Intelligent Production All-in-One Machine
M19 Instruction Manual

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M19 Display Instructions for Smart Integrated Production Machine

1. Application Scenarios

Traditional cafeteria systems rely on manual price verification after meal selection, resulting in low efficiency, frequent errors, outdated accounting methods, and opaque revenue analysis. Management remains rudimentary as consumers use cash or meal cards that are inconvenient to carry and prone to loss, while operational costs remain high due to stringent cashier requirements. For diners, limited dining time is often consumed by long queues, overcrowded dining areas, and manual price calculations prone to errors. The ordering and meal delivery process is time-consuming, requiring repeated communication for dish modifications or price updates. Each restaurant must assign multiple staff members to handle checkout and

meal preparation across multiple stalls, further complicating operations.

The Smart Canteen aligns with the trends of the mobile internet era. Building upon existing canteen management models, it innovatively creates convenient meal ordering and dining systems that enable precise meal preparation/purchasing, eliminate waste/rot, enhance interaction between diners and the canteen, and improve dining experiences and service quality. Equipped with robust management functions, it covers essential canteen operations including procurement, cost control, inventory management, reporting systems, personnel permissions, and meal card administration. Additionally, its advanced headquarters-level management capabilities meet diverse canteen management needs across various scales.

2. Product Features

This device is designed for standard meal preparation tables, where each thermal insulation unit (dish basin) corresponds to a single-serving integrated machine (mainboard + NFC reader/writer + motherboard + 4.3-inch display + 7-inch nutritional ingredient display). All thermal insulation unit-related equipment is interconnected, with parallel connections between individual units, and ultimately linked to an Android-based integrated machine.

- Dual-screen display (4.3+7 inches), integrated structure
- NFC automatic sensing plates, bowls, and dishes
- R485 Network Communication

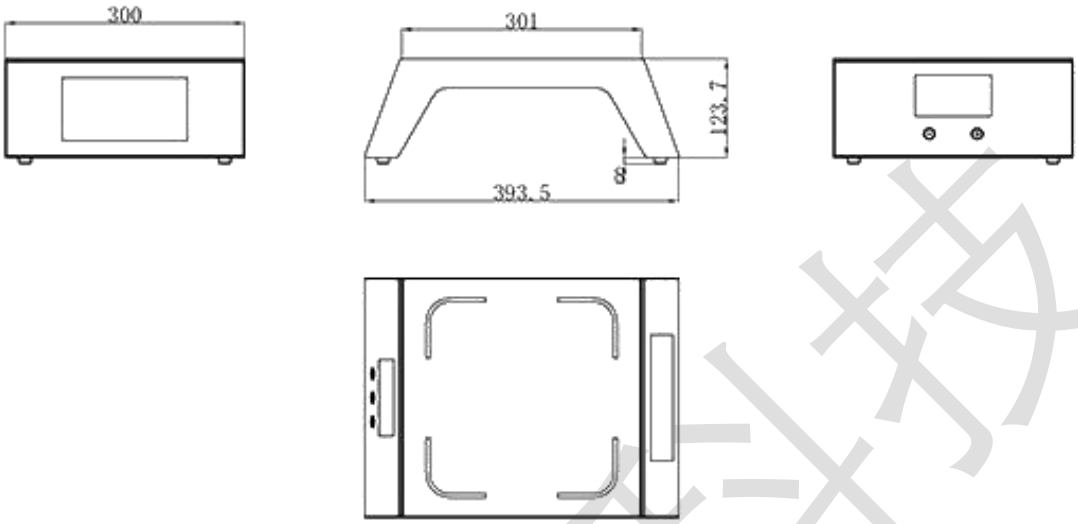
3. Product Specification Table

product name	Intelligent product display and checkout machine
product model	M19
CPU	AM7331 (2 units)
ROM	4M
SDRAM	64M
system	MCU kernel subsystem
screen	4.3-inch display screen (resolution: 480*272) 7-inch nutritional display (optional) (800*480 resolution)
NFC module	Supports 15693 protocol, IC cards, and CPU cards
Recognition	0~5CM

distance	
Recognition speed	less than 300 milliseconds
buzzer	Voice-over prompt
communication interface	DC input 12V*1 DC output 12V*1 485 Input*1 485 output *1 Electronic scale interface*1 USB 2.0 port
device power supply	DC 12V/ 3 A
levels of protection	IP66 design
relative humidity	0%-90% (in the absence of condensed water droplets)
working temperature	0°C ~ 45°C
Product weight	2kg (reference)
packing measurement	450mm* 350mm* 180mm

