

OSCam Connection Manager

User Guide

Version 1.0

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A graphical tool for managing OSCam configurations through FTP connections developed by mapi68

https://github.com/mapi68/oscam-connection-manager

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Introduction

1.1 About OSCam Connection Manager

OSCam Connection Manager is a graphical tool designed to help you manage OSCam configurations across multiple servers using FTP connections. It provides an intuitive dark-themed interface for:

- Managing multiple OSCam server connections via FTP
- Viewing and editing oscam.server configurations
- Creating manual backups of OSCam configurations
- Restarting OSCam services remotely

1.2 Key Features

- Multi-Server Support: Manage multiple OSCam servers from a single interface
- Dark Theme Interface: Modern, eye-friendly dark theme
- Manual Backup System: Create backups of your OSCam configurations on demand
- Remote Control: Restart OSCam services through web interface
- File Management: View, edit, and transfer configuration files via FTP

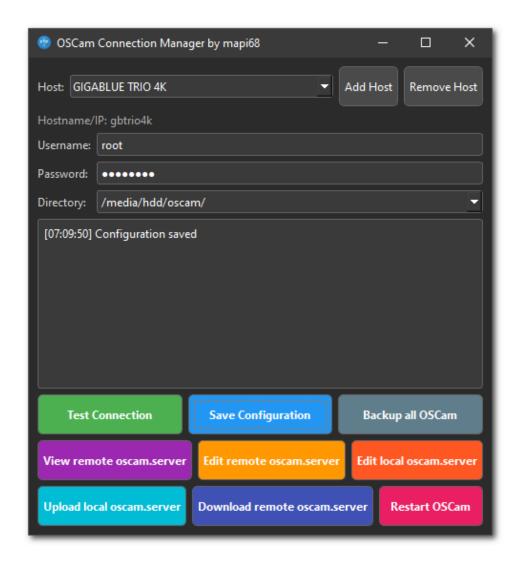


Figure 1.1: OSCam Connection Manager Main Interface

Installation

2.1 System Requirements

≔ Procedure

Essential Requirements:

- Python 3.6 or higher
- FTP access to your OSCam server(s)
- Network connectivity
- Storage space for local configurations and backups

Required Python Packages:

- PyQt6: For the graphical interface
- requests: For OSCam service control

2.2 Installation Steps

≡ Procedure

Option 1: Windows 64-bit Binary Release

- 1. Download the pre-built Windows 64-bit release from GitHub
- 2. Extract the files to your preferred location
- 3. Run the executable directly no additional installation required

Option 2: From Source

- 1. Download the latest source release from GitHub
- 2. Extract the files to your preferred location
- 3. Install required Python packages:

pip install PyQt6 requests

4. Launch the application:

python oscam_connection_manager.py

? Tip

For most Windows users, the pre-built 64-bit release is recommended as it doesn't require Python installation or additional setup steps.

Interface Overview

3.1 Console Output Features

The console output area provides detailed operational feedback:

- Timestamped Entries: Each log entry includes HH:MM:SS timestamp
- Color-Coded Messages:
 - Standard operations in white
 - Errors highlighted distinctly
 - Success messages clearly indicated
- Operation Types Logged:
 - Connection attempts and results
 - File operations (view, edit, transfer)
 - Host management actions
 - Backup operations with file counts
 - OSCam restart attempts and results

Tip

The console provides immediate feedback for all operations, helping users track actions and diagnose issues quickly.

3.2 Main Window Layout

3.2.1 Host Management Section

- Host Dropdown: Select from configured hosts
- Add Host: Create new host configurations
- Remove Host: Delete existing host configurations
- Host Info Display: Shows current host's IP/hostname

3.2.2 Connection Settings

• Username Field: Default is "root"

• Password Field: For FTP authentication

• Directory Field: Configurable path to OSCam files with common presets

3.2.3 Action Buttons

The interface provides three rows of action buttons:

Row 1 - Connection Management:

- Test Connection
- Save Configuration
- Backup all OSCam

Row 2 - File Operations:

- View remote oscam.server
- Edit remote oscam.server
- Edit local oscam.server

Row 3 - Transfer and Control:

- Upload local oscam.server
- Download remote oscam.server
- Restart OSCam

3.2.4 Console Output

A text area displaying:

- Operation timestamps
- Success/failure messages
- Error details
- Connection status

Basic Operations

4.1 Directory Configuration

4.1.1 Preconfigured Directory Paths

The application includes commonly used OSCam configuration paths:

!≡ Procedure

Available preset directories:

- /etc/tuxbox/config/
- /etc/tuxbox/config/oscam/
- /etc/tuxbox/config/oscam-emu/
- /hdd/oscam/
- /hdd/oscam-emu/
- /home/oscam/
- /home/oscam-emu/
- /media/hdd/oscam/
- /media/hdd/oscam-emu/
- /media/usb/oscam/
- /media/usb/oscam-emu/
- /usr/local/etc/
- /usr/local/oscam/config/
- /usr/share/oscam/config/
- /var/tuxbox/config/
- /var/etc/
- /var/oscam/config/

6 Note

The directory field is editable, allowing users to enter custom paths when needed.

