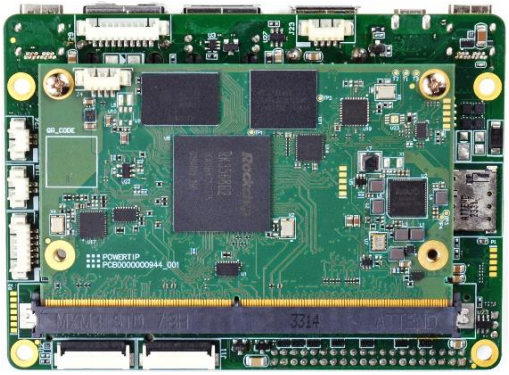
P05D00108-01

Rockchip RK3568

Front View



Features

- Compact SMARC + Pico-ITX carrier for space-limited designs
- Multi-display: HDMI 2.0, eDP, LVDS/MIPI DSI
- MIPI CSI 4-lane camera input for edge AI vision
- Ready-to-use I/O: USB, Ethernet, UART, M.2
- Reference carrier for evaluation and rapid prototyping
- Rockchip RK3568 with 1 TOPS NPU for AIoT applications

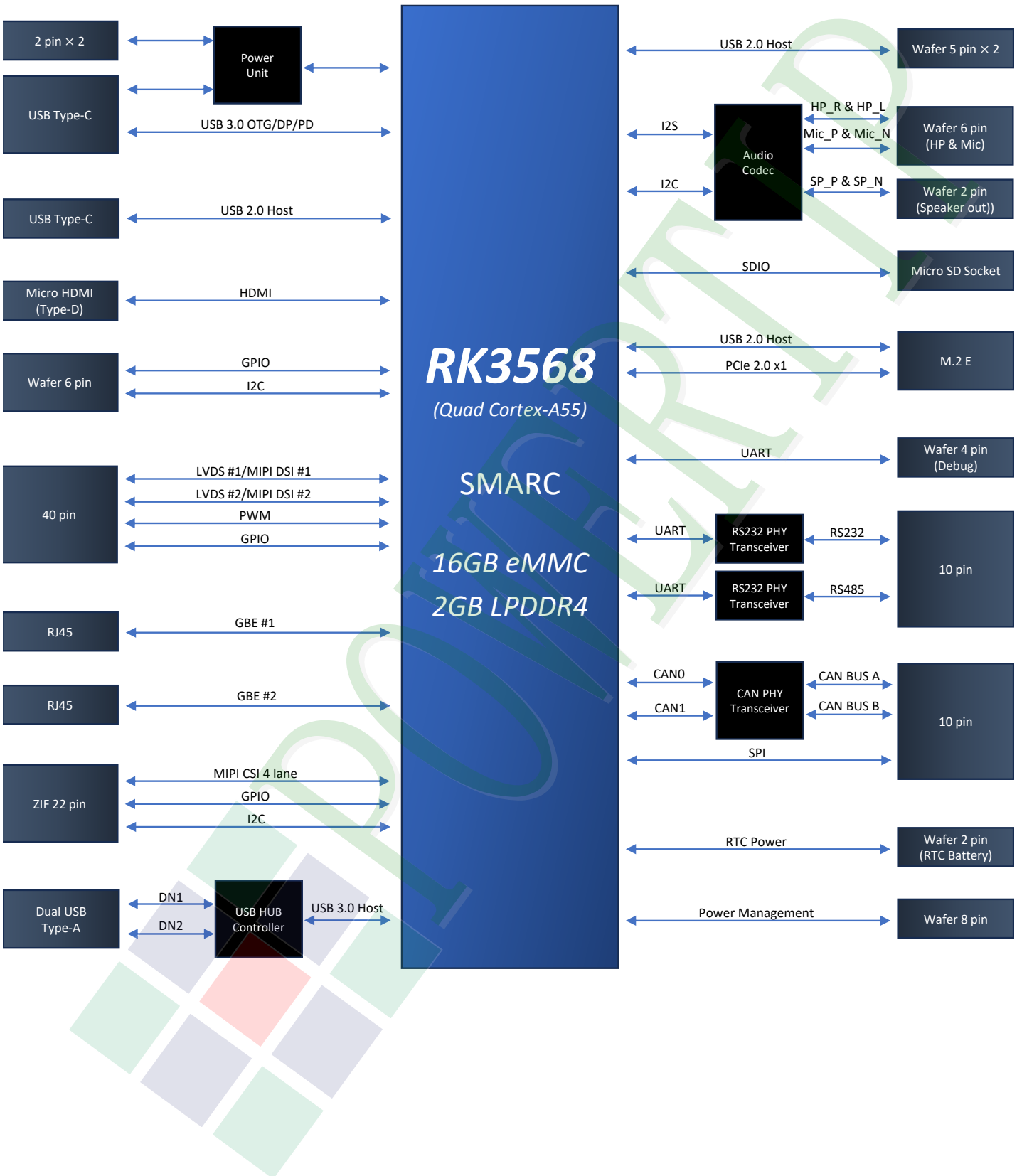
Specifications

Hardware		
CPU	RK3568B2	Quad-Core Arm Cortex-A55
GPU	Mali-G52-2EE	OpenGL ES 1.1/2.0/3.2, OpenCL 2.0, Vulkan 1.1
NPU	RKNN	Accelerator with processing performance up to 1 TOPS
Memory	Onboard RAM	2GB LPDDR4 SDRAM
	Storage (Default Boot Device)	16GB eMMC Flash (Optional: 32GB/64GB)
I/O	Display	2 × LVDS (single-channel) or MIPI DSI (4-lane), [shared pins] 1 × HDMI 2.0, up to 4096×2160@60Hz 1 × eDP 1.3, up to 2560×1600@60Hz
