

智能生产协同平台 API 说明书

Version 2.1 | 2025 年最新版

1. 快速开始

1.1 接入流程

注册开发者账号



获取API Key/Secret



选择通信协议



沙箱环境测试



生产环境部署

1.2 认证方式

```
1 POST /auth/token
2 Headers:
3   Content-Type: application/json
4 Body:
5 {
6   "api_key": "your_key",
7   "secret": "your_secret"
8 }
9 Response:
10 {
11   "token": "xxxxxx",
12   "expires_in": 3600
13 }
```

2. 核心 API 目录

模块	端点	速率限制	适用场景
设计生成	/v2/design/generate	1000 次/分钟	电商定制、快速打样
工艺拆解	/v2/design/generate	1000 次/分钟	工厂工单转换
产能查询	/v2/design/generate	1000 次/分钟	跨境订单调度
实时监控	/v2/design/generate	1000 次/分钟	生产进度追踪

3. 典型调用示例

3.1 生成 T 恤设计方案 (Python)

```
1 import requests
2
3 url = "https://XXX.XXX.XXX.XXX/v2/design/generate"
4 headers = {
5     "Authorization": "Bearer YOUR_TOKEN",
6     "Content-Type": "application/json"
7 }
```

```
8 data = {
9     "product_type": "t_shirt",
10    "params": {
11        "color": "navy_blue",
12        "pattern": {"type": "ai_generate", "prompt": "科技感线条"}
13    }
14 }
15
16 response = requests.post(url, json=data, headers=headers)
17 print(response.json())
```

3.2 响应数据结构

```
1 {
2     "status": "success",
3     "data": {
4         "design_id": "DSG-2024-XXXX",
5         "preview_url": "https://cdn.example.com/preview/123.png",
6         "production_ready": true,
7         "materials": [
8             {"type": "fabric", "code": "FB-025", "consumption": "1.2m"}
9         ]
10    }
11 }
```

4. 错误处理

4.1 常见错误码

代码	含义	解决方案
401	认证失效	检查 token 有效期并重新获取
429	请求超限	降低频率或联系扩容
5003	工艺不可行	调用 <code>/alternative</code> 获取替代方案

4.2 重试机制建议

```
1 // 指数退避算法示例
2 async function callAPIWithRetry(url, params, maxRetries = 3) {
3   let delay = 1000;
4   for (let i = 0; i < maxRetries; i++) {
5     try {
6       return await apiCall(url, params);
7     } catch (error) {
8       if (error.code !== 500) break;
9       await new Promise(resolve => setTimeout(resolve, delay));
10      delay *= 2;
11    }
12  }
13 }
```

5. 高级功能

5.1 WebSocket 实时监控

```
1 # 连接示例
2 wss://api.smart-manu.com/ws/progress?order_id=ORD-123
3 # 实时推送数据格式
4 {
5   "timestamp": "2024-03-20T15:30:00Z",
6   "stage": "cutting",
7   "completion": 35.7,
8   "alert": null
9 }
```

5.2 批量异步处理

```
1 POST /v2/async/batch
2 Headers:
3   X-Callback-Url: https://your-callback.url
4 Body:
5 {
6   "tasks": [
7     {"task_id": "1", "design_params": {...}},
8     {"task_id": "2", "design_params": {...}}
9   ]
10 }
```
