CMS Device API Documentation
Base URL
https://api.your-cms.com/v1
Authentication
All endpoints (except login) require JWT authentication via the Authorization header:
Authorization: Bearer <jwt_token>

Endpoints
1. Device Login
Authenticate device and receive JWT token.
Endpoint: POST /device/login
Request Body:

```
{
  "macAddress": "00:11:22:33:44:55"
}
```

Response:

```
{
  "success": true,
  "token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9...",
  "expiresIn": 3600,
  "deviceId": "device-uuid-here"
}
```

Status Codes:

- 200 OK - Success
- 401 Unauthorized - Invalid MAC address
- 500 Internal Server Error - Server error

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2. Check Status
Device sends battery information and checks if there are any updates available.
Endpoint: POST /device/checkStatus
Request Body:

```
{
  "macAddress": "00:11:22:33:44:55",
  "batteryVoltage": 12.5,
  "batteryCurrent": 2.3,
  "systemVoltage": 5.0,
  "dcInputCurrent": 1.8
}
```

Response:

```
{
```

```
  "success": true,
  "hasUpdates": true,
  "message": "Updates available"
}
```

Status Codes:

- 200 OK - Success
- 401 Unauthorized - Invalid/expired token
- 400 Bad Request - Invalid request data

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3. Get Device Configuration

Retrieve complete device configuration and content schedules.

Endpoint: GET /device/getStatus

Request Body:

```
{
  "macAddress": "00:11:22:33:44:55"
}
```

Response:

```
{
  "success": true,
  "data": {
    "deviceId": "device-uuid-here",
    "macAddress": "00:11:22:33:44:55",
    "nextWakeUpTime": "2025-07-12T08:00:00Z",
    "schedules": [
      {
        "id": "schedule-uuid-1",
        "startDate": "2025-07-11T00:00:00Z",
        "endDate": "2025-07-18T23:59:59Z",
        "playlists": [
          {
            "id": "playlist-uuid-1",
            "name": "Morning Ads",
            "playlistItems": [
              {
                "id": "item-uuid-1",
                "url": "https://cdn.your-cms.com/media/image1.bin",
                "startTime": "08:00:00",
                "endTime": "08:30:00",
                "order": 1
              },
              {
                "id": "item-uuid-2",
                "url": "https://cdn.your-cms.com/media/image2.bin",
```

```
            "startTime": "08:30:00",
            "endTime": "08:45:00",
            "order": 2
          },
          {
            "id": "item-uuid-3",
            "url": "https://cdn.your-cms.com/media/image3.bin",
            "startTime": "08:45:00",
            "endTime": "09:30:00",
            "order": 3
          }
        ]
      }
    ]
  }
],
"defaultSchedule": [
  {
    "id": "schedule-uuid-1",
    "playlists": [
      {
        "id": "playlist-uuid-1",
        "name": "Morning Ads",
        "totalDuration": "01:30:00",
        "playlistItems": [
          {
            "id": "item-uuid-1",
            "url": "https://cdn.your-cms.com/media/image1.bin",
            "duration": "00:30:00",
            "order": 1
          },
          {
            "id": "item-uuid-2",
            "url": "https://cdn.your-cms.com/media/image2.bin",
            "duration": "00:15:00",
            "order": 2
          },
          {
            "id": "item-uuid-3",
            "url": "https://cdn.your-cms.com/media/image3.bin",
            "duration": "00:45:00",
            "order": 3
          }
```

```
            ]
          }
        ]
      }
    ],
    "firmwareUpdate": {
      "available": true,
      "version": "2.1.0",
      "downloadUrl": "https://cdn.your-cms.com/firmware/v2.1.0.bin",
      "checksum": "sha256:abc123..."
    }
  }
}
```

Status Codes:

- 200 OK - Success
- 401 Unauthorized - Invalid/expired token
- 404 Not Found - Device not found

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4. Update Device Status

Report device status, activities, and errors to the system.

Endpoint: POST /device/UpdateDeviceStatus

Request Body:

```
{
  "macAddress": "00:11:22:33:44:55",
  "status": "downloading_media",
  "details": {
    "playlistItemId": "item-uuid-1",
    "message": "Downloading image1.bin"
  },
  "timestamp": "2025-07-11T14:30:00Z"
}
```

Possible Status Values:

- downloading_media - Downloading media files
- download_complete - Media download completed
- displaying_content - Currently displaying content
- error - Error occurred

Response:

```
{
  "success": true,
  "message": "Status updated successfully"
}
```

Status Codes:

- 200 OK - Success

- 401 Unauthorized - Invalid/expired token
- 400 Bad Request - Invalid status data

Data Models

Device

```
{
  "deviceId": "string (UUID)",
  "macAddress": "string (MAC format)",
  "timezone": "string (IANA timezone)",
  "nextWakeUpTime": "string (ISO 8601 datetime)"
}
```

Schedule

```
{
  "id": "string (UUID)",
  "startDate": "string (ISO 8601 datetime)",
  "endDate": "string (ISO 8601 datetime)",
  "playlists": "array of Playlist objects"
}
```

Playlist

```
{
  "id": "string (UUID)",
  "name": "string",
  "totalDuration": "string (HH:MM:SS format)",
  "playlistItems": "array of PlaylistItem objects"
}
```

PlaylistItem

```
{
  "id": "string (UUID)",
  "url": "string (media URL)",
  "duration": "string (HH:MM:SS format)",
  "order": "integer"
}
```

Battery Information

```
{
  "batteryVoltage": "number (volts)",
  "batteryCurrent": "number (amperes)",
  "systemVoltage": "number (volts)",
  "dcInputCurrent": "number (amperes)"
}
```

Firmware Update

```
{
  "available": "boolean",
  "version": "string",
```

```
  "downloadUrl": "string",
  "checksum": "string"
  }
```

Error Responses

All error responses follow this format:

```
{
  "success": false,
  "error": {
    "code": "ERROR_CODE",
    "message": "Human readable error message"
  }
}
```

Common Error Codes:

- INVALID_MAC_ADDRESS - MAC address format is invalid
- DEVICE_NOT_FOUND - Device not registered in system
- INVALID_TOKEN - JWT token is invalid or expired
- MISSING_PARAMETERS - Required parameters are missing
- BATTERY_DATA_INVALID - Battery information format is incorrect
- INTERNAL_ERROR - Server internal error

Rate Limits

- Status check: 1 request per minute
- Config retrieval: 1 request per 5 minutes
- Status updates: 10 requests per minute
- Login: 5 requests per hour per MAC address

Example Device Flow

1. Device Boot Up
2. POST /device/login → Get JWT token
3. Regular Status Check (every minute)
4. POST /device/status/check → Check for updates
5. If Updates Available
6. GET /device/config → Get latest configuration
7. During Operation
8. POST /device/status/update → Report current activity

Notes

- All timestamps are in ISO 8601 format with UTC timezone
- Duration fields use HH:MM:SS format
- JWT tokens expire after 1 hour and should be refreshed
- Device should handle network failures gracefully and retry requests
- Media URLs are CDN-hosted with appropriate caching headers

- Firmware updates should be verified using provided checksums