

Shenzhen Genstar Technology Co., Ltd.

Model: Z2 Series

specification



Photo Statement: The photo was taken of products from a specific batch manufactured by our company. Due to ongoing maintenance, the actual shipped products may differ from those shown in the photo.

version number	date of issue
V1.3	2026/1/20

Thank you for choosing our products. Please read this manual carefully before use.

Product Usage Precautions

- **This equipment must be installed, disassembled, and maintained by technically trained personnel.**
- **Before powering on, carefully verify that the electrical parameters of the power supply equipment match those specified on the rear casing label of this product; otherwise, do not power on.**
- **Ensure that products with a supply voltage higher than the safe voltage are installed or placed in locations inaccessible to children or where adequate protective measures are in place.**
- **Unplug the power cord and store it in a safe, designated location during thunderstorms or lightning, when the interior is unoccupied, or after prolonged disuse.**
- **Check and ensure that the ground wire of the AC power cord is properly connected, while protecting the power cord from physical or mechanical damage.**
- **During cleaning, ensure the entire unit is powered off and unplug the power socket.**
- **During installation, avoid harsh conditions such as damp environments, direct sunlight, high-temperature sources, heavy cooking fumes, or strong wind and sand.**
- **Do not place the antenna inside a metal enclosure or similar shielding equipment to prevent network disconnections or instability.**
- **Do not place heavy objects on the device to avoid excessive pressure, which may damage the equipment and prevent it from functioning properly.**

- **Avoid using in vehicles or environments with significant vibrations to prevent poor interface contact.**
- **Private disassembly and repair without permission is strictly prohibited.**