4.2 Managing Hosts

4.2.1 Adding a Host

≡ Procedure

- 1. Click "Add Host"
- 2. Enter a unique display name
- 3. Enter the hostname or IP address
- 4. Click OK to save

A Warning

Both display name and hostname are required fields. The display name must be unique across all configured hosts.

4.2.2 Removing a Host

E Procedure

- 1. Select the host from the dropdown
- 2. Click "Remove Host"
- 3. Confirm deletion in the popup dialog

4.3 Connection Management

4.3.1 Testing Connections

\E Procedure

- 1. Select a host from the dropdown
- 2. Enter/verify username and password
- 3. Select/verify the correct directory path
- 4. Click "Test Connection"
- 5. Check console output for connection status

1 Note

A successful connection will display the FTP server's welcome message in the console.

4.4 File Operations

4.4.1 Viewing Remote Configuration

≡ Procedure

- 1. Select the target host
- 2. Click "View remote oscam.server"
- 3. Review the configuration in the viewer window

4.4.2 Editing Configurations

≔ Procedure

Local File Editing:

- 1. Click "Edit local oscam.server"
- 2. Make your changes in the editor
- 3. Click Save to store changes locally

Remote File Editing:

- 1. Click "Edit remote oscam.server"
- 2. Make your changes
- 3. Click Save to update the remote file

4.5 File Transfer

4.5.1 Downloading Configuration

≡ Procedure

- 1. Select the host
- 2. Click "Download remote oscam.server"
- 3. File is saved as: oscam.server_[hostname]

4.5.2 Uploading Configuration

E Procedure

- 1. Select the host
- 2. Ensure local file exists (oscam.server_[hostname])
- 3. Click "Upload local oscam.server"
- 4. A backup of the remote file is automatically created

A Warning

Before uploading, ensure your local configuration is correct as it will replace the remote file.

Backup System

5.1 Manual Backup Process

≡ Procedure

To create a backup:

- 1. Select the target host
- 2. Click "Backup all OSCam"
- 3. Monitor the console for backup progress
- 4. Backups are stored in: oscam_backups/[hostname]/backup_[timestamp]/

1 Note

The backup system:

- Creates timestamped backup folders
- Copies all configuration files from the remote server
- Provides backup status in the console
- Maintains separate backup directories for each host

5.2 Backup Structure

```
oscam_backups/
__ [hostname] /
__ backup_[YYYYMMDD_HHMMSS] /
__ oscam.conf
__ oscam.server
__ oscam.user
__ [other configuration files]
```

Remote Control

6.1 Restarting OSCam

≡ Procedure

To restart the OSCam service:

- 1. Select the target host
- 2. Click "Restart OSCam"
- 3. The application will:
 - Connect to the remote server via FTP
 - Read and parse the remote oscam.conf file
 - Extract the httpport setting from the remote configuration
 - Use the extracted port to send restart command via web interface
 - Display operation result in console

A Warning

Restart requirements:

- Valid httpport setting in remote oscam.conf
- Network access to OSCam's web interface
- Correct host configuration and FTP access

1 Note

The application always reads the httpport value from the remote oscam.conf file to ensure consistency with the actual server configuration.

Troubleshooting

7.1 Error Message Reference

The application provides detailed error messages for common issues:

• Host Management Errors:

- "Host already exists"
- "No host selected"
- "Both fields are required!"

• File Operation Errors:

- "Remote oscam.server file not found"
- "Local [filename] file not found"
- "Failed to backup [filename]"

• Connection Errors:

- "FTP connection failed: [specific error]"
- "Please fill in all connection details"

≡ Procedure

When encountering errors:

- 1. Read the full error message in the console
- 2. Check the timestamp of the error
- 3. Verify the current host selection
- 4. Review connection settings
- 5. Ensure required files exist

7.2 Web Interface Troubleshooting

7.2.1 Authentication Issues

A Warning

Common web interface authentication problems:

- Missing Credentials: Web interface authentication must be configured in oscam.conf
- Wrong Authentication Method: Check if basic or digest authentication is required
- Invalid Credentials: Verify username and password in webif section of oscam.conf

7.2.2 Network Access Issues

E Procedure

If you cannot access the web interface, verify:

1. Firewall Settings:

- Check if the configured HTTP port is open in your firewall
- Verify both incoming and outgoing connections are allowed
- Test with telnet: telnet hostname httpport

2. Network Connectivity:

- Ensure the host is reachable (try ping)
- Verify no VPN or proxy is interfering
- Check if the HTTP port is not blocked by ISP

3. Port Configuration:

- Confirm httpport setting in oscam.conf matches your connection attempt
- Verify port is not used by another service
- Try using netstat to check port status:

netstat -tuln | grep httpport

7.2.3 Connection Timeout Issues

1 Note

When experiencing timeout issues:

- Default timeout is set to 5 seconds for restart operations
- High latency networks may require longer timeouts
- Load on the OSCam server can affect response time
- Network congestion can cause timeouts

7.2.4 Configuration Reference

Essential oscam.conf settings for web interface access:

