



LEOPARD
IMAGING

LI-ASTRO-VB1940-VCL-ST80-10GigE-120H



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TECHNICAL FEATURES

- Compatible with NVIDIA® Jetson AGX Orin™, IGX Orin™, Thor Developer Kit
- Lattice® CertusPro-NX FPGA
- AQrate® 10GB Ethernet PHY Transceiver
- IMU (Inertial Measurement Unit): BMI088
- Baseline: 80 mm
- Focused Distance: 75 cm
- Sensor: 5.1MP Global Shutter RGB-IR Sensor (QYT: 2)
- Resolution: 2560 (H) x 1984 (V)
- Single IR illuminator and single IR dot projector
- Working Mode: Master / Trigger mode
- Power Supply: 12 VDC external power supply
- Power Consumption: ~ 6 W
- Operating temperature: TBD
- Storage temperature: TBD
- Weight: TBD
- Protection: N/A
- Allows customization

Applications

- In Cabin Automotive
 - ◆ Gesture Recognition
 - ◆ Iris Scanning
 - ◆ Head Roll
 - ◆ Eye Tracking
 - ◆ Machine Vision

LENS SPECIFICATIONS

Effective focal Length	2.94 ± 5% mm
Aperture, F/#	2.0 ± 5
Field of View (FOV)	120° horizontal
IR Filter	Visible + 940 nm band pass filter
Relative Illumination	(49.4 ± 5) %
Optical Distortion	-79% ± 5%
Lens Mount	M12 x P0.5

IR ILLUMINATOR SPECIFICATIONS

Wavelength	940 nm
Field of Illumination (FOI)	110° (H) x 85° (V)



● Laser Projector Specifications

Wavelength	940 nm
Field of Illumination (FOI)	110° (H) x 77° (V)
Dot in FOV	10935

NOTE:

- Avoid hitting VCSEL when camera assembly and operating.
- Keep wide clear upon VCSEL when camera operating.

● Laser Projector Safety and Certificates

Safety & Certificates	TBD
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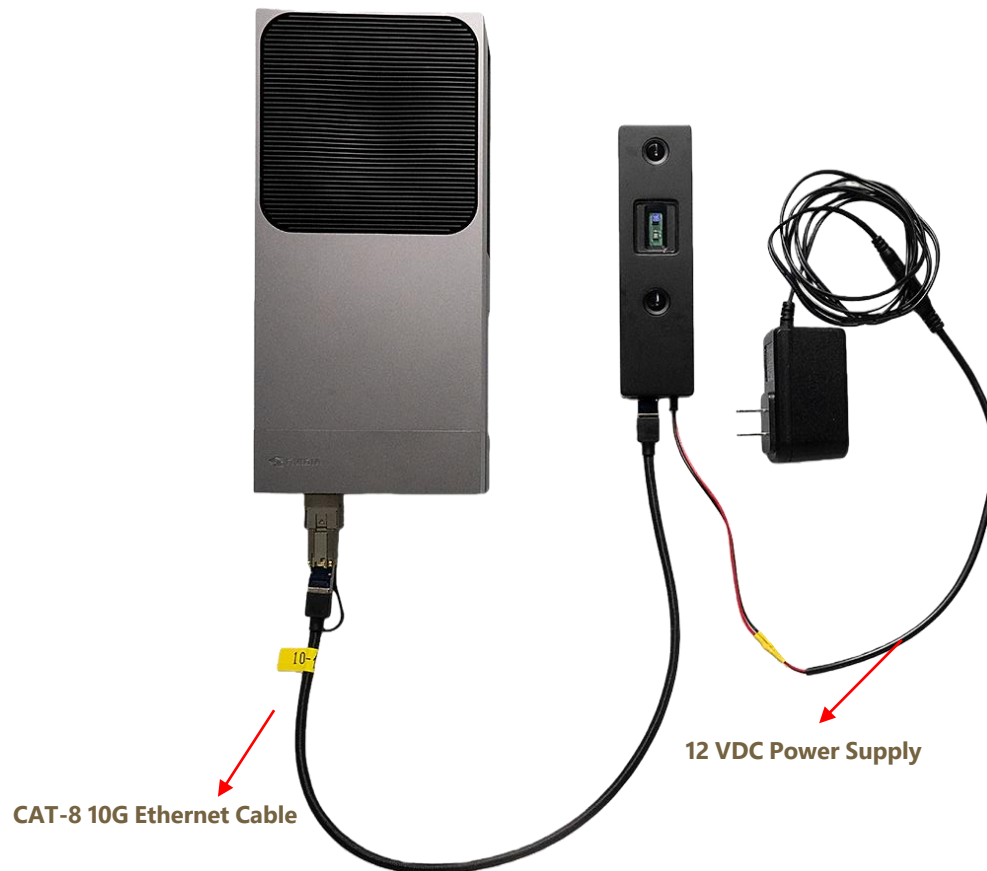
● Laser Projector Maintenance

- Make maintenance after a period of use, such as cleaning dust.
- Return to factory for repair when meeting VCSEL work unnormal.

