



Quick start guide :

1. Product specification 產品規格

Model name 產品型號	KP52B130A-D1001
Processor 處理器	ARM Cortex-M4@200MHz for system control ARM Cortex-M4@250MHz as AI co-processor
NPU 神經網路處理器	Maximum Frequency @300 MHz Peak throughput of 8-bit mode 345GOPS, 576MAC/cycle
Flash 快閃記憶體	32MB SPI NOR Flash
Memory 動態隨機存取記憶體	64MB
Peripheral Interface 週邊硬體介面	USB 2.0 type A
Supported AI framework 支持的網路框架	ONNX/Caffe/Keras/Pytorch/TensorFlow
Dimension 尺寸	55x20.5x10 mm
Weight 重量	18g
Working temperature 工作溫度	0 °C to 45°C
Rated voltage 額定電壓	5V~150mA

2. Getting start 如何開始

2.1. VMware Software Installation on host side

2.2. Kneron Software in Virtual Machine

2.3. Import .ovf File in VMware Workstation

2.4. Build Host Lib

2.5. Run Examples of Host Lib

3. More resource 更多資源

Please visit <http://www.kneron.com/forum/>

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4. Cautions and warnings 注意事項與警語

4.1 Safety Precautions

- All cautions and warnings on the device should be noted.
- Make sure the power source matches the power rating of the device.
- Position the power cord so that people cannot step on it. Do not place anything over the power cord.
- Always completely disconnect the power before working on the system's hardware.
- No connections should be made when the system is powered as a sudden rush of power may damage sensitive electronic components.
- If the device is not to be used for a long time, disconnect it from the power supply to avoid damage by transient over-voltage.
- Always disconnect this device from any power supply before cleaning.
- While cleaning, use a damp cloth instead of liquid or spray detergents.
- Make sure the device is installed near a power outlet and is easily accessible.
- Keep this device away from humidity.



- k. Place the device on a solid surface during installation to prevent falls.
- l. Do not cover the openings on the device to ensure optimal heat dissipation.
- m. Watch out for high temperatures when the system is running.
- n. Do not touch the heat sink or heat spreader when the system is running.
- o. Never pour any liquid into the openings. This could cause fire or electric shock.
- p. As most electronic components are sensitive to static electrical charge, be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and contain all electronic components in any static-shielded containers.
- q. If any of the following situations arises, please contact our service personnel:
 - I. Damaged power cord or plug
 - II. Liquid intrusion to the device
 - III. Exposure to moisture
 - IV. Device is not working as expected or in a manner as described in this manual
 - V. The device is dropped or damaged
 - VI. Any obvious signs of damage displayed on the device
- r. Do not leave this device in an uncontrolled environment with temperatures beyond the device's permitted storage temperatures (see chapter 1) to prevent damage.
- s. Do NOT disassemble the motherboard so as not to damage the system or void your warranty.
- t. If the thermal pad had been damaged, please contact Kneron's salesperson to purchase a new one. Do NOT use those of other brands.
- u. Repeatedly assemble and disassemble the system may cause damages to the exterior paint and surface and screw holes.

4.2 IMPORTANT SAFEGUARD



All lead-free products offered by the company comply with the requirements of the European law on the Restriction of Hazardous Substances (RoHS) directive, which means our manufacture processes and products are strictly "lead-free" and without the hazardous substances cited in the directive.



The crossed-out wheeled bin mark symbolizes that within the European Union the product must be collected separately at the product end-of-life. This applies to your product and any peripherals marked with this symbol. Do not dispose of these products as unsorted municipal waste. Contact your local dealer for procedures for recycling this equipment.



This apparatus is manufactured to comply with the radio interference requirements.

Disclaimer

We reserve the right to revise or remove any content in this manual at any time. We do not warrant or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of this manual. The content of this manual is subject to change without notice.

4.3 US local contact information 美國當地聯絡資訊

公司名稱(Company): Kneron, Inc

公司地址(Address): 10052 Mesa Ridge Court, Suite 101, San Diego, CA 92121

5. Contracted manufacture 委製廠商

公司名稱(Company): 訊舟科技股份有限公司(Edimax Technology Co., Ltd.)

公司地址(Address): 台北市內湖區新湖一路 278 號(No. 278, Xinhu 1st Rd., Neihu Dist., Taipei City, Taiwan)



公司電話(Tel):(+886)2-7739-6888

5.1 Certification obligor 報驗義務人:

耐能智慧股份有限公司 Kneron (Taiwan) Co., Ltd.

台北市內湖區南京東路 6 段 386 號 12 樓之 1 (12F-1., No. 386, Sec. 6, Nanjing E. Rd., Neihu Dist., Taipei City, Taiwan)

5.2 Made in China 原產地:中國

5.3 符合 RoHS 指令聲明 (Declaration of RoHS Compliance)

以下的產品符合 RoHS 和 PPW 指令 (List of Kneron product conform to RoHS & PPW)

型號 (Device): KP52B130A-D1001

電子電機類的材料及產品,依規定符合以下 RoHS 指令(Directive 2011/65/EU Restriction of Hazardous Substances 及附錄二 Directive (EU) 2015/863) 的要求:

The electrical material conforms to the restricted use of hazardous substances on electrical equipments required by RoHS (Directive 2011/65/EU Restriction of Hazardous Substances and Annex II (EU) 2015/863) is as following:

物質 Substance	鉛 Pb	鎘 Cd	汞 Hg	六價鉻 Cr ⁶⁺	多溴聯苯 PBBs	多溴二苯醚 PBDEs
	Lead	Cadmium	Mercury	Hexavalent Chromium	Polybrominated Biphenyls	Polybrominated Diphenyl Ethers
最大值 Max. Content	1000 ppm	100 ppm	1000 ppm	1000 ppm	1000 ppm	1000 ppm

物質 Substance	鄰苯二甲酸二(2-乙基己基)酯 DEHP	鄰苯二甲酸丁酯苯甲酯 BBP	鄰苯二甲酸二丁酯 DBP	鄰苯二甲酸二異丁酯 DIBP
	Di(2-ethylhexyl) Phthalate	Butyl benzyl Phthalate	Dibutyl Phthalate	Diisobutyl Phthalate
最大值 Max. Content	1000 ppm	1000 ppm	1000 ppm	1000 ppm

The packing material conforms to the restricted use of hazardous substances required by PPW (Directive 94/62/EC Packaging and Packaging Waste) is as following:

物質 Substance	鉛 Pb	鎘 Cd	汞 Hg	六價鉻 Cr ⁶⁺
	Lead	Cadmium	Mercury	Hexavalent Chromium
總和最大值 Total Max. Content	100 ppm			