

LI-AR0144-MIPI-85H SPECIFICATION

**Rev 1.1
Leopard Imaging Inc.**

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LI-AR0144-MIPI-85H SPECIFICATION

Version History

| Version | Description | Release Date |
|---------|---------------------------------------|---------------|
| 1.0 | First Release. | 13. Jul. 2017 |
| 1.1 | Deleted info quoted from sensor spec. | 19. May. 2022 |



LI-AR0144-MIPI-85H SPECIFICATION

Key Information

| Module Part# | | LI-AR0144-MIPI-85H |
|----------------------------|---------|--|
| Module Size | | 37 (L) x 8 (W) x 5.6 (H) mm |
| Sensor Type | | AR0144 |
| Array Size | | 1280 (H) x 800 (V) |
| Supply Voltage | Digital | 1.2V |
| | Analog | 2.8V |
| | I/O | 1.8 or 2.8V |
| Optical Format | | 1/4" (4.5 mm) |
| Focus (F.NO) | | 2.2 |
| FOV (H) | | 85° |
| Focal Length | | 2.3 mm |
| Focusing Range | | 20 cm to Infinity |
| TV Distortion | | < -20 % |
| Pixel Size | | 3.0 x 3.0 μm |
| Color Filter Array | | Monochrome |
| Output Format | | RAW data |
| Operating Temperature | | -40°C to +85°C (ambient) -40°C to +105°C (junction) |
| Max. Frame Rate | | Full resolution @ 60 fps 720P @ 66 fps |
| Dynamic Range | | 63.9 dB |
| SNR _{MAX} | | 38 dB |
| Responsivity | | 3.6 V/lux-sec (Monochrome) |
| Shutter Type | | Global shutter |
| Power Consumption | | < 250 mW |
| Input Clock Range | | 6 ~ 64 MHz |
| Output Pixel Clock Maximum | | 74.25 MHz |



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Pin Assignment

| No. | Name | Pin type | Description |
|-----|------------|----------|--|
| 1 | SDA | I/O | Two-Wire Serial data I/O |
| 2 | SCL | Input | Two-Wire Serial clock input |
| 3 | DOVDD 1.8V | Power | I/O supply power |
| 4 | MCP | Output | MIPI serial clock differential P |
| 5 | MCN | Output | MIPI serial clock differential N |
| 6 | DGND | Power | Digital GND |
| 7 | MDP1 | Output | MIPI serial data, lane 1, differential P |
| 8 | MDN1 | Output | MIPI serial data, lane 1, differential N |
| 9 | DGND | Power | Digital GND |
| 10 | MDP2 | Output | MIPI serial data, lane 2, differential P |
| 11 | MDN2 | Output | MIPI serial data, lane 2, differential N |
| 12 | DGND | Power | Digital GND |
| 13 | NC | NC | |
| 14 | SHUTTER | Output | Control signal to drive external light sources |
| 15 | AGND | Power | Analog GND |
| 16 | TRIGGER | Input | Exposure synchronization input |
| 17 | SADDR | Input | Two-Wire Serial address select |
| 18 | DVDD 1.2V | Power | Digital power |
| 19 | XCLK | Input | External input clock |
| 20 | FLASH | Output | Control signal to drive external light sources |
| 21 | RESET | Input | Asynchronous reset (active LOW). All settings are restored to factory default. |
| 22 | AVDD 2.8V | Power | Analog power |
| 23 | NC | NC | |
| 24 | DGND | Power | Digital GND |



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Mechanical Diagram

