

Open API for Camera Version 1.0 dated 11th February 2021

Overview

The purpose of this document is to provide an open API for camera connectivity to MPPCB Real Time Monitoring Server. This API is published so that each Industry can publish their camera to the MPPCB Real Time Monitoring Server.

Key Supported Operations in Version 1.0

The following are the operations supported in Version 1.0 of the Open API for Camera. All clients should support full integration with all these operations.

- Real Time Streaming of Camera using RTSP or RTMP protocol
- PTZ Control using REST Interface provided by NVR (Network Video Recorder) or Camera directly. The following operation will be supported “Left”, “Right”, “Up”, “Down”, “Zoom In”, “Zoom Out”

Key Concepts

The following are the key concepts for streaming the camera.

- Industry has to install camera as per the specification provided by MPCB.
- Industry to provide the RTSP URL to the MPCB to provide connectivity for Live streaming of the camera.
- MPCB will provide unique camera ID for each camera to be connected
- Industry to provide use the REST Based PTZ Control API and trigger the PTZ camera based on the command from the MPCB Server. Industry can also subscribe to push notification for PTZ control if they choose to. MQTT based push will be provided for Push based PTZ Control.

API Details

1. For CameraStreaming

Provide the RTSP URL in the following format

```
rtsp://[username:password@]ip_address[:rtsp_port]/server_URL[?[?param1=val1[?param2=val2]...[?paramN=valN]]]
```

IP Address : The public static IP of the camera

RTSP Port

- The port number on which the server is listening for RTSP commands. The port must be a number from 1 to 65535. Port 554 is the default for RTSP.

username / password

- your username and a password as part of the RTSP URL. Ensure the password should not have the @ or / characters.

server URL

- Each RTSP server or Camera Server has its own relative server URL, so please work with camera vendor to obtain it.

paramN=valN

- Extra parameters on this context are server parameters which can be used to control compression, video size, etc. See the examples below for such parameters.

Example RTSP URLs

These examples are here to merely show the possible formatting for the RTSP URLs. They will not work for testing RTSP sources.¹

Panasonic IP camera example

rtsp://admin:password@13.168.1.111/MediaInput/h264

1. For PTZControl

Client Software for PTZ

The client software should poll on the URL

https://<onlinecems.ecmpcb.in/RTMS/Camera/<CameraID>

Camera_ID will be provided by registering the camera with MPCB.

2. The response to this will be

For Left Movement → {"command" : "Left", "cameraID": <cameraID>} For Right

Movement → {"command" : "Right", "cameraID": <cameraID> } For Up

Movement → {"command" : "Up", "cameraID": <cameraID> }

For Down Movement → {"command" : "Down", "cameraID": <cameraID>}

For ZoomIn Movement → {"command" : "ZoomIn", "cameraID":<cameraID> }

For ZoomOut Movement → {"command" : "ZoomOut", "cameraID":<cameraID>

}

Based on above controls the camera has to be moved using the PTZ control