CRIB LIGHTING

UWMC- X04
DATASHEET

visit to
www.criblighting.com/manuals
for all documents and manuals

Key Features

Display & Interface

- 4" IPS LCD Touchscreen
- 480 x 480 resolution
- Capacitive multi-touch
- Auto brightness adjustment
- Scratch-resistant glass
- 16.7M colors
- 300 nits brightness

System Architecture

- Processor: RK3566 Quad-core Cortex-A55 @1.8GHz.
- RAM: 2GB DDR3.
- Storage: 32GB eMMC Flash.
- OS: Android

Connectivity

- Wi-Fi: IEEE 802.11 b/g/n
  - Frequency: 2.4GHz
  - Security: WPA2-PSK/WPA3
  - Range: Up to 50m

- Ethernet:
  - 10/100 Mbps RJ45
  - Optional PoE (802.3af)
  - Auto MDI/MDIX
- RS485:
  - Half-duplex communication
  - 3.81mm terminal blocks
  - Up to 1200m range

Power Specifications

- Operating Voltage: 100-240VAC
- Frequency: 50/60Hz
- Power Consumption:
  - Active: < 3W
  - Standby: < 0.5W
- PoE Class 2 (optional)

Physical Properties

- Dimensions:
  - Panel: 86 x 86 x 10mm
  - With base: 86 x 86 x 36.6mm
- Installation depth: > 50mm
- Weight: 210g
- Housing: ABS plastic

Environmental

- Operating Temperature: -10°C to 60°C.
- Storage Temperature: -20°C to 70°C.
- Humidity: 5-90% RH, non-condensing.
- Protection Rating: IP20.

Software Features

- System Security
  - Secure boot.
  - Encrypted storage.
  - User authentication.
  - Firmware update protection.
- Integration Capabilities
  - MQTT protocol for smart home communication.
  - HTTP/HTTPS API access.
  - Modbus/BACnet support (optional).
  - Scene-based lighting control.
- Performance Metrics
  - Boot Time: <30 seconds.
  - Touch Response: <50ms.
  - Command Execution: <100ms.
  - Scene Activation: <200ms.

Applications

1. Smart Lighting Control

- Smart Home Systems
- Commercial Buildings
  - Offices
  - Meeting rooms
  - Common areas
  - Reception zones
  - Corridors
- Hospitality
  - Hotel rooms
  - Restaurants
  - Conference facilities
  - Spa/wellness areas

- Healthcare
  - Patient rooms
  - Nursing stations
  - Treatment rooms
  - Administrative areas

2. Building Integration

- HVAC Control
- Scene Management
- Occupancy-based Control
- Energy Monitoring
- Schedule Management

3. Residential Applications

- Smart Homes
- Apartments
- Private Residences
- Multi-dwelling Units

4. Special Applications

- Retail Spaces
  - Showrooms
  - Display lighting
  - Ambient control
- Educational Facilities
  - Classrooms
  - Lecture halls
  - Libraries

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Interface Capabilities

Touch Interface

- Technology: Projected Capacitive
- Points: 5-point multi-touch
- Response time: < 50ms
- Glass thickness: 2mm
- Viewing angle: 178° (H/V)

Display Performance

- Brightness: 300 cd/m²
- Contrast ratio: 1000:1
- Color depth: 24-bit
- Refresh rate: 60Hz
- Backlight: LED
- Backlight life: 30,000 hours

Communication Protocols

Network Features

- TCP/IP Stack
- MQTT Protocol Support
    ◦ QoS levels: 0, 1
    ◦ SSL/TLS encryption
    ◦ Last Will Testament
    ◦ Keep-alive monitoring
    ◦ Auto-reconnect
- HTTP/HTTPS
    ◦ RESTful API support
    ◦ Secure firmware updates
    ◦ Web configuration interface

RS485 Specifications

- Baud rate: up to 115200bps
- Data bits: 8
- Stop bits: 1/2
- Parity: None/Even/Odd
- Flow control: None

Software Features

System Software

- Auto-recovery system
- Watchdog timer
- Local data caching
- Configuration backup

Security Features

- Secure boot
- Encrypted storage
- Access control
- Password protection
- Session management
- Update authentication

Integration Capabilities

ULDC Integration

- Direct device control
- Status monitoring
- Scene management
- Schedule coordination
- Firmware update
- Device discovery

Building Management

- Modbus TCP/IP
- MQTT integration
- HTTP API access
- Energy monitoring
- Occupancy tracking

Performance Specifications

Response Times

- Boot time: < 30 seconds
- Screen wake: < 1 second
- Touch response: < 50ms
- Command execution: < 100ms
- Scene activation: < 200ms
- Status update: Real-time

Reliability Metrics

- MTBF: > 50,000 hours
- Service life: > 5 years
- Error recovery: Automatic
- Watchdog timeout: 60 seconds