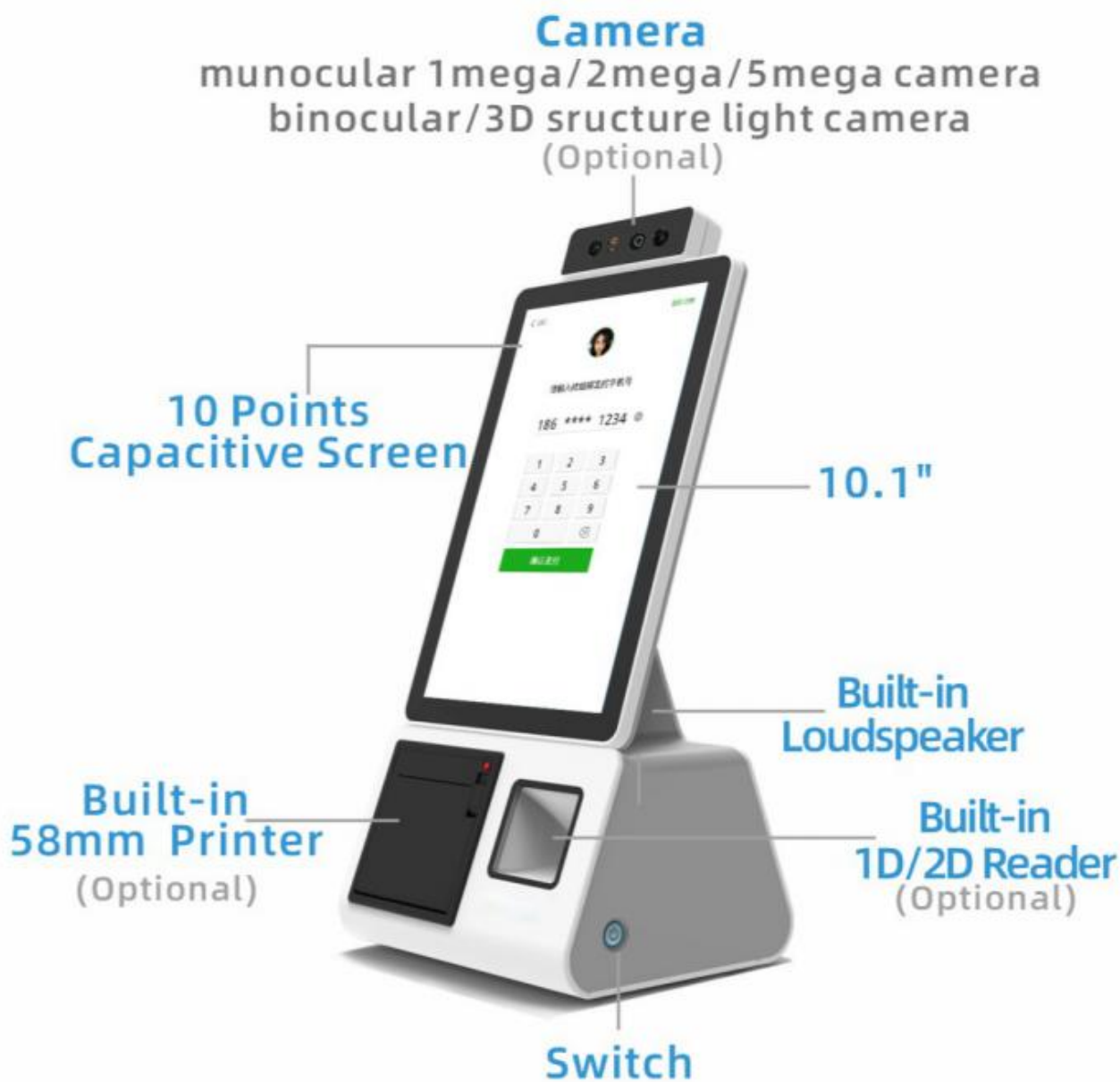
Product Presentation

GENSTAR Z2 is a high-performance smart self-service cash register terminal specifically designed for small retail scenarios such as supermarkets and convenience stores. It is deeply adapted to unattended operation needs, integrating core capabilities such as multiple payment methods, intelligent verification, receipt printing, and advertising operations. It supports flexible deployment in various forms, including single/dual screens, portrait/landscape, providing a stable, efficient, and scalable integrated terminal solution for the digital upgrade of stores.

The product is equipped with a mature and stable Android 11 operating system (with Android 12/13/14 versions available as options). It comes standard with an RK3568 quad-core 64-bit Cortex-A55 main control chip, with a maximum clock speed of 2.0GHz, paired with 2G DDR4 memory and 32G ROM storage (expandable to 4G/8G memory and 64G storage), capable of meeting the smooth operation requirements for 7×24 hours unattended operation. It features a G+G ten-point capacitive touch screen, providing sensitive operation and rapid response, suitable for high-frequency self-service scenarios. The built-in speaker supports voice broadcast, optimizing the user interaction experience.

The terminal fully supports face recognition payment, one-dimensional/two-dimensional scanning payment, and seamlessly adapts to mainstream payment methods such as WeChat, providing high cashier efficiency and convenient experience. It can be equipped with functions such as 58MM thermal printer, binocular/3D structured light camera, 4G communication module, IC/ID card reader, ID card recognition, temperature sensor, etc., according to needs, expanding multi-scenario application capabilities such as government verification and self-service. It offers single-screen and dual-screen versions of 10.1 inches/11.6 inches, adapting to different store layouts. It comes standard with rich interfaces such as DC-IN, MINI HDMI, USB-A, RJ45 network port, RJ11 serial port, etc., supporting independent cashiering and deep system integration, seamlessly adapting to various retail management systems and reducing deployment costs. The product supports customized development, provides comprehensive technical support and after-sales guarantee, and meets the full-process implementation needs of projects.





◆ Product Display



- Built-in 58mm Printer
- Built-in 1D/2D Scanner



Back side



- Landscape screen Dual screen
- Built-in 58MMprinter
 - Built-in 1D/2D scanner

Product Core Parameters

Android system	RK3568	RK3576	RK3588
CPU	Rockchip RK3568 quad-core 64-bit processor with Cortex-A55 architecture, featuring a maximum clock speed of 2.0GHz	Rockchip RK3576 quad-core Cortex-A72 + quad-core Cortex-A53, with a maximum frequency of 2.2GHz	The Rockchip RK3588S is an octa-core 64-bit processor with a maximum clock speed of 2.4GHz, featuring a quad-core Cortex-A76 (large core) and quad-core Cortex-A55 (small core) architecture.
GPU	ARM G52 2EE Supports OpenGL ES 1.1/2.0/3.2, OpenCL 2.0, and Vulkan 1.1 Embedded high-performance 2D acceleration hardware	ARM G52 MC3 Supports OpenGL ES 1.1/2.0/3.2, OpenCL 2.0, and Vulkan 1.1. Embedded high-performance 2D acceleration hardware	ARM G610 GPU MC4 quad-core GPU Supports OpenGL ES3.2, OpenVG1.1, and OpenCL2.2, with 450 GFLOPS Embedded high-performance 2D acceleration hardware
NPU	Equipped with a built-in neural network processor (NPU) delivering 0.8TOPS@INT8 performance, it supports AI development tools including Caffe/Mxnet/TensorFlow/TF Lite/ONNX/Darknet for model deployment. Features rapid model conversion capabilities.	Equipped with a built-in neural network processor (NPU) delivering 6.0TOPS@INT8 performance, it supports models including Caffe, Mxnet, TensorFlow, PyTorch, TF Lite, ONNX, and Darknet, providing comprehensive AI development tools with rapid model conversion capabilities.	Equipped with a built-in neural network processor (NPU) for powerful AI computing: Supports IN4/IN8/INT16/FP16 operations with up to 6.0 TOPS performance, enabling direct loading of models like Caffe/Mxnet/TensorFlow/TF Lite/ONNX/Darknet. Provides AI development tools including rapid model conversion capabilities.
Operating System	Android 11	Android 14	Android 12
RAM	LPDDR4 2GB (4G/8G optional)	LPDDR4 4GB (8G/16G optional)	LPDDR4 4GB (8G/16G/32G optional)
ROM	eMMC 16GB (available in 32G, 64G, 128G, or 256G options)	eMMC 32GB (available in 64G, 128G, 256G, or 512G options)	eMMC 32GB (64G/128G/256G optional) TF Card expansion (optional)
Ethernet	Supports Ethernet 10/100	Supports Ethernet 10/100/1000 speeds	Supports Ethernet 10/100/1000 speeds

