



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

- Industrial AI
- Smart Manufacturing
- Robotics
- Barcode Scanning

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 |
|----------------------------------|-----|

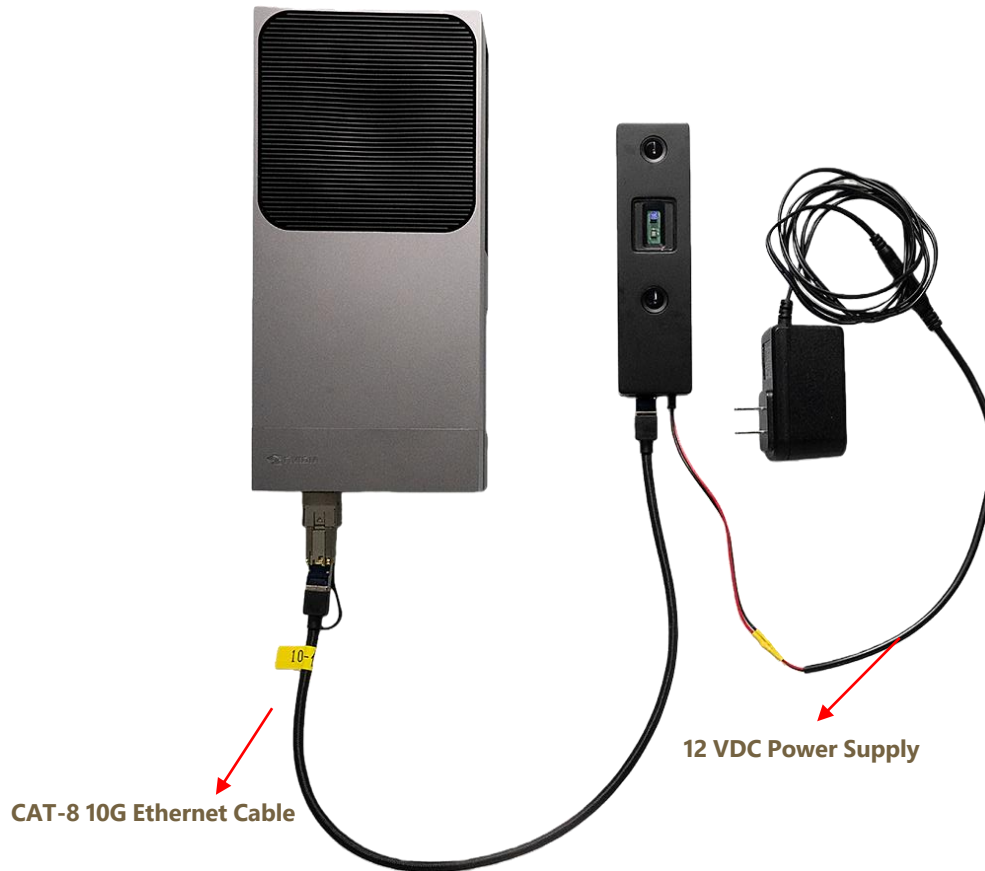
● Laser Projector Maintenance

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

BOM

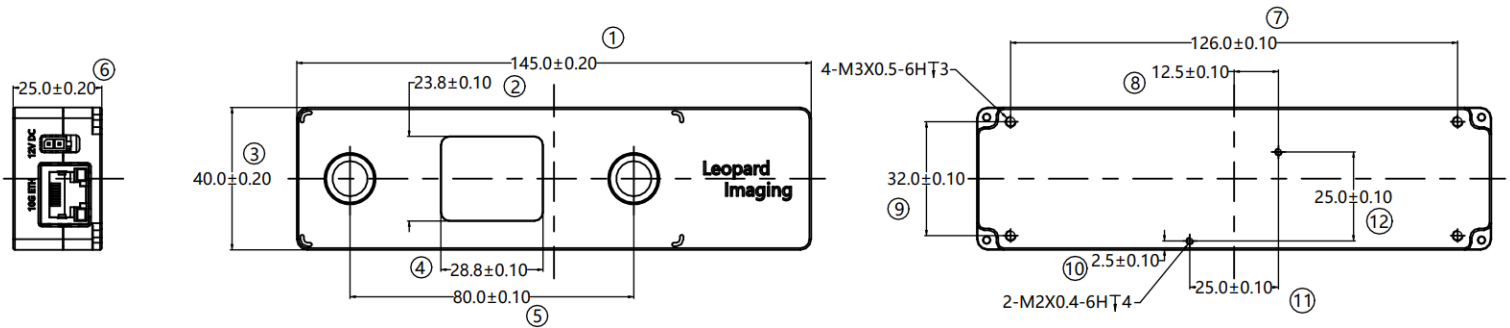
| # | Items | QTY |
|---|--|-----|
| 1 | LI-ASTRO-VB1940-VCL-ST80-10GigE-120H | 1 |
| 2 | CAT-8 10G Ethernet Cable | 1 |
| 3 | 12 VDC Power Supply + adapter cable (Only for test) | 1 |

Typical Connection



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

DIMENSIONS



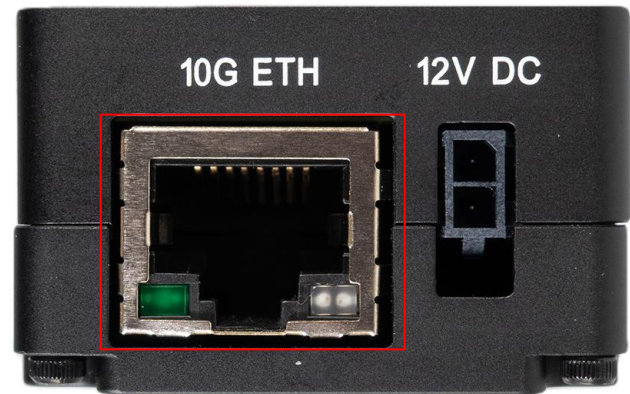
NOTE:

- Other unmarked tolerances refer to the tolerance table.