• BOM

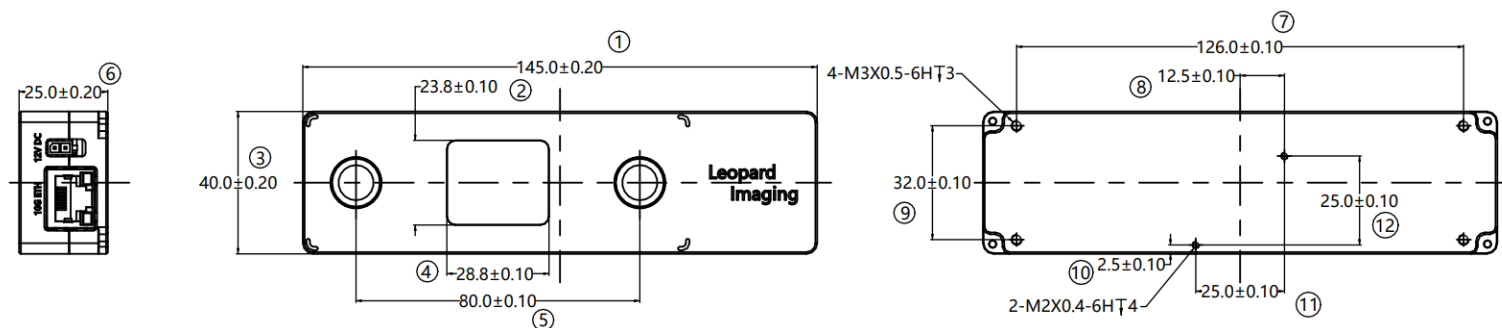
#	Items	QTY
1	LI-ASTRO-VB1940-VCL-ST80-10GigE-120H	1
2	CAT-8 10G Ethernet Cable	1
3	12 VDC Power Supply + adapter cable (Only for test)	1

• Typical Connection



Nvidia® Jetson IGX Orin / AGX Orin™ Developer Kit is **NOT** included.

DIMENSIONS



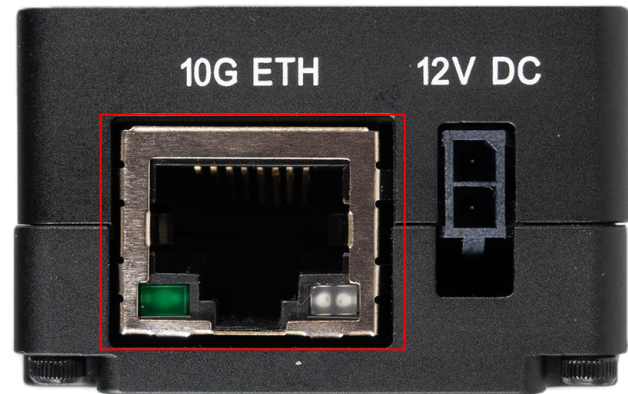
NOTE:

- Other unmarked tolerances refer to the tolerance table.
- ⊗ marked are important sizes.
- All materials are compliant with RoHS requirements.
- Unit: mm

TOLERANCE TABLE					
LENGTH TOLERANCE		CHAMFER TOLERANCE		ANGLE TOLERANCE	
Size X	Tolerance	Size X	Tolerance	Size X	Tolerance
0.5 < X ≤ 3	±0.1	0.5 < X ≤ 3	±0.2	X ≤ 10	±1°
3 < X ≤ 6	±0.1	3 < X ≤ 6	±0.5	10 < X ≤ 50	±30°
6 < X ≤ 30	±0.2	6 < X ≤ 30	±1	50 < X ≤ 120	±20°
30 < X ≤ 120	±0.3	X > 30	±2	120 < X ≤ 400	±10°
120 < X ≤ 400	±0.5			X > 400	±5°
400 < X ≤ 1000	±0.8				
X > 1000	±1.2				

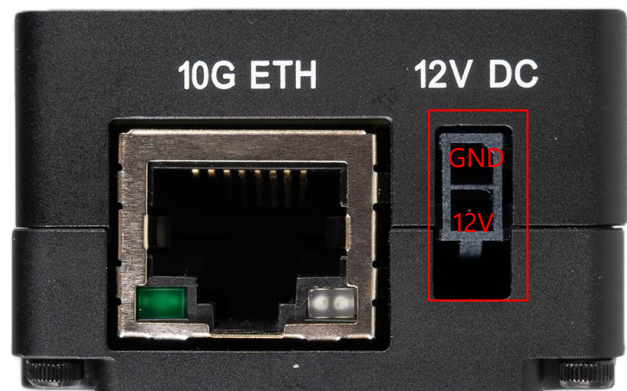
• RJ45 10GB Ethernet

- Part#: 7499811420
- Connector Type: RJ45
- Orientation: 90° Angle (Right)
- LED Color: Yellow, Green – Green
- Number of Cores per Jack: 8



• External 12 VDC Power Supply

- Part#: 0430450200
- Number of Positions: 2



- REVISION HISTORY

Revision	Description	Release Date
0.1	Initial draft.	18 Dec 2025
0.2	Updated pictures on the page 1 & 2.	31 Dec 2025

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