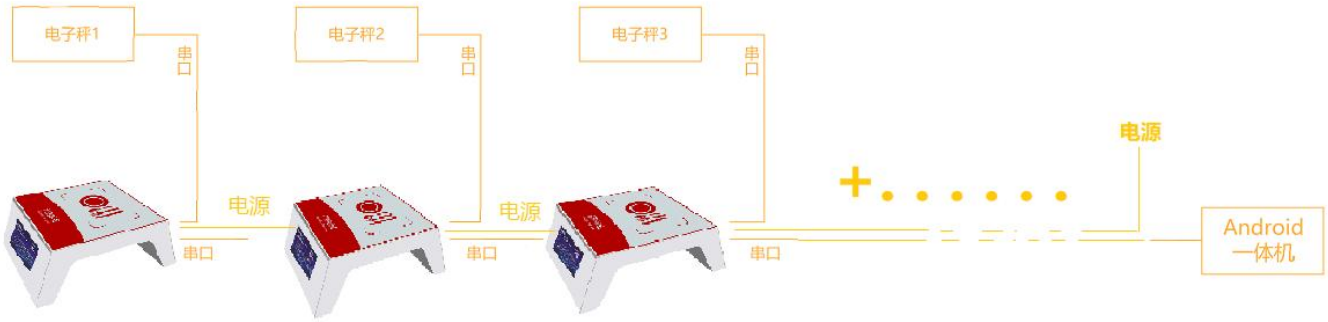
4. Diagram of M19 Facial Recognition Payment Terminal Types

5. Dimensions of M19 facial recognition payment terminal (unit: mm)



6. Description of External Part Indicators

7. Product (System) Wiring Diagram



8. Product Packaging and Instructions for Use

Materials/Tools List

order number	Material/Tool Name	dosage	explain
1	All-in-one host	1	Included accessories include: 12V power adapter (2 units for 5 machines), screws, desiccant, certificate of conformity, warranty card, etc.
3	RS485 cable	1	For direct communication connection with output devices
4	power line	1	For direct power supply connection to the output machine
5	Slanting pliers, electrical tape, wire clips (optional: requires external purchase)	a surname	For routing layout

9. Installation Precautions

1. During actual wiring installation, if the host computers 12V power supply line does not utilize a "dedicated power extension cable" and has an excessively long distance, resulting in excessive cable equivalent resistance, abnormal phenomena such as insufficient terminal voltage (≤11V), repeated host restarts, and system crashes may occur.

2. The installation environment must strictly avoid strong electric currents and strong electromagnetic fields.

Electromagnetic appliances, mobile phones, and other portable electrical devices should be kept as far away from the equipment as possible.

3. This product is a precision device. Avoid collisions, drops, and vibrations to prevent detachment of motherboard components or internal camera damage, which may lead to functional or performance issues.

4. The equipment comes with a built-in power adapter, with a total length of 2.5 meters.

- The power cord extension should not exceed 3 meters, as exceeding this length may cause insufficient voltage supply to the devices main unit, resulting in abnormal phenomena such as repeated restarts and system crashes.
- Using other adapters (e.g., 9V/1A) may cause repeated device restarts due to insufficient voltage or low current.
- The cables used should not be too thin (e.g., thin Ethernet cables). It is recommended to use parallel multi-strand cables of the same type or thicker copper-core cables to ensure a voltage>11V.
  Note: If using a network cable, connect the extension cable with a 4-core network cable as the positive terminal and another 4-core cable as the negative terminal.
- If you are unsure how to extend the power supply, contact the supplier to replace it with a dedicated power extension cable.