- \otimes 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 |
| $0.5 < X \leq 3$ | ± 0.1 | $0.5 < X \leq 3$ | ± 0.2 | $X \leq 10$ | $\pm 1^\circ$ |
| $3 < X \leq 6$ | ± 0.1 | $3 < X \leq 6$ | ± 0.5 | $10 < X \leq 50$ | $\pm 30'$ |
| $6 < X \leq 30$ | ± 0.2 | $6 < X \leq 30$ | ± 1 | $50 < X \leq 120$ | $\pm 20'$ |
| $30 < X \leq 120$ | ± 0.3 | $X > 30$ | ± 2 | $120 < X \leq 400$ | $\pm 10'$ |
| $120 < X \leq 400$ | ± 0.5 | | | $X > 400$ | $\pm 5'$ |
| $400 < X \leq 1000$ | ± 0.8 | | | | |
| $X > 1000$ | ± 1.2 | | | | |

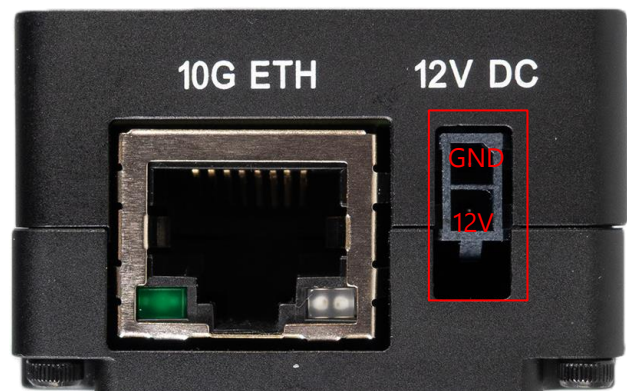
● RJ45 10GB Ethernet

- 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 |
| 0.3 | Updated Applications. | 18 Jun 2026 |

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