

A10-3588 Specifications

Processor	
CPU	Rockchip RK3588
Cores	8 Cores, Quad Core ARM Cortex-A76 + Quad Core ARM Cortex-A55
Frequency	Cortex-A76 up to 2.4GHz, Cortex-A55 up to 1.8GHz
Graphics	ARM Mali-G610 MP4, up to 1GHz
Video Codec	8K@60fps H.265/VP9, 4K@60fps AV1 Decoding 8K@30fps H.264/H.265 Encoding
NPU	Build-in 6 TOPS
SPI Flash	32MB
MCU	STM32G031K6
Memory	
Technology[1]	64-bit LPDDR4X 2112 MHz
Capacity[2]	8GB/16GB
Storage[3]	
eMMC	32/64GB
SD Card	Molex Slot, Spec Version 2.x/3.x/4.x(SDSC/SDHC/SDXC), UHS-III
Display	
HDMI	Type-A Female, 8K@60fps HDMI2.1, Dynamic HDR, CEC, DSC 1.2a and HDCP 2.3
DP	USB Type-C Female, 8K@30fps
MIPI Display	x1 30-pin 0.5mm FPC Connector 4-lane MIPI-DSI Interface, Resolution up to 4K@60Hz
Touch Display	x1 40-pin 0.5mm FPC Connector 4-lane MIPI-DSI Interface, Resolution up to 4K@60Hz I2C and GPIO for Touch Panel
Multiple Displays[4]	4 (HDMI + DP + MIPI Display+ Touch Display)
Network	
LAN	x1 RJ45, 1.0 Gigabit Ethernet
Wireless Communication[5]	Expansion E-KEY M.2 Slot Wi-Fi 6 Support, IEEE 802.11 ax/ac/a/b/g/n
Audio	
Chipset	Everest ES8316, Low Power Audio Codec, Line-in, Line-out
Interface	x1 6-pin 1.27mm Header, Headphone Jack x1 2-pin 1.27mm Header, AMIC
Interfaces	
USB	x2 USB 3.1 Gen1, Type-A Female x1 USB 3.1 Gen1 + PD +DP, Type-C Female x2 USB2.0, 6-pin 1.27mm Header x1 USB 3.1 Gen1, 12-pin 1.27mm Header
LED	x2 LEDs, Power LED(Red) + System LED(White)
Buttons	x3 Buttons, Reset + Func + Power
Sensor	TDK ICM-42670-P, 6-axis Digital Accelerometer
I2C	x2 I2C, 4-pin 1.27mm Header + 6-pin 1.27mm Header(x2 Normal GPIO)

SPI	x1 SPI, 6-pin 1.27mm Header
UART	x2 UART, 4-pin 1.27mm Header x1 Debug UART, 3-pin 1.27mm Header
ADC/PWM	x2 ADC + x2 PWM, 4-pin 1.27mm Header
KEY	x1 PWR KEY, 4-pin 1.27mm Header
FAN	x1 4-pin 1.27mm Header
CAN	x1 2-pin 1.27mm Header
Expansion	
NAMTSO Link[6]	x1 4-lane + x2 1-lane PCIe x1 USB 3.1 + x1 USB 2.0 x1 HDMI + x1 eDP x1 I2C + x2 UART + x1 Debug UART
M.2 Slot	x1 E-KEY M.2 Slot, Wi-Fi 6 Module Support x1 1-lane PCIe + x1 USB 2.0 + x1 UART
Power	
USB-C PD Input	9V ~ 20V
DC Power Input	12V ~ 24V, 4-pin 2.54mm Header
NAMTSO Link	Power Input: 12V ~ 24V Power Output: 12V ~ 24V
Priority[7]	NAMTSO Link > DC Power Input > USB-C PD Input
Environment	
Operational Temperature	-20°C ~ 80°C, 95% RH Non-Condensing
Non-Operational Temperature	-40°C ~ 85°C, 95% RH Non-Condensing
Physical	
Dimension	145.8mm x 101.2mm x 13.3mm
Weight	86.2g
Mounting Holes	x4 Size M2 + x4 Size M3
Operating System	
Linux	Ubuntu 22.04 / Yocto
Android	Android 13
Certification	CE, FCC, UCKA, TELEC, RoHS

[1] RK3588 compatible JEDEC standards LPDDR4/LPDDR4X/LPDDR5.

[2] RK3588 has up to 32GB of addressable space.

[3] SSD and SATA can be accessed through NAMTSO Link.

[4] HDMI and eDP is not available through NAMTSO Link.

[5] The officially supported Wi-Fi module is Ampak AP6275P(2T2R).

[6] NAMTSO Link: NAMTSO self-developed high speed connector.

[7] Power supply switching after power-on will cause the A10-3588 to reboot.