

WUC GLOBAL CO. LTD

# Multi-Port USB Control Board

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## TECHNICAL SPECIFICATION – GM-30

### Product Identification

Name: Multi-Port USB Control Board

Model: GM-30

Category: Electronic Power & Control Distribution Component

Intended Use: Integration in automation systems and multi-module embedded platforms

### General Description

The GM-30 is a high-density control board engineered for simultaneous management of multiple embedded modules through USB signaling and isolated power channels. Its architecture enables stable energy delivery, synchronized module control, and scalable automation performance across complex systems.

### Physical Characteristics

- Dimensions: 31–33 cm (length) × 5–6 cm (height)
- Weight: ~200.
- PCB Material: Industrial-grade FR-4 fiberglass, dual-layer.
- Assembly: SMD + through-hole components.

#### Connector Layout:

- 20 independent multi-pin module ports.
- 1 USB-A control interface.
- 1 IDC expansion header.
- Cooling System: Passive (no mechanical components).

### **Electrical Specifications**

- Operating Voltage: 5 V / 9 V / 12 V depending on module requirements
- Power Source: External Switching Power Supply
- Typical Power Consumption: 1–10 W (load-dependent)
- Integrated Protection:
- Section-based voltage regulation
- Passive EMI filtering
- Segmented power distribution buses for improved stability

### **Communication Interface**

- Connection Type: Wired USB communication.
- Supported Standard: USB 2.0 control signaling.
- Device Role: Internal board for coordinated USB command distribution and power management within automation units.

### **Technical Classification**

Component Type: Multi-port control and distribution board

Typical Applications:

- Automation clusters.
- Embedded module testing and diagnostics.
- Laboratory electronic control systems.
- High-density multi-device platforms.
- Suggested HS Code: 8504.40.30 (industrial control components).

### **Reliability & Design**

- Designed for continuous operation and repetitive connection cycles.
- Reinforced PCB layout optimized for high-density signal routing.
- EMI-aware trace design for signal integrity.
- Suitable for industrial, laboratory, and embedded automation environments.

## **Technical Declaration**

The GM-30 is a wired electronic control component.  
It does not include wireless chipsets, radio modules, or communication transceivers.  
Its functions are exclusively electrical distribution and USB-based control.

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