TTL input × 4, and TTL output × 4 and TTL output × 4 Female header  Electrical feature  Power consumption  Typ. 10 W (without PoE)  Mechanical  Dimension  181 mm × 126.3 mm × 21.6 mm (7.1" × 5.0" × 0.9")  Temperature  Working temperature: 0°C to 60°C (32°F to 140°F) Storage temperature: -20°C to 70°C (-4°F to 158°F)  Humidity  10% to 95% RH, non-condensing  General  Client software  MVS  Operating system  32/64-bit Windows 7/10	Stream indicator	4 pairs
RGB 8, BGR 8 HB (High Bandwidth) enabled: Mono 8, Bayer 8  Jumbo frame 9 KB  GPIO  I/O Type Provides 24 I/O connectors, including opto-isolated input × 4 (4.5 VDC to 28 VDC), opto-isolated output × 4 (4.5 VDC to 28 VDC), RX422 input × 4, TX422 output × 4, TTL input × 4, and TTL output × 4  Connector Female header  Electrical feature  Power consumption Typ. 10 W (without PoE)  Mechanical  Dimension 181 mm × 126.3 mm × 21.6 mm (7.1" × 5.0" × 0.9")  Temperature Working temperature: 0 °C to 60 °C (32 °F to 140 °F) Storage temperature: -20 °C to 70 °C (-4 °F to 158 °F)  Humidity 10% to 95% RH, non-condensing  General  Client software MVS  Operating system 32/64-bit Windows 7/10	Processing feature	
HB (High Bandwidth) enabled: Mono 8, Bayer 8	Pixel format	Mono 8/10/10p/12/12p, Bayer 8/10/10p/12/12p, YUV422Packed, YUV422_YUYV_Packed,
Jumbo frame  GPIO  I/O Type Provides 24 I/O connectors, including opto-isolated input × 4 (4.5 VDC to 28 VDC), opto-isolated output × 4 (4.5 VDC to 28 VDC), RX422 input × 4, TX422 output × 4, TTL input × 4, and TTL output × 4  Connector Female header  Electrical feature  Power consumption Typ. 10 W (without PoE)  Mechanical  Dimension 181 mm × 126.3 mm × 21.6 mm (7.1" × 5.0" × 0.9")  Temperature Working temperature: 0 °C to 60 °C (32 °F to 140 °F) Storage temperature: -20 °C to 70 °C (-4 °F to 158 °F)  Humidity 10% to 95% RH, non-condensing  General  Client software MVS Operating system 32/64-bit Windows 7/10		RGB 8, BGR 8
I/O Type Provides 24 I/O connectors, including opto-isolated input × 4 (4.5 VDC to 28 VDC), opto-isolated output × 4 (4.5 VDC to 28 VDC), RX422 input × 4, TX422 output × 4, TTL input × 4, and TTL output × 4  Connector Female header  Electrical feature  Power consumption Typ. 10 W (without PoE)  Mechanical Dimension 181 mm × 126.3 mm × 21.6 mm (7.1" × 5.0" × 0.9")  Temperature Working temperature: 0 °C to 60 °C (32 °F to 140 °F) Storage temperature: -20 °C to 70 °C (-4 °F to 158 °F)  Humidity 10% to 95% RH, non-condensing  General  Client software MVS Operating system 32/64-bit Windows 7/10		HB (High Bandwidth) enabled: Mono 8, Bayer 8
Provides 24 I/O connectors, including opto-isolated input × 4 (4.5 VDC to 28 VDC), opto-isolated output × 4 (4.5 VDC to 28 VDC), RX422 input × 4, TX422 output × 4, TTL input × 4, and TTL output × 4    Connector   Female header	Jumbo frame	9 KB
isolated output × 4 (4.5 VDC to 28 VDC), RX422 input × 4, TX422 output × 4, TTL input × 4, and TTL output × 4  Connector Female header  Electrical feature  Power consumption Typ. 10 W (without PoE)  Mechanical  Dimension 181 mm × 126.3 mm × 21.6 mm (7.1" × 5.0" × 0.9")  Temperature Working temperature: 0 °C to 60 °C (32 °F to 140 °F)	GPIO	
and TTL output × 4  Connector Female header  Electrical feature  Power consumption Typ. 10 W (without PoE)  Mechanical  Dimension 181 mm × 126.3 mm × 21.6 mm (7.1" × 5.0" × 0.9")  Temperature Working temperature: 0 °C to 60 °C (32 °F to 140 °F)	I/O Type	Provides 24 I/O connectors, including opto-isolated input × 4 (4.5 VDC to 28 VDC), opto-
ConnectorFemale headerElectrical featurePower consumptionTyp. 10 W (without PoE)MechanicalDimension181 mm × 126.3 mm × 21.6 mm (7.1" × 5.0" × 0.9")TemperatureWorking temperature: 0 °C to 60 °C (32 °F to 140 °F) Storage temperature: -20 °C to 70 °C (-4 °F to 158 °F)Humidity10% to 95% RH, non-condensingGeneralMVSOperating system32/64-bit Windows 7/10		isolated output × 4 (4.5 VDC to 28 VDC), RX422 input × 4, TX422 output × 4, TTL input × 4,
Power consumption   Typ. 10 W (without PoE)		and TTL output × 4
Power consumption Typ. 10 W (without PoE)  Mechanical  Dimension 181 mm × 126.3 mm × 21.6 mm (7.1" × 5.0" × 0.9")  Temperature Working temperature: 0 °C to 60 °C (32 °F to 140 °F)	Connector	Female header
MechanicalDimension181 mm × 126.3 mm × 21.6 mm (7.1" × 5.0" × 0.9")TemperatureWorking temperature: 0 °C to 60 °C (32 °F to 140 °F) Storage temperature: -20 °C to 70 °C (-4 °F to 158 °F)Humidity10% to 95% RH, non-condensingGeneralClient softwareMVSOperating system32/64-bit Windows 7/10	Electrical feature	
Dimension 181 mm × 126.3 mm × 21.6 mm (7.1" × 5.0" × 0.9")  Temperature Working temperature: 0 °C to 60 °C (32 °F to 140 °F) Storage temperature: -20 °C to 70 °C (-4 °F to 158 °F)  Humidity 10% to 95% RH, non-condensing  General  Client software MVS  Operating system 32/64-bit Windows 7/10	•	Typ. 10 W (without PoE)
Temperature Working temperature: 0 °C to 60 °C (32 °F to 140 °F) Storage temperature: -20 °C to 70 °C (-4 °F to 158 °F)  Humidity 10% to 95% RH, non-condensing  General Client software MVS Operating system 32/64-bit Windows 7/10		
Storage temperature: -20 °C to 70 °C (-4 °F to 158 °F)  Humidity 10% to 95% RH, non-condensing  General  Client software MVS  Operating system 32/64-bit Windows 7/10	Dimension	, ,
Humidity 10% to 95% RH, non-condensing  General  Client software MVS  Operating system 32/64-bit Windows 7/10	Temperature	
General       Client software     MVS       Operating system     32/64-bit Windows 7/10		
Client software     MVS       Operating system     32/64-bit Windows 7/10	Humidity	10% to 95% RH, non-condensing
Operating system   32/64-bit Windows 7/10		
	Client software	MVS
Certification         WEEE, RoHS, REACH	Operating system	32/64-bit Windows 7/10
•	Certification	WEEE, ROHS, REACH



Hangzhou Hikrobot Technology Co.,Ltd. No.399 Danfeng Road, Binjiang District,Hangzhou 310051 , China. en.hikrobotics.com