WiFi	Supports 2.4GHz and Wi-Fi 802.11b/g/n/ac protocols. (Optional 5GHz dual-band WiFi)	Supports 2.4GHz and WiFi6 802.11b/g/n/ax protocols (5GHz dual-band WiFi optional)	Supports 2.4G WiFi and Wi-Fi 802.11b/g/n protocols. (Optional 5GHz dual-band WiFi)
Bluetooth	Supports Bluetooth function, V2.1+EDR (optional 3.0/3.0+HS/4.1/BLE)	Supports Bluetooth function, V2.1+EDR (optional 3.0/3.0+HS/4.1/BLE)	Supports Bluetooth function, V2.1+EDR (optional 3.0/3.0+HS/4.1/BLE)

Screen			remarks
LCD type	TFT	TFT	
LCD size	10.1 inch	11.6 inches	
Active Area(W×H)	135.36 x 216.58 mm	256.125 x 144 mm	
Number of Dots	800*RGB*1280	1366*768	
Brightness	300 Cd/m ²	220 Cd/m ²	
Viewing Angle(H) θ 3	85 degrees	45 degrees	
Viewing Angle(H) θ 9	85 degrees	45 degrees	
Viewing Angle(V) θ 12	85 degrees	20 degrees	
Viewing Angle(V) θ 6	85 degrees	40 degrees	
Contrast Ratio	800~1000	500	
Response Time	35 ms	12 ms	
Colour Gamut	NTSC 60%(Typ)	45%	

Touchscreen/Glass		remarks
structure	G+G	
Tempered glass thickness	1.1 mm	
Sensor thickness	0.7 mm	
Cover plate color	black	
surface hardness	>6H	
Number of contacts	10	
Touch area	Φ≥9	
input mode	Finger or conductive pen	

Total light transmittance	≥86%	
fog level	≤5%	

Printer		remarks
Print mode	Thermal-line dot method	
Print Speed	MAX:90mm/s	
Resolution	203dpi	
Effective print area	48mm	
Paper type	Thermal paper rol	
Paper width	57.5±0.5mm	
Max Paper Rolldiameter	max: 40mm	
Paper Thickness	0.055-0.09mm	
Print Life	50 KM	
Cutter	not have	
Character Set	ASCII code, GBK, BIG5, etc.	

Scanner		remarks
imaging sensor	CMOS	
resolution ratio	300,000 pixels, 640*480	
Recognition accuracy	≥10 mil	
recognition distance	0~100 mm	
readable encoding system	Two-dimensional formats: PDF417, QR Code, Data Matrix, Hanxin Code, GM Code, Aztec, MicroQR, MicroPDF417, etc.	
	One-dimensional: Code 128, EAN-13, EAN-8, Code39, GS1, UPC-A, UPC-C, Code11, Code93, Codebar, China Post, etc.	

