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MLD-R1 AI USB

Product User Guide



To ensure your safety and convenience,
please read the user guide.

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User Guide Information

This user guide explains how to install and operate the Mobilint MLD-R1 AI USB. If you cannot find the information you need in this guide, please contact Mobilint Technical Support.

Technical Inquiries	discuss.mobilint.com
	tech-support@mobilint.com

Product Overview

Portable On-Device AI Inference Environment in a Single USB

The MLD-R1 AI USB is an on-device AI USB stick that delivers 20 TOPS* of AI inference performance anywhere. It can be used with any device that supports a standard USB 3.1 Gen1 Type-C port, such as laptops, industrial PCs, and embedded hosts.

Built on REGULUS, Mobilint's edge AI SoC, it supports Windows and Linux operating systems and runs on x86 and ARM hosts.

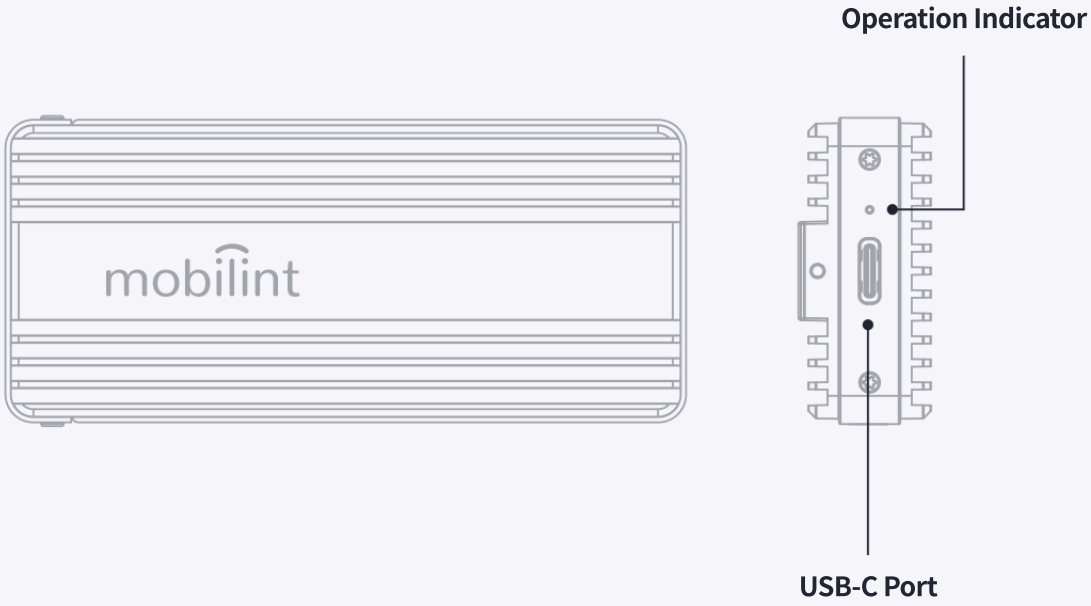
* TOPS based on INT4

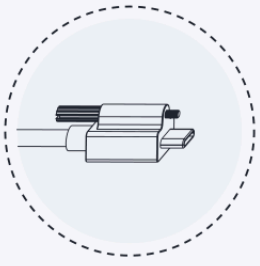
Detailed Specifications

Product Name	MLD-R1 AI USB
Model Name	MLD-R1
NPU	REGULUS AI SoC
Performance	20 TOPS* (INT4)
CPU	Quad-core ARM Cortex-A53, up to 1.2 GHz
TDP	3.5–4 W (Typical)
Memory Type	LPDDR4X
Memory Capacity	8 GB (2 GB / 4 GB option)
Memory Speed	4,266 MT/s
Supported OS	Windows, Linux
Supported Frameworks	Keras, TensorFlow, TensorFlowLite, PyTorch, ONNX
LED Indicators	1 (Power LED)
Host Architectures	x86, ARM
Ingress Protection	IP65 (TBD)
Data Interface	USB 3.1 Gen1
Dimensions (mm)	90 × 40 × 16
Weight (g)	88