	Camera	1 × MIPI CSI (4-lane)
	USB	1 × USB 3.0 OTG (Type-C [J2], with DP and PD) 2 × USB 3.0 Host (Type-A [J13]) 3 × USB 2.0 Host (1 × Type-C [J3], 2 × wafer [J14 J16])
	Ethernet	2 × 10/100/1000 Mbps
	Audio	1 × Headphone output 1 × Microphone input 1 × Speaker output
	Serial Port	3 × UART (1 × debug console, 1 × RS232, 1 × RS485)
	I^2C	1 × I^2C
	PWM	2 × PWM

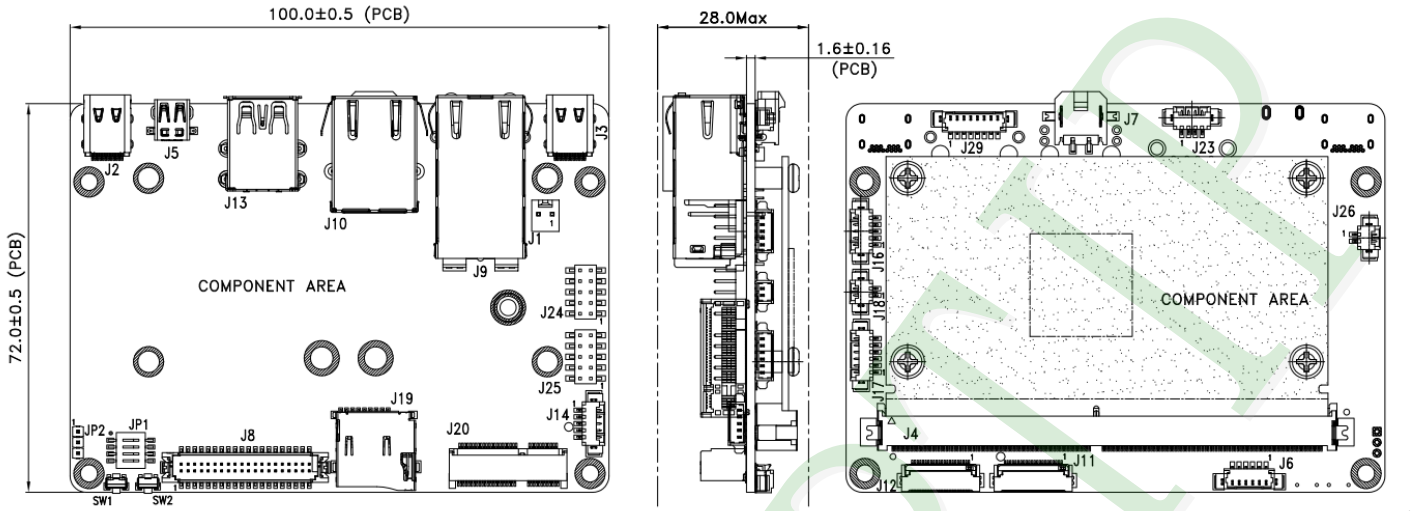
Hardware		
I/O	CAN	2 × CAN
	Other	GPIOs
Expansion	M.2 Key E	USB 2.0, PCIe 2.0 x1 (reserved: I²S, UART, I²C)
	SD Socket	1 × microSD card socket
Power	Input Voltage	9 ~ 24V DC
Environment	Operating Temp.	0 ~ 70 °C
	Storage Temp.	-30 ~ 85 °C
Mechanical	Form Factor	SMARC v2.2 Module + Pico Carrier Board
	SMARC Module	82 × 50 mm
	Pico Carrier Board	100 × 72 mm

Software		
OS	Default	Yocto 4.X
	Optional	Buildroot, Debian, Android

Block Diagram



Dimensions



POWERTIP