[webif]

httpport = port_number
httpuser = username
httppwd = password

httpallowed = 127.0.0.1,192.168.0.0-192.168.255.255,10.0.0.0-10.255.255.255

• Tip

Best practices for web interface security:

- Always use strong passwords for web interface access
- Limit allowed IP ranges using httpallowed
- Consider using HTTPS if available in your OSCam build
- Regularly check web interface logs for unauthorized access attempts
- Use non-standard ports to avoid automated scanning

7.2.5 Diagnosing Restart Problems

≡ Procedure

If OSCam restart fails, follow these steps:

1. Check web interface accessibility:

```
curl -v http://hostname:httpport/
```

2. Verify credentials if authentication is enabled:

```
curl -v -u username:password http://hostname:httpport/
```

- 3. Examine OSCam logs for authentication failures
- 4. Monitor network traffic during restart attempt
- 5. Check system logs for firewall blocks

A Warning

Common causes of restart failure:

- Web interface disabled in OSCam configuration
- Authentication failure due to incorrect credentials
- Network firewall blocking access
- OSCam process lacking permissions to restart
- System resource constraints preventing restart

7.3 Common Issues

7.3.1 Connection Problems

Common Connection Errors

\E Procedure

When encountering FTP connection issues, follow this systematic troubleshooting guide:

- 1. Connection Timeout Errors
 - Error Message: "FTP connection failed: [Errno 110] Connection timed out"
 - Possible Causes:
 - Network firewall blocking FTP traffic
 - Server not responding
 - Incorrect hostname/IP
 - Solutions:
 - Verify server is online with: ping hostname
 - Check firewall settings for ports 20/21 (FTP)
 - Try connecting from another network

2. Authentication Failures

- Error Message: "FTP connection failed: 530 Login incorrect"
- Possible Causes:
 - Incorrect username/password
 - Account locked or disabled
 - FTP access not enabled for user
- Solutions:
 - Double-check credentials
 - Try default username "root" if unsure
 - Check for account lockout on server

3. Directory Access Issues

- Error Message: "FTP connection failed: 550 Failed to change directory"
- Solutions:
 - Verify directory path exists on server
 - Check directory permissions
 - Try preset directories from dropdown

Advanced Troubleshooting

≡ Procedure

Diagnostic Commands

- # Test basic connectivity ping hostname
- # Check FTP port accessibility
 telnet hostname 21
- # Verify DNS resolution nslookup hostname

Common Error Codes

- 421: Service not available
- 425: Can't open data connection
- 430: Invalid username or password
- **530**: Not logged in
- **550**: Permission denied

Tip

Best Practices:

- Always test connection before file operations
- Use IP addresses instead of hostnames if DNS issues persist
- Keep a log of successful connection settings
- Regularly verify FTP service status

6 Note

The application implements a 10-second connection timeout by default. For slow networks, try during periods of better connectivity.

7.3.2 File Operation Errors

A Warning

Common problems and solutions:

- File Not Found: Check directory path and file existence
- Permission Denied: Verify FTP user permissions
- Transfer Failed: Check disk space and connectivity
- Backup Error: Verify write permissions in backup directory

7.3.3 Restart Problems

≡ Procedure

If restart fails:

- 1. Verify httpport setting in oscam.conf
- 2. Check web interface accessibility
- 3. Review error messages in console
- 4. Verify network connectivity

Best Practices

8.1 Configuration Management

🕊 Tip

Recommended Practices:

- Create backups before making changes
- Test configuration changes carefully
- Keep local copies of working configurations
- Document your changes
- Regularly verify connection settings
- Clean up old backup files periodically

8.2 Security Considerations

A Warning

Important security measures:

- Use strong FTP passwords
- Change default usernames where possible
- Regularly update OSCam software
- Monitor access logs
- Restrict FTP access to necessary directories

Appendix A

Configuration Reference

A.1 Configuration File Format

The oscam_connection_manager.conf file uses the INI format to store host configurations. Each host is represented by a section named Host_[name], where [name] is the display name of the host.

≡ Procedure

Example configuration file structure:

```
[Host_MyServer1]
```

host = 192.168.1.100

username = root

password = mypassword

directory = /etc/tuxbox/config/

[Host_MyServer2]

host = example.com

username = root

password = anotherpassword

directory = /etc/tuxbox/config/oscam/

Each host section contains the following fields:

- host: The hostname or IP address of the server
- username: FTP username (defaults to "root")
- password: FTP password
- directory: Path to OSCam configuration files

6 Note

The configuration file is automatically:

- Created when saving host configurations
- Loaded when the application starts
- Updated when changes are made to host settings

▲ Warning

Security considerations:

- The configuration file stores passwords in plain text
- Ensure the file has appropriate permissions
- Keep the file in a secure location
- Consider using environment variables or a secure password manager for sensitive credentials

A.2 Directory Structure

```
/
coscam_connection_manager.py
coscam_connection_manager.conf
cicon.ico
cicon.png
coscam.server_[hostname]
coscam_backups/
chostname]/
coscam_backup_[timestamp]/
```