



**APPLICATION PROGRAMMING INTERFACE
SPECIFICATIONS**

**TRAFFIC DATA
FROM
TRAFFIC DATA ANALYTICS SYSTEM**

Version: 1.1

April 2022

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| Amendment History | | |
|--------------------------|---|------------|
| Version | Revision Description | Date |
| 1.0 | First released version | 25/04/2022 |
| 1.1 | Type correction in Section 1.2.1 – Sample Request | 29/04/2022 |
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1. TRAFFIC DATA FROM TRAFFIC DATA ANALYTICS SYSTEM

This API makes use of the Transport Department Intelligent Road Network (IRN) dataset and predictive traffic conditions data from the Traffic Data Analytics System (TDAS) to provide the average traffic speed and the total journey time of the driving route from origin to destination.

For IRN dataset, please refer to Road Network (2nd generation) dataset at https://data.gov.hk/en-data/dataset/hk-td-tis_15-road-network-v2.

1.1 Request

| Method | URL |
|--------|---|
| POST | https://tdas-api.hkemobility.gov.hk/tdas/api/route |

1.2 Request Body

| Parameter | Details |
|-----------|--|
| start | <p>Description:</p> <p>(Required) The starting location with coordinates and optional buffer distance.</p> <p>Coordinates can be either a pair of latitude and longitude coordinates in WGS84 in decimal degrees, or a pair of x and y coordinates in HK80. Coordinates must be provided.</p> <p>Buffer is the maximum distance used to find the closest starting edge in unit of meter. If Buffer is omitted, the system default buffer distance (50 meters) will be used.</p> <p>Syntax:</p> <ol style="list-style-type: none">start: { lat: < number >, long: < number >, buffer: < number optional > }start: { x: < number >, y: < number >, } |

| Parameter | Details |
|-----------|--|
| | <pre> buffer: < number optional > } </pre> <p>Example:</p> <ol style="list-style-type: none"> start: { <ul style="list-style-type: none"> lat: 22.3964, long: 114.1095, buffer: 50 start: { <ul style="list-style-type: none"> x: 834869.80, y: 818075.18, buffer: 50 |
| end | <p>Description:</p> <p>(Required) The destination location with coordinates and optional buffer distance.</p> <p>Coordinates can be either a pair of latitude and longitude coordinates in WGS84 in decimal degrees, or a pair of x and y coordinates in HK80. Coordinates must be provided.</p> <p>Buffer is the maximum distance used to find the closest destination edge in unit of meter. If no buffer is provided, the system default buffer distance (50 meters) will be used.</p> <p>Syntax:</p> <ol style="list-style-type: none"> end: { <ul style="list-style-type: none"> lat: < number >, long: < number >, buffer: < number optional > end: { <ul style="list-style-type: none"> x: < number >, y: <number>, buffer: < number optional > <p>Example:</p> <ol style="list-style-type: none"> end: { <ul style="list-style-type: none"> lat: 22.3964, |

| Parameter | Details |
|-----------|---|
| | <pre> long: 114.1095, buffer: 300 } 2. end: { x: 834869.80, y: 818075.18, buffer: 100 } </pre> |
| departIn | <p>Description:</p> <p>(Optional) The time in minutes to depart from the start location. The latest departure time is 90 minutes from current time. If this parameter is omitted, departure time is assumed as the current time.</p> <p>Syntax:</p> <ol style="list-style-type: none"> 1. departIn: <int> <p>Values:</p> <ol style="list-style-type: none"> 1. 0 2. 15 3. 30 4. 45 5. 60 6. 75 7. 90 <p>Example:</p> <ol style="list-style-type: none"> 1. departIn: 15 <p>Note:</p> <p>Please specify value of departure time from the above 7 options. Otherwise, the closest value to one of the options will be applied.</p> |
| lang | <p>Description:</p> <p>(Optional) Language to be returned. Based on the value passed in, the response should return in the corresponding language. If this parameter is omitted, language is assumed as Traditional Chinese.</p> <p>Syntax:</p> <ol style="list-style-type: none"> 1. lang: <text> |

| Parameter | Details |
|-----------|---|
| | <p>Values:</p> <ol style="list-style-type: none"> tc (Traditional Chinese - Default) sc (Simplified Chinese) en (English) <p>Example:</p> <ol style="list-style-type: none"> lang: tc |
| type | <p>Description:</p> <p>(Optional) The type of route to be returned. If this parameter is omitted, type of route is assumed as the shortest time.</p> <p>Syntax:</p> <ol style="list-style-type: none"> type: <text> <p>Values:</p> <ol style="list-style-type: none"> ST (Shortest Time - Default) SD (Shortest Distance) <p>Example:</p> <ol style="list-style-type: none"> type: ST |
| tunnel | <p>Description:</p> <p>(Optional) Parameter to force the usage of a cross harbour tunnel when crossing between Hong Kong Island and Kowloon.</p> <p>Syntax:</p> <ol style="list-style-type: none"> tunnel: <text > // Code of Harbour Tunnel <p>Value:</p> <ol style="list-style-type: none"> cht (Cross-Harbour Tunnel) eht (Eastern Harbour Crossing) wht (Western Harbour Crossing) <p>Example:</p> <ol style="list-style-type: none"> tunnel: cht |

