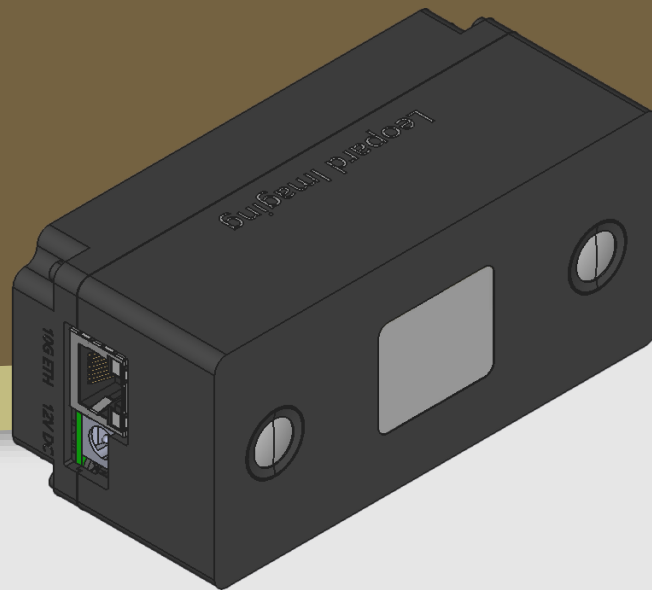




**LEOPARD**  
IMAGING

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



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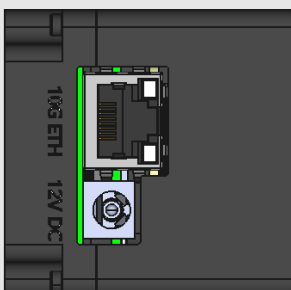
## TECHNICAL FEATURES

- Compatible with NVIDIA® Jetson AGX Orin™ and IGX Orin™ Developer Kit
- Lattice® CertusPro-NX FPGA
- AQrate® 10GB Ethernet PHY Transceiver
- IMU (Inertial Measurement Unit): BMI088
- Sensor: 5.1MP Global Shutter RGB-IR Sensor (QYT: 2)
- Resolution: 2560 (H) x 1984 (V)
- Baseline: 80 mm
- Single IR illuminator and single IR dot projector
- Working Mode: Master / Trigger mode
- Power Supply: 12 VDC external power supply

**Note:** If you are looking for PoE power supply module, refer to:

[LI-VB1940-VCL-ST80-10GigE-120H-POE - Leopard Imaging Inc.](#)

- Power Consumption: ~ 6 W
- Operating temperature: -40°C ~ +70°C
- Storage temperature: -40°C ~ +85°C
- Weight: TBD
- Protection: N/A
- Allows customization



## Applications

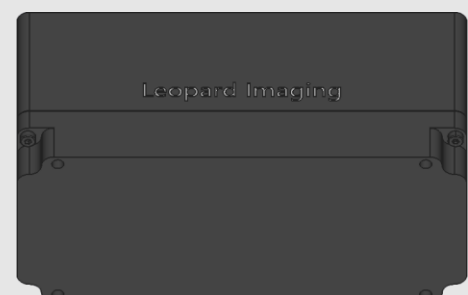
- In Cabin Automotive
  - ◆ Gesture Recognition
  - ◆ Iris Scanning
  - ◆ Head Roll
  - ◆ Eye Tracking
  - ◆ Machine Vision

## 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

|                                  |                                                                                      |
|----------------------------------|--------------------------------------------------------------------------------------|
| <b>Safety &amp; Certificates</b> | <div>CLASS 1 PRODUCT<br/>IEC 60825-1 : 2014<br/>EN 60825-1 : 2014 + A11 : 2021</div> |
|----------------------------------|--------------------------------------------------------------------------------------|

## —● Laser Projector Maintenance

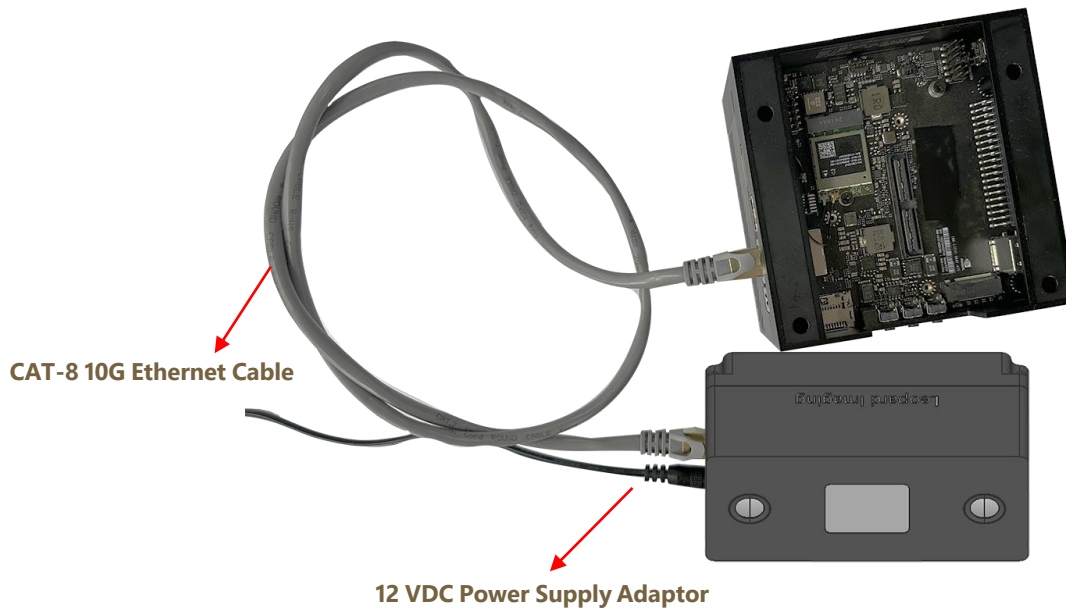
- Make maintenance after a period of use, such as cleaning dust.
- Return to factory for repair when meeting VCSEL work unnormal.

