



- Edge Data Acquisition Product Series -

LX-ADCU1000 Series Product Specification

I、Product Description

The Jin Zhi Ling Xuan LX-ADCU1000 embedded intelligent all-in-one product is a core basic hardware product developed in response to the national requirement for independent control, using domestic chips to create a product with high industry recognition. It adopts an integrated business architecture, supporting high-performance streaming media services, national standard gateway services, comprehensive AI data perception services, and data automatic cleaning services. It possesses industry-leading AI data acquisition and automatic cleaning capabilities, used to achieve automatic perception, automatic cleaning, automatic marking, and automatic uploading of basic data in the factory area based on video AI, aiding in the automation and standardization of AI data collection in the factory area.

II、Product Features

- ◆ Embedded Design: High stability with embedded ARM architecture design.
- ◆ Strong Comprehensive Business Application Capability: Capable of providing high-performance streaming media services, national standard gateway services, comprehensive AI data perception services, and data automatic cleaning services.
- ◆ Simple System Management: Offers fine-grained management based on collection strategy configuration, collection task configuration, and single-board operation status.
- ◆ Diversified Modules: Including video mixed access, video efficient decoding, scene collection tags, data quality filtering, and data on-demand sharing;

III、Core Functions

The factory area data automatic collector performs multi-dimensional information collection of real data in various scenes of the factory area. A single fully configured device can support real-time data collection of up to 100 video channels, with the following built-in modules:

Please note: The product's appearance and color are subject to change. The actual product shall prevail.

- ① Video Access, obtaining real-time video streams from the factory area resource networking platform via GB28181 or RTSP, and managing point scene tagging according to scene definition.
- ② Efficient Decoding, enhancing decoding efficiency with chip hard decoding, supporting hard decoding of H.264, H.265 encoding formats, with a maximum of 16 1080P simultaneous decoding per device.
- ③ Collection Slicing, implementing scene image slicing processing according to configured sampling strategies such as time intervals or target triggering.
- ④ Data Cleaning, automatically performing preliminary cleaning and filtering for sample images that are static (repeated) or have poor image quality (such as stripes, large noise points, patterns, etc.), with cleaning and filtering strategies expandable as needed.
- ⑤ Classification Packaging, automatically packaging sample images by scene, supporting dynamic secret key encryption packaging.
- ⑥ Upload to Library, adopting a time-sharing upload strategy to upload data during idle times (e.g., after 10 pm, customizable), supporting redundancy mechanisms such as breakpoint resumption.

IV、Core Selling Points

Camera/video file access, automatic slicing, mixed slicing, image quality filtering, and idle-time uploading solve the tedious tasks traditionally requiring manual copying, slicing, screening, and filtering.

V、Product Specifications

- Product Model: LX-ADCU1000
- Main Control CPU: 8-core ARM A53@2.3GHz
- AI Computing Power: INT8 17.6 TOPS, FP32 2.2 TFLOPS
- Video/ Image Decoding:

Video Decoding Capability: H.264: 1080P @960fps; H.265: 1080P @960fps

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Video Decoding Resolution: 8192 * 8192 / 8K / 4K / 1080P / 720P / D1 / CIF

Video Encoding Capability: H.264: 1080P @50fps; H.265: 1080P @50fps

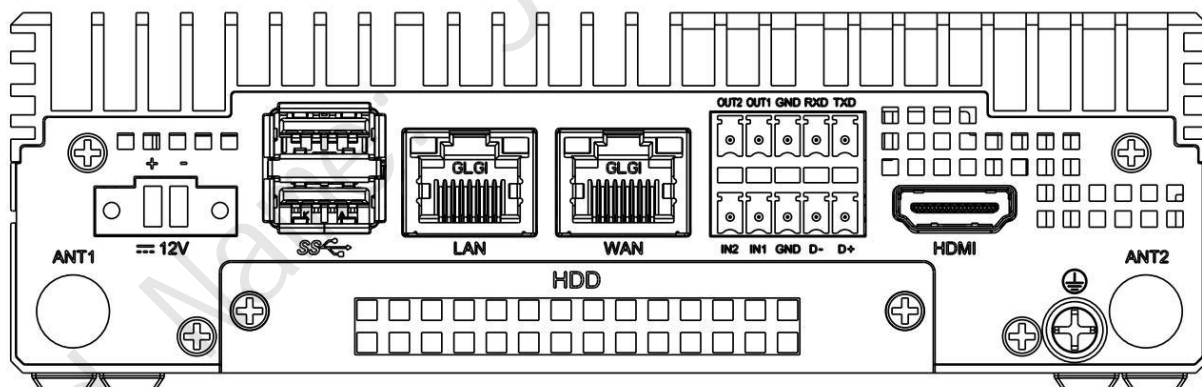
Video Encoding Resolution: 4K / 1080P / 720P / D1 / CIF


Image Decoding Capability (JPEG): 480 frames/second @1080P

Maximum Image Decoding Resolution: 32768 * 32768

- Memory eMMC: Standard Configuration 12GB
- Interfaces:
 - ✓ Network Interface: 10/100/1000Mbps adaptive *2
 - ✓ External Interfaces: USB *2 / HDMI / SATA / RS-232 / RS-485 / TF / LTE
 - ✓ Power Interface: DC 12V
 - ✓ Operating Temperature: Temperature Range -20℃ ~ +60℃
 - ✓ Power Consumption: Typical Value ~20W
 - ✓ Protection Level: IP Grade IP30
 - ✓ Structural Size: Length * Width * Height 188 * 148 * 44.5 (mm)

VI、Interface Description



Silk screen Printing	Name	Description
	Power interface	2-PIN (self-locking) Phoenix contact power interface, anti-reverse insertion, connected to 2-PIN terminal of the power supply equipped for the complete machine.

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	USB interface	USB3.0 Type-A, two USB interfaces in total.
LAN	LAN interface	Local area network gigabit interface
WAN	WAN interface	Wide area network gigabit interface
HDD	Hard disk bay	Can support the user to install 2.5-inch SATA hard disk at its own option.
HDMI	HDMI interface	Video output display, connected to display via HDMI high-definition cable.
	Grounding terminal	Used for complete machine grounding; connect equipment to the ground point of cabinet or workbench via protective ground wire; M3 screw used for grounding.
TXD	RS232 sending signal	RS232 sending signal, to be used in cooperation with RXD signal.
RXD	RS232 receiving signal	RS232 receiving signal, to be used in cooperation with TXD signal.
D+	RS485 positive pole	RS485 interface positive pole, to be used in cooperation with D- signal.
D-	RS485 negative pole	RS485 interface negative pole, to be used in cooperation with D+ signal.
IN1	I/O1 input	GPIO1 input, can be used as alert input.
OUT1	I/O1 output	GPIO1 output, can be used as alert output.
IN2	I/O2 input	GPIO2 input, can be used as alert input.
OUT2	I/O2 output	GPIO2 output, can be used as alert output.
GND	Grounding signal	Phoenix contact grounding signal
ANT1	Antenna interface 1	(Optional) SMA Female interface 1, can be connected with SMA rod antenna.
ANT2	Antenna interface 2	(Optional) SMA Female interface 2, can be connected with SMA rod antenna.
	<p>Note: Hard disk and wireless function are optional, not standard configuration for the product. HDMI interface has display output only when SE5 matched face algorithm application software is preinstalled. As to the equipment for which this version is not preinstalled, it can be supported only when the user develops the application by itself.</p>	

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