Intelligent Material Management System

LP7830 Static DWS

1.System Architecture Options

Option 1 (Weighing Inventory Management System):



Display & Communication



Weighing Scales



System Software

Option 2 (Weighing Material Requisition Management System):



Weighing Shelf



Facial Recognition Access Control

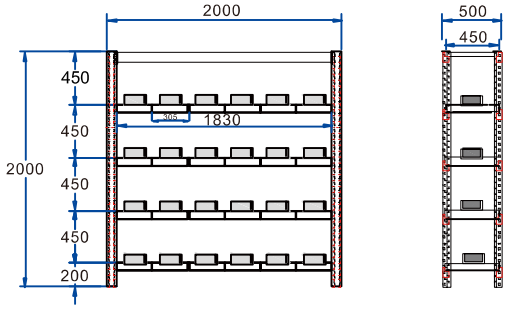


System Software

2.Hardware Specification Selection

Parameters	Specification & Index
Dimensions	H2000×D400×L2000mm / H2000×D600×L2000mm
Display Screen	2.0 full-view LCD screen
Number of Shelf Layers	3 / 4 / 5
Positions per Layer	3 / 4 / 5 / 6 / 7 / 8
Total Bin Positions	32
Maximum Weighing Capacity	5 / 10 / 20 / 30 kg
Weighing Resolution	0.1 / 0.5 / 1 / 2 g
Communication Interface	RJ45 Ethernet
System Integration	ERP, WMS, etc.
Scale Material	Powder-coated carbon steel, reinforced
Shelf Frame Material	Powder-coated sheet metal, reinforced
Power Input	220V AC
Indicator Light	Column lights / position lights for prompt
Operating Temperature	Temperature: -10°C ~ +40°C; Humidity: ≤85%
Storage Temperature	Temperature: -20°C ~ +60°C; Humidity: ≤85%

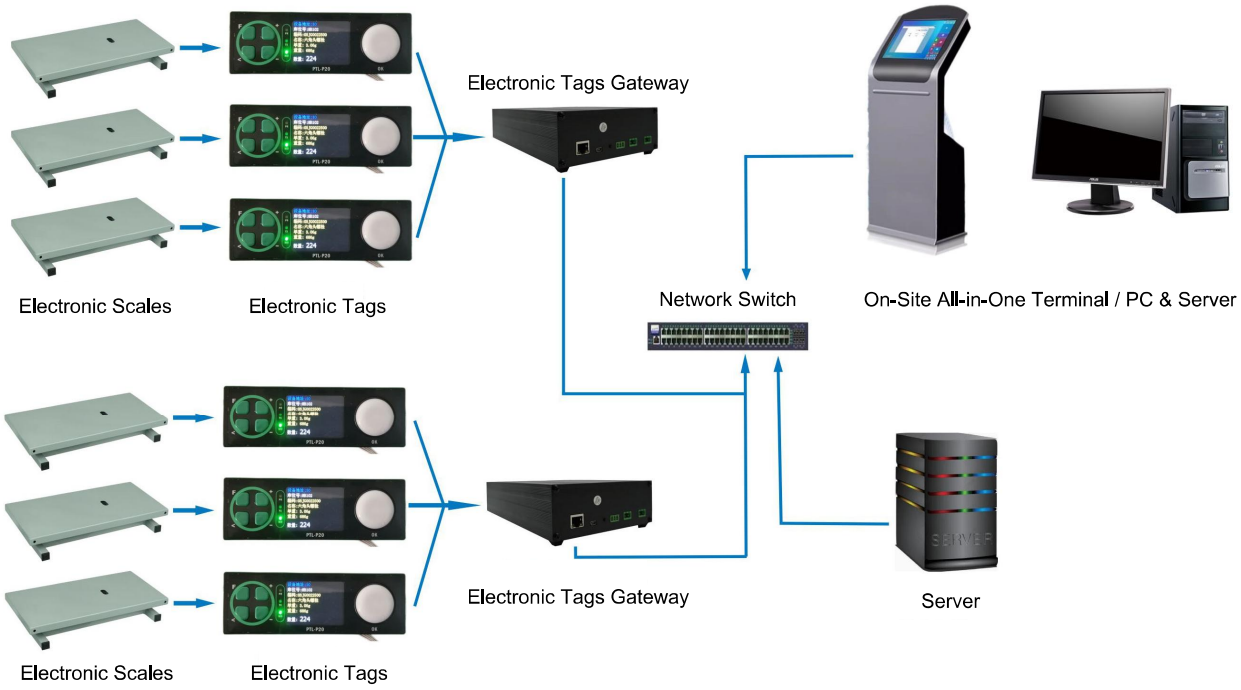
Example: 4 layers × 6 pcs



Front view

Side view

3.Network Architecture Diagram



4.Material Requisition Workflow



01 Interface with third-party systems like WMS/MES/ERP to obtain the outbound task list.

02 The system organizes outbound lists into picking tasks and displays them on the touch-screen terminal. Pickers select a task to begin material picking.

03 Facial recognition access control ensures the picker matches the requisition task personnel.

04 The system sends a light command to illuminate the regional indicator. It also sends commands to light up the location's electronic label, showing the required item quantity.

05 Picking staff retrieve materials from the location following the electronic label guidance.

06 The electronic scale logs the retrieved weight in real time and transmits it to the label, which calculates the quantity represented by the weight and guides accurate picking.

07 Verify that the retrieved materials and quantities match the requisitionorder.

08 The client system computes the real-time collected label quantities to generate outbound slips automatically without manual operation.

09 Outbound materials and quantities are transmitted back to the system via the interface.