* TOPS based on INT4

Component Names





USB-C Cable

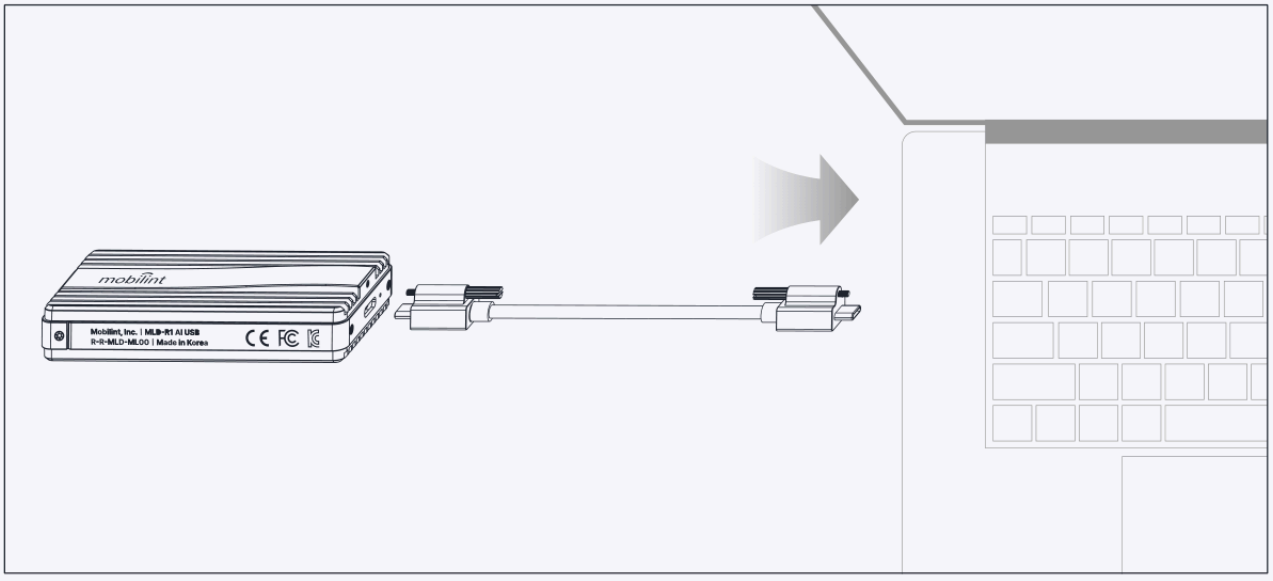
A different cable may prevent the product from being recognized correctly.

System Requirements

The features supported by this product may be expanded or reduced depending on the installed software version.

- Windows 10/11
- Ubuntu 20.04 or later
- Other Linux distributions supported upon consultation

Installation Instructions



1 Connect the product to your computer's USB-C port using the included cable.

2 After connecting, verify that the PC recognizes the device and that the LED operation indicator illuminates.

3 Install the driver and software.

Visit docs.mobilint.com in your browser and follow the on-screen instructions to download and install the required driver and software.

4 Verify installation and normal operation.

Once installation is complete, use the provided guide or test program to confirm that the device operates normally.

⚠ Use the included cable. A different cable may prevent the product from being recognized correctly.

⚠ Disconnecting the product while it is running a task, such as AI model inference, may cause errors, data loss, or device malfunction. Disconnect the device only after all tasks have completely ended.

Mobilint Software

Mobilint SDK qb is provided through the official support channel, where guidance on how to use the software is also available. For inquiries, you can receive answers through the Mobilint technical support channel (discuss.mobilint.com).

Technical Inquiries	discuss.mobilint.com
	tech-support@mobilint.com

Installation Precautions

- The installation images above are for reference only. The actual installation method may vary depending on your environment.
- Install the device in a well-ventilated location, away from direct sunlight and hot, humid environments.
- Do not cover the device as the product dissipates heat across its entire body. A rise in internal temperature may cause malfunction or failure.
- Disconnecting the product while it is running a task, such as AI model inference, may cause errors, data loss, or device malfunction. Disconnect the device only after all tasks have completely ended.
- Use the included cable. A different cable may prevent the product from being recognized correctly.

Operating Precautions

- To ensure smooth operation, install the latest driver and SDK version provided by the manufacturer.
- When connecting or disconnecting the product, hold the connector straight and do not apply excessive force.
- Do not connect or disconnect the device while the system is powered on. Always shut down the system first to ensure safe handling.
- The product surface may become hot during prolonged high-load use. Handle with care.
- Operating the product in high humidity or poorly ventilated environments may shorten its lifespan.
- Do not handle the product with wet hands, as this may cause electric shock.
- The product is water-resistant but not fully waterproof. Never submerge it in water, and avoid high-pressure water streams, which may allow water to seep inside. If the product comes into contact with liquids other than clean water (such as beverages, alcohol, seawater, or chemicals), disconnect the power immediately, wipe it with a dry cloth, and use it only after it has dried completely.
- Do not drop the product or subject it to strong impact.
- Do not disassemble or modify the product. Unauthorized modification may cause product damage, electric shock, or other unforeseen hazards.

Certification Status

	**KC (South Korea)** Verifies compliance with electromagnetic compatibility (EMC) and product standards.
	**CE (European Union)** Verifies compliance with EU safety, health, environmental, and consumer protection standards.
	**FCC (United States)** Verifies compliance with electromagnetic compatibility (EMC) and product standards.
	**VCCI (Japan)** Verifies compliance with electromagnetic interference (EMI) and usage regulations.
	**BSMI (Taiwan)** Verifies compliance with electromagnetic compatibility (EMC) and product safety regulations.

For details on certifications and standards, please contact the Mobilint technical support channel (discuss.mobilint.com).

Mobilint Technical Inquiries

- discuss.mobilint.com
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This user guide is subject to change without prior notice due to product improvements or version updates.

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