

Compact Self-Checkout Terminal

Product Manual





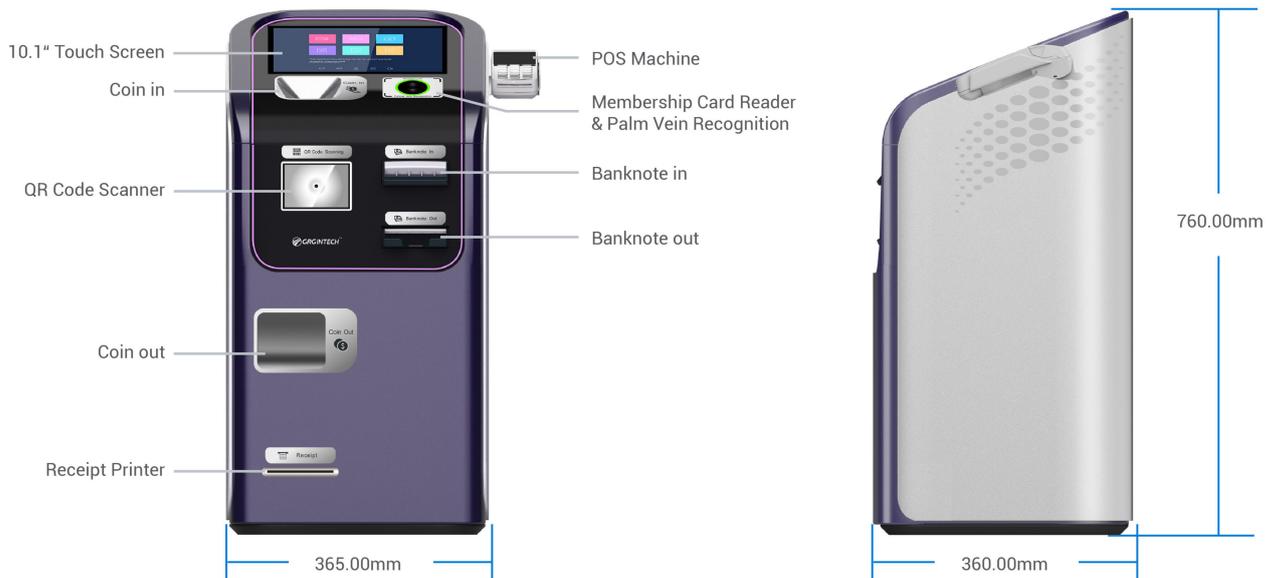
1. Product Overview

The GRGintech Compact Self-Checkout Terminal is designed for retail environments such as supermarkets, convenience stores, unmanned retail, and community outlets. It integrates product scanning, card and digital payments, biometric authentication (optional), cash acceptance and dispensing, and receipt printing - providing a complete and efficient self-checkout solution.

Product Advantages:

- Accelerates checkout and reduces waiting time
- Supports multiple payment methods
- High modularity and flexible configurations
- Compact footprint for small retail spaces
- User-friendly interface with guided workflow
- Stable performance suitable for high-traffic environments

** Customization acceptable in appearance*





2. Key Features

2.1 Functional Features

- **10.1-inch Touch Display**
Responsive industrial-grade display with intuitive user interaction.
- **Multiple Payment Methods**
Cash, card payment, QR code scanning, ticket card, and optional biometric verification.
- **Modular Hardware Architecture**
All functional modules can be configured, replaced, or upgraded based on project requirements.
- **Fast & Accurate Scanning**
Supports 1D/2D barcodes and mobile payment codes.
- **Automatic Cash Recycling**
Coin and banknote acceptance and dispensing.
- **High Reliability**
Long MTBF, low maintenance requirements.
- **Real-Time Data Communication**
Network-based reporting and parameter synchronization.

3. System Architecture

3.1 Hardware Architecture

- Industrial control tablet
- Payment modules (card reader, QR scanner, biometric module)
- Cash modules (coin + banknote recycling units)



- Receipt printing unit
- Power supply module
- Audio and amplifier system
- Main chassis and structured wiring

3.2 Software Architecture

- Android operating system
- Payment processing SDK
- Device driver layer
- Terminal management application
- Remote monitoring and data reporting module

4. Configurable Module List

All modules listed below are configurable and may vary based on customer requirements.

