



Imou Desk Tracker Backend

Backend proxy server for the Imou desk occupancy tracking system. This server securely handles Imou API authentication and provides CORS-enabled endpoints for the frontend application.



Quick Deploy

Deploy to Vercel (Recommended)

Show Image

Deploy to Railway

Show Image

Deploy to Render

Show Image



Environment Variables

Set these environment variables in your deployment platform:

Variable	Description	Required
IMOU_APP_ID	Your Imou Developer App ID	✔ Yes
IMOU_APP_SECRET	Your Imou Developer App Secret	✔ Yes
PORT	Server port (auto-set by platforms)	✘ No
NODE_ENV	Environment (production/development)	✘ No



API Endpoints

Health Check

GET /health

Returns server status and timestamp.

Get Access Token

POST /api/imou/token

Retrieves access token from Imou API using stored credentials.

Get Live Stream URL

POST /api/imou/stream

Content-Type: application/json

```
{
  "deviceId": "your_camera_device_id",
  "token": "access_token_from_previous_call"
}
```

Get Device List

POST /api/imou/devices

Content-Type: application/json

```
{
  "token": "access_token_from_previous_call"
}
```

Local Development

1. Clone repository

bash

```
git clone https://github.com/yourusername/imou-desk-tracker-backend.git
cd imou-desk-tracker-backend
```

2. Install dependencies

bash

```
npm install
```

3. Create environment file

```
bash
```

```
cp .env.example .env  
# Edit .env with your actual Imou credentials
```






4. Start development server

```
bash
```

```
npm run dev
```

Server will be running at `http://localhost:3000`

Security Features

-  **Credentials Protection:** App ID and Secret stored securely in backend
-  **CORS Enabled:** Configurable origins for frontend access
-  **Error Handling:** Comprehensive error messages without exposing secrets
-  **Input Validation:** Validates all incoming requests
-  **Rate Limiting:** Built-in protection against abuse

CORS Configuration

The server is configured to accept requests from:

- `http://localhost:3000` (local development)
- `https://yourdomain.com` (your production frontend)

Update the CORS configuration in `server.js` to match your frontend domains.

Compatible Cameras

This backend works with all Imou cameras that support the OpenAPI, including:

- IPC-S41F (tested)
- IPC-A22EP
- IPC-C22EP
- And other Imou IP cameras

Troubleshooting

Common Issues

1. **401 Unauthorized:** Check your App ID and App Secret
2. **CORS Error:** Verify your frontend domain is in the CORS allowlist
3. **Device Not Found:** Ensure camera is online and Device ID is correct
4. **Stream Error:** Check camera supports HLS streaming

Debug Mode

Set `DEBUG=true` in environment variables for detailed logging.

Check Logs

Most deployment platforms provide logs:

- **Vercel:** View logs in dashboard
- **Railway:** Check deployment logs
- **Render:** Monitor service logs



Related Links

- [Imou OpenAPI Documentation](#)
- [Frontend Repository](#)
- [Live Demo](#)



License

MIT License - see LICENSE file for details.



Contributing

1. Fork the repository
2. Create a feature branch
3. Make your changes
4. Submit a pull request



Support

For issues or questions:

1. Check the troubleshooting section
 2. Review server logs
 3. Verify environment variables
 4. Check Imou API status
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