## BOM

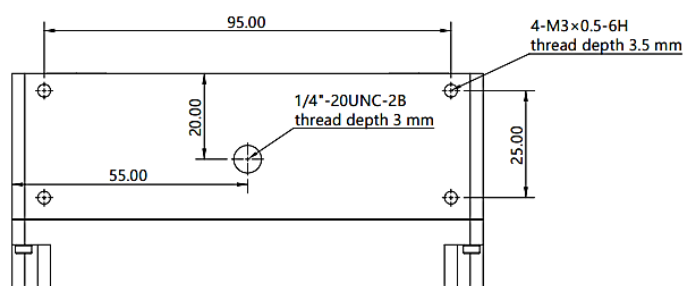
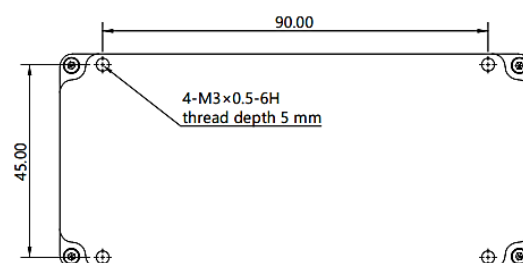
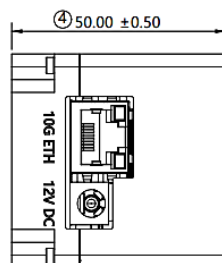
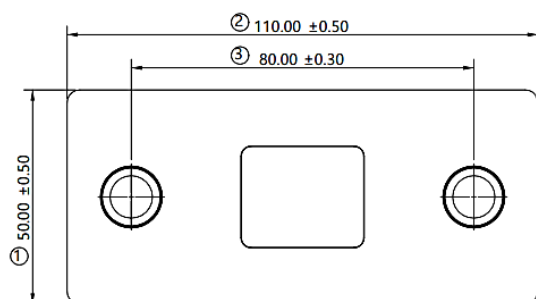
| # | Items                          | QTY |
|---|--------------------------------|-----|
| 1 | LI-VB1940-VCL-ST80-10GigE-120H | 1   |
| 2 | CAT-8 10G Ethernet Cable       | 1   |
| 3 | 12 VDC Power Supply Adaptor    | 1   |

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

## Supported platform: Nvidia Jetson AGX Orin / IGX Orin development kit



## DIMENSIONS



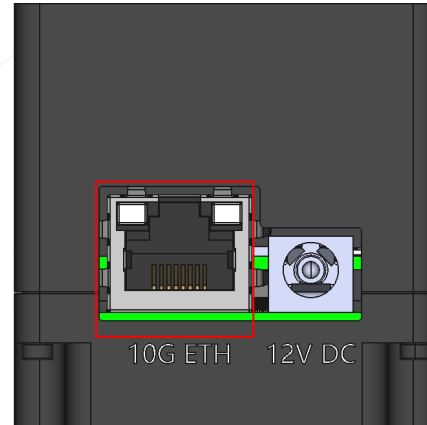
### NOTE:

- 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     |
| $0.5 < X \leq 3$    | $\pm 0.1$ | $0.5 < X \leq 3$  | $\pm 0.2$ | $X \leq 10$        | $\pm 1^\circ$ |
| $3 < X \leq 6$      | $\pm 0.1$ | $3 < X \leq 6$    | $\pm 0.5$ | $10 < X \leq 50$   | $\pm 30'$     |
| $6 < X \leq 30$     | $\pm 0.2$ | $6 < X \leq 30$   | $\pm 1$   | $50 < X \leq 120$  | $\pm 20'$     |
| $30 < X \leq 120$   | $\pm 0.3$ | $X > 30$          | $\pm 2$   | $120 < X \leq 400$ | $\pm 10'$     |
| $120 < X \leq 400$  | $\pm 0.5$ |                   |           | $X > 400$          | $\pm 5'$      |
| $400 < X \leq 1000$ | $\pm 0.8$ |                   |           |                    |               |
| $X > 1000$          | $\pm 1.2$ |                   |           |                    |               |

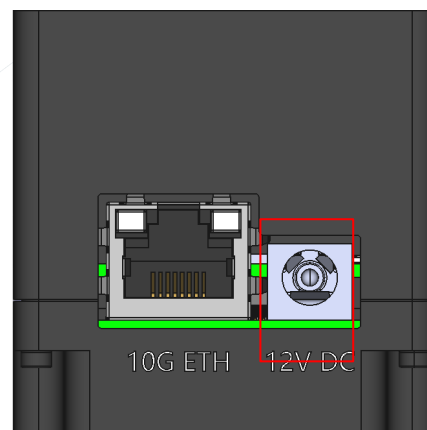
## ● RJ45 10GB Ethernet

- 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#: PJ-002A
- Number of Positions: 3
- Connector Type: Jack
- Inner Diameter: 2 mm
- Outer Diameter: 6.5 mm



- REVISION HISTORY

| Revision | Description    | Release Date |
|----------|----------------|--------------|
| 0.1      | Initial draft. | 12 Aug 2025  |

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