No.	Module	Component	Unit	Quantity
1	Industrial Tablet	Control board, OS, touch display	pcs	Optional
2	Card Reader	Card reader module	pcs	Optional
3	Palm recognition module	Biometric recognition module	pcs	Optional
4	Coin Module	Coin recycling unit	pcs	Optional
5	Banknote Module	Banknote recycling unit	pcs	Optional
6	QR Code Scanner	Scanner module	pcs	Optional
7	Receipt Printer	Thermal printer	pcs	Optional
8	Amplifier & Speaker	Speaker	pcs	Optional
9	Power Supply	Power supply	pcs	Optional
10	Cabinet	Structure and wiring	set	Standard

5. Technical Specifications (Configurable)

Note: The specifications below are standard reference values. All configurations can be customized according to customer requirements.

No.	Category	Item	Specification
1	Basic Characteristics	Dimensions	365 mm × 365 mm × 765 mm (W×D×H)

No.	Category	Item	Specification
2		Weight	≤100 kg
3		Enclosure Material	2.0 mm stainless-steel chassis
4	Electrical Characteristics	Power Input	220V +10% / -15%, 50Hz ±4%
5		Power Consumption	≤150 W
6		Standby Power	~50 W
7		Communication Interface	RJ45
8		Protocol	TCP/IP
9		Network Speed	1000 Mbps
10		Communication Performance	Data Upload Time
11	Parameter Sync Time		SC → terminal synchronization within 2 minutes
12	Communication Recovery		Auto-upload pending data within 2 minutes after reconnection
13	Environmental Conditions	Operating Temperature	0°C – 50°C
14		Storage Temperature	-20°C – 60°C
15		Operating Humidity	10% – 95% (non-condensing)
16		Storage Humidity	10% – 95% (non-condensing)
17	Reliability	MCBF	≥100,000 cycles
18		MTTR	≤30 minutes
19		MTBF	≥100,000 hours
20		Accuracy Rate	≥99.995%

6. Performance Indicators

Item	Specification
Printing Speed	Up to 300 mm/s
Scan Accuracy	≥99%
Coin Dispensing Speed	12 coins/sec
Banknote Dispensing Speed	1.5 notes/sec
Transaction Upload Time	≤2 seconds
Parameter Sync Time	≤2 minutes
Communication Recovery	Auto-upload pending data within 2 minutes



7. Operation Instructions

Customer Workflow

- Scan product barcode
- Confirm items and pricing
- Select payment method
- Complete cash/card/QR payment
- Collect change (if applicable)
- Take printed receipt

Startup Procedure (Staff Use)

- Place terminal on stable, ventilated surface
- Connect power, network, and peripherals
- Power on → automatic self-check
- Ensure printer, scanner, and cash modules are ready

8. Installation and Environmental Requirements

- Stable ground, avoid humid environments
- Leave 100 – 150 mm clearance for maintenance
- Use a grounded power supply
- Temperature: 0 – 50° C, Humidity: 10 – 95% (non-condensing)

9. Daily Maintenance

- Clean exterior with soft cloth; avoid corrosive agents
- Remove dust from coin/banknote modules regularly
- Replace thermal paper and clean print head
- Check module connections periodically
- Shut down device if not used for extended periods

10. FAQ and Troubleshooting

Issue	Possible Cause	Solution
Printer not printing	Paper roll empty or installed incorrectly	Check or replace thermal paper roll
Cash drawer won't open	Loose connection / communication error	Check connections / restart terminal
Scan failure	Poor lighting / dirty barcode	Clean scanner window / adjust lighting
Card reading failure	Damaged card / poor contact	Try another payment method / clean reader



Issue	Possible Cause	Solution
Cash module jam	Folded or dirty coins/notes	Use proper currency / clean cash bin
System freeze	Software error / power issue	Restart terminal / check power

11. Safety and Compliance

- Complies with CCC / CE / FCC and other safety standards
- Do not use in damp environments
- Use grounded power outlet
- Non-professionals should not disassemble
- Contact manufacturer for repairs