

# CDHX-AIN58

Rockchip RK3588 CPU, 8GB Ram, 128GB eMMC, 2 \* 10 Gigabit optical port, 3 \* Gigabit electrical port, 2 \* USB3.0, 1 \* TYPE-C, 1 \* HDMI, 2 \* AI, 4 \* COM, 1 \* console port, 4 \* DIO, 2 \* CAN, 1 \* Audio out, 1 \* Mini PCIe, 1 \* M.2 M-Key, WIFI5+BT4.2, DC 9-36V



## Overview

CDHX-AIN58 is a domestically produced fanless embedded machine equipped with a Rockchip RK3588 processor, 8GB of onboard memory, and 128GB of eMMC storage. HDMI, TYPE-C display, 10 Gigabit optical port, 3 \* Gigabit electrical port, 2 \* USB3.0, 1 \* TYPE-C, 1 \* console port, 2 \* AI, 4 \* COM with isolation (2 \* RS485, 2 \* RS232), 4 \* DIO (with isolation), 2 \* isolation CAN2.0, 1 \* M.2 2242 M-Key, 1 full height Mini PCIe, M.2, dual SIM card slot, support for 4/5G LTE, onboard WIFI5+BT4.2. DC 9-36V wide voltage power supply is suitable for network security, edge computing, logistics visual inspection, AGV, AMR, intelligent connected vehicle MEC and other industrial applications.

## Product characteristics

- Aluminum rectangular profile shell with fanless heat dissipation design
- Rockchip RK3588 CPU, 4-core Cortex-A76 and 4-core Cortex-A55, 2.4GHz main frequency
- Onboard 8GB memory
- GPU exclusive display 1 \* HDMI, 1 \* TYPE-C
- 5 \* LAN, 2 \* USB3.0, 1 \* console port, 4 \* COM, 4 \* DIO, 2 \* isolated CAN2.0, 2 \* AI, 1 \* Audio out
- Mini PCIe, M.2 dual SIM card slot, supporting 4/5G LTE
- On board Gigabit WiFi/Bluetooth 4.2
- 128GB eMMC onboard and 1 \* M.2 2242 M-Key dual storage



## Product specifications

CPU	Rockchip RK3588, 4-core Cortex-A76 and 4-core Cortex-A55, 2.4GHz main frequency
System Memory	On board memory 8GB LPDDR4
GPU and VPU	Mali-G610 GPU, supporting OpenGL ES3.2/OpenCL2.2/Vulkan1.1, embedded with high-performance 2D and 3D acceleration hardware, GPU with unique HDMI display resolution of 1920x1080@60fps ; VPU decoding: H.265/AVS2/VP9, 8bits/10bits, 8K@60fps ; H. 264/AV1, 8bits/10bits, 8K@30fps ; Multi channel decoder in parallel for less resolution (4K/1080p/720p, etc.) VPU code: H.265/H.264, 8K@30fps ; Multi channel encoder in parallel for less resolution (1080p/720p, etc.), Multi format Video Decoder.
NPU	Support 6.0T computing power, support INT4/INT8/INT16/FP16 operations
Display	HDMI, TYPE-C Display
Expansion	1 * Mini PCIe, M.2 dual SIM card slots, supporting 4, 5G LTE or other IO function modules On board Wifi5/BT4.2 wireless function
Audio Frequency	Realtek ES8388 audio chip, Audio out
	Muchuang RNP N400 provides RJ45 network interface with 2 1G optical ports, 2 gigabit electrical ports (with bypass), and 1 RTL8211F chip Supports 10Mbps/100Mbps/1000Mbps adaptation Network characteristics support RSS with a maximum of 256 queues Support packet offloading, IP/TCP and IP/UDP checksum offloading; Support TSO/GRO/TCO/RCO Supports packet filtering and MAC/VLAN/TCP based_ SYN, packet filtering for five tuples

Ethernet	<p>Supports packet redirection and supports MAC/VLAN/TCP based SYN, packet redirection for quintuples</p> <p>Support flow control mechanism and FC/PFC</p> <p>Support PTP, support IEEE1588v2, support data packet upload with timestamp</p> <p>Support for Virtual Ethernet Bridge (VEB)</p> <p>Supports VxLAN/NVGRE</p> <p>Supports PXE</p> <p>Supports sideband management</p> <p>Support QoS and control of data flow based on queue mechanism</p> <p>Support the maximum 9564 byte Jumbo frame, and capture capability of 100% of all frames (including Jumbo frame) from 64 to 9564 bytes RNP N400 DataSheet 5/26</p> <p>Supports VLAN and QinQ</p> <p>Supports IPV4/IPV6</p> <p>Supports 128 tuple lookups (SIP/DIP/SPORT/DPORT/PROTO), scalable</p> <p>IEEE standards 802.1P, 802.1Q, 802.2, 802.3ac, 802.3az, 802.3x, 802.3z, 802.3ad</p>
Storage	128G eMMC onboard, 1 * M.2 2242 M-key NVMe storage
I/O interface	<p>2 * SFP, 3 * RJ45 Gig-LAN (interface anti detachment design);</p> <p>2 * USB3.0 Type A, 1 * TYPE-C, 2xUSB2.0 is a built-in DuPont pin interface;</p> <p>4 * COM (2 * RS485 and 2 * RS232 with isolation, 1 * console port);</p> <p>2 * DI 9-36V, 2 * DO default NC (normally open) optional NO (normally closed) with isolation ;</p> <p>2 * 2.5KV optical isolation CAN (CAN Open2.0);</p> <p>1*Audio-out (1x3.5 phone jack) , 1*HDMI</p> <p>2 * AI 4-20mA current</p>
Pilot Lamp	1 * Power indicator light, integrated with power on/off and switch on/off, 2 * DI status indicator light, 2 * D0 status indicator light,
Switch	1*Power Button , 1*Remote
Power requirements	DC 9-36V, power consumption: TBD
Operating System	Android, Linux, Kirin, Ningsi, Tongxin
Structure	Aluminum magnesium alloy
Colour	Black
Installation method	Desktop installation, rail and wall mounting
Size	(W*D*H) : 147*134*65mm
Net Weight	TBD
Operation Temperature	-20~60°C , SSD, AIR FLOW
Storage Temperature	-40°C~85°C
Storage Humidity	10~95%@40°C , No condensation
Vibrate	5grms/5~500Hz/random/working state (SSD); 1 grms/5~500Hz/random/working state (HDD)
Impact	50g peak acceleration (lasting for 11ms) (SSD); 20g peak acceleration (lasting for 11ms) (HDD)
EMC /Certification	