Camera		remarks
optical size	1/2.7-inch CMOS sensor	
sensor resolution	1920*1080	

Pixel size per unit	3.0um *3.0um	
Maximum frame rate	1920*1080/30fps	
Signal-to-Noise Ratio (SNR)	41db	
dynamic range	85db	
Field of View (FOV)	H: 62 degrees, V: 38 degrees	
iris diaphragm	F2.4	
focal distance	4.4 mm	
object distance	60 cm	
distortion	TV Distortion<1.0%	
lens structure	4E	
Video compression format	MJPG/YUY	

4G module		备注
Network type	LTE (FDD) : LTE FDD B1/B3/B5/B8 LTE (TDD) : LTE TDD B38/B39/B40/B41 WCDMA: BAND 1/BAND 5/BAND 8	
Application processor	Single-core ARM Cortex-A7 processor, clocked at 1.2GHZ, with 256kB L2 cache	
Transmit power	LTE: Class 3 (23dBm±2dB) UMTS: Class 3 (24dBm+1/-3dB)	
Data services	WCDMA: UMTS R99: DL 384 kbps/UL 384 kbps DC-HSPA+: DL 42 Mbps/UL 5.76 Mbps LTE: LTE FDD:DL 150Mbps/UL 50Mbps@20M BW cat4 LTE TDD:DL 130Mbps/UL 35Mbps@20M BW cat4 LTE FDD:DL 10Mbps/UL 5Mbps@20M BW cat1 LTE TDD:DL 10Mbps/UL 5Mbps@20M BW cat1	
AT command	Supports standard AT command set (Hayes 3GPP TS 27.007 and 27.005)	

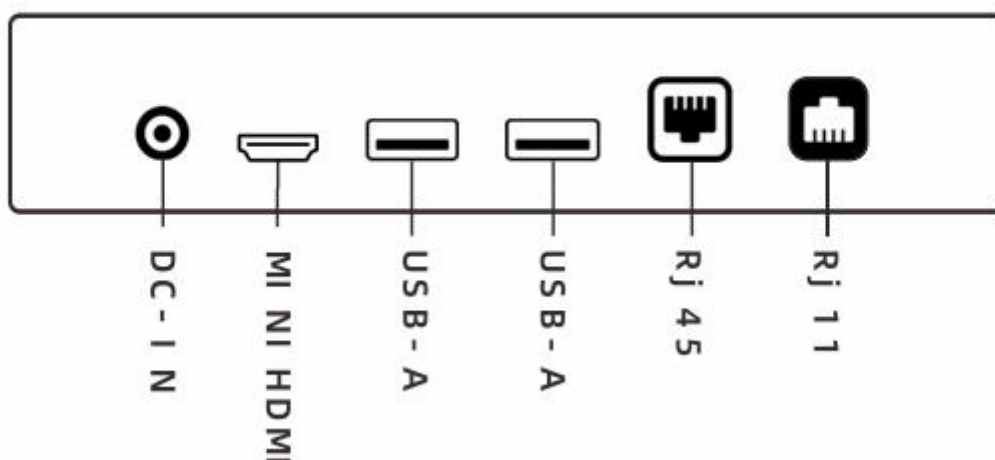
	Supports Text and PDU modes	
SMS service	Support point-to-point MO and MT SMS storage: USIM card/ME (default)	

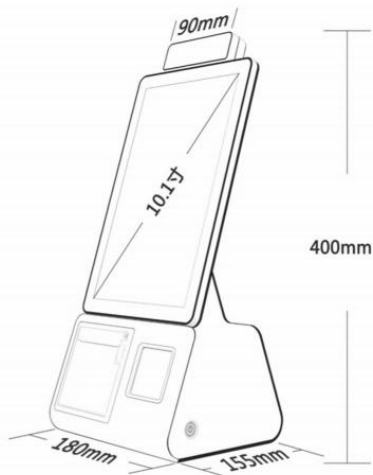
Loudspeaker		remarks
impedance	4Ω±15%	
power rating	3W	
maximum power	4W	

Product operating environment parameters	
Storage temperature and humidity	-20 ~ 70°C, 10 ~ 85 %RH
Working temperature and humidity	-20 ~ 50°C, 10 ~ 80 %RH
Electrostatic Discharge Immunity (ESD)	Contact voltage: ±6 kV; air voltage: ±8 kV
Power Input	DC12V

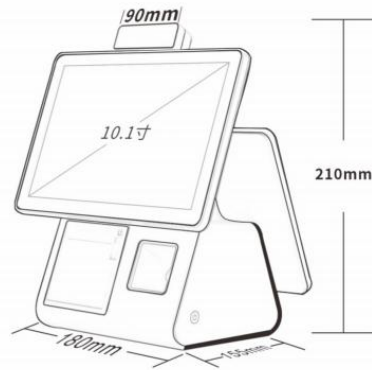
Product appearance and interfaces:

AndroidInterface





Z2 portrait screen 10.1" 18*15.5*40CM



Z2 landscape screen 10.1" 18*15.5*21CM