# QR Code Accurate Docking Deployment Manual

I. Add QR code to the map as a POI

1. First, you need to print the QR code label as shown below and post it in the correct location:

The following points need to be noted :

•The printed QR code needs to measure the side lengths of the large and small codes and provide them to Slamtec support staff for adjustment. If the standard printed side length value (large size 6cm, small size 2.5cm) does not need to be adjusted, just use it directly;

•QR code posting requirements: The distance between the center of the robot's QR code camera and the ground of the small code on the QR code label must be consistent.

• Ensure that the light emitted by the QR code label is bright and the camera can recognize the QR code normally (the image can be observed through the camera calibration function)
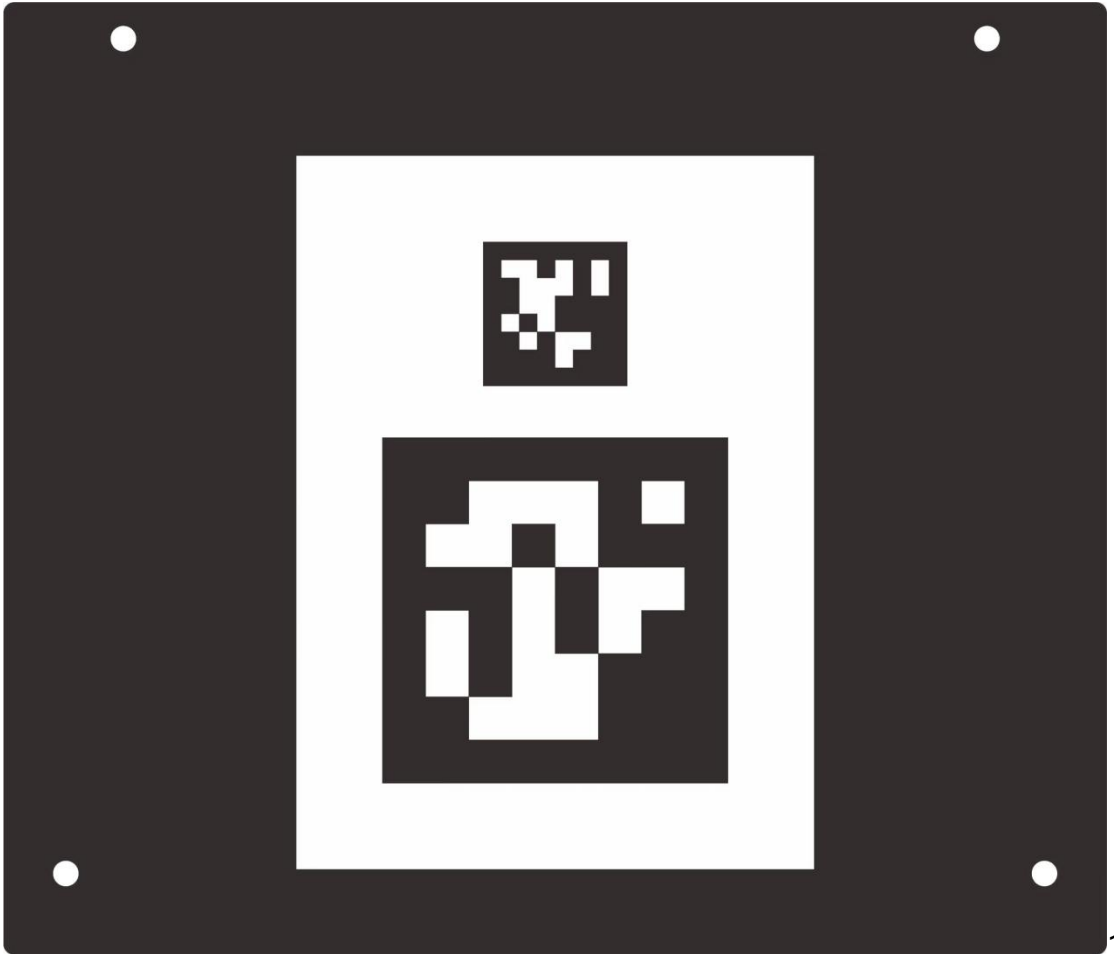
2. Press the brake release and push the robot to about 20cm directly in front of the QR code

3. RoboStudio (1.7.4 version and later) click on [POI/Add QR Code Tags].
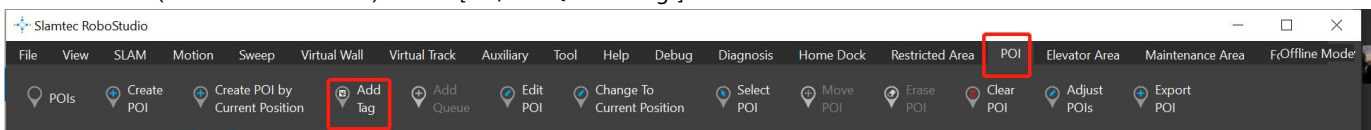
4. Enter the name of the POI in the pop-up window.
The Device SN and Cargo ID are specifically used for the delivery cabinet, but can be left blank for other scenarios. If "QR code not recognized" pops up, please adjust the robot position and angle and try again.

5. Add other QR code tags in turn.

6. Save the map, if it is a multi-floor environment, you need to combine this map with other floors into one file

II. Obtaining POI information

GET /api/core/artifact/v1/pois
Find the poi with type TAG, find the POI you need according to display_name, record the pose and tag_ids


```json
[
    {
        "id": "e9697f16-bcd7-4d71-81ef-716ff6998d07",
        "metadata": {
            "cargo_id": "",
            "display_name": "1",
            "station_id": "",
            "tag_ids": "[0,50]\n",
            "type": "TAG"
        },
        "pose": {
            "x": -0.150,
            "y": -0.030,
            "yaw": 3.120
        }
    }
]
```

III. Calling MoveToTagAction

POST /api/core/motion/v1/actions

```
{
    "action_name": "slamtec.agent.actions.MoveToTagAction",
    "options": {
        "target": {
            "x": -0.150,
            "y": -0.030,
            "yaw": 3.120
        },
        "tag_ids": [0,50],
        "relative_pose_to_tag":{
            "x":0.1,
            "y":0.0
        }
    }
}
```

※Note: target and tag_ids are the data recorded in the second step. The relative_pose_to_tag field can be left blank, x represents the vertical distance from the QR code, and y represents the lateral deviation from the center of the QR code. When not filled in, the QR code docking defaults to precise_move_to_tag.safe_distance_to_tag (7.5cm) as the default value of x, and the y value still defaults to 0

IV. Call back action first after the operation is completed to avoid collision

POST /api/core/motion/v1/actions

```
{
    "action_name": "slamtec.agent.actions.BackOffFromTagAction",
    "options":{
    }
}
```