1.2.1 Sample Request

```

POST /api/route HTTP/1.1
Host: https://tdas-api.hkemobility.gov.hk/tdas/api/route
Content-Type: application/json
Content-Length: 230

{
  "start": {
    "lat": 22.287826,
    "long": 114.204979
  },
  "end": {
    "lat": 22.342032,
    "long": 114.154581
  },
  "departIn": 15,
  "lang": "en",
  "type": "ST",
  "tunnel": "wht"
}

```

1.3 Response

| Status | Response |
|--------|--|
| 200 | <pre> { jSpeed : <text>, // Overall average journey speed in km/h distM : <number>, // Total distance in meter distU : <text>, // Total distance with unit eta : <time>, // Estimated journey time in hh:mm cht : <bool>, // Used Cross-Harbour Tunnel wht : <bool>, // Used Western Harbour Crossing eht : <bool>, // Used Eastern Harbour Crossing ar: [{ // Alternate Route (If crossing harbour) name : <text>, // Name of harbour tunnel (cht, wht, eht) distU : <text>, // Total distance with unit eta : <text>, // Estimated journey time in hh:mm }], route: [{ // List of Route start : { // Start location for this part of the route intersect : [double], // Pair of coordinate for the start location rid : <int> // Route_ID of Centreline feature in IRN }, end : { // End location for this part of the route intersect : [double], // Pair of coordinate for the end location </pre> |

| Status | Response |
|--------|---|
| | <pre> rid : <int> // Route_ID of Centreline feature in IRN }, segment: [{ // List of Segments dir : <int>, // Travel Direction Code [0 – 4] 0. turn to 1. keep / turn left to 2. keep / turn right to 3. keep going to 4. turn around to rid : [<int>], // Route_ID(s) of Centreline feature in IRN ped: [{ // Pedestrian Zone (if applicable) id : <int>, // PED_ZONE_ID // of Pedestrian_Zone feature in IRN desc : <text> // Description }], }] }] }</pre> |
| 400 | <p>Bad Request</p> <pre> { "Message": "No route is available. Please review the location(s) of origin and/or destination." } { "Message": " No road centreline is found within 50m from the [start/end] location." }</pre> |
| 500 | Internal Server Error |

1.3.1 Sample Response

```

{
  "jSpeed": "50 km/h",
  "distM": 15605,
  "distU": "15.6 km",
  "eta": "00:20",
  "cht": false,
  "eht": false,
  "wht": true,
  "ar": [
    {
      "name": "cht",
```

```
        "distU": "17.97 km",
        "eta": "00:32"
    },
    {
        "name": "eht",
        "distU": "22.16 km",
        "eta": "00:29"
    }
],
"route": [
    {
        "start": {
            "rid": 3086,
            "intersect": [
                22.287826,
                114.204979
            ]
        },
        "end": {
            "rid": 268304,
            "intersect": [
                22.342032,
                114.154581
            ]
        },
        "segment": [
            {
                "dir": 3,
                "rid": [
                    3086
                ]
            },
            {
                "dir": 1,
                "rid": [
                    5461
                ]
            },
            {
                "dir": 1,
                "rid": [
                    2222,
                    1728
                ]
            },
            {
                "dir": 1,
                "rid": [
                    3652,
                    2514,
                    768,
                    2893,
                    2779,
                    3732
                ]
            },
            {
                "dir": 1,
                "rid": [
                    3655,
                    2264
                ]
            }
        ]
    }
]
```

```
},
{
  "dir": 2,
  "rid": [
    3261,
    3366
  ]
},
{
  "dir": 2,
  "rid": [
    1724,
    5801
  ]
},
{
  "dir": 1,
  "rid": [
    276724,
    2501,
    4636,
    263344
  ]
},
{
  "dir": 2,
  "rid": [
    261655
  ]
},
{
  "dir": 1,
  "rid": [
    262806,
    261670
  ]
},
{
  "dir": 2,
  "rid": [
    265822,
    265823,
    263312
  ]
},
{
  "dir": 2,
  "rid": [
    263307,
    263309,
    263308,
    262781,
    5741,
    1061,
    5229,
    5134,
    458,
    3594,
    3345,
    106784,
    105994,
    105595,
```

```
        163857
      ]
    },
    {
      "dir": 1,
      "rid": [
        106932
      ]
    },
    {
      "dir": 1,
      "rid": [
        106925
      ]
    },
    {
      "dir": 1,
      "rid": [
        105599,
        106937
      ]
    },
    {
      "dir": 2,
      "rid": [
        106735,
        106736,
        107044,
        106153,
        107062,
        106233,
        106185,
        107060,
        106184
      ]
    },
    {
      "dir": 2,
      "rid": [
        7709,
        7703,
        7411,
        7713,
        9317,
        9012,
        106350,
        106695,
        106340
      ]
    },
    {
      "dir": 1,
      "rid": [
        110024
      ]
    },
    {
      "dir": 1,
      "rid": [
        106321
      ]
    }
  ],
```

```
{
  "dir": 2,
  "rid": [
    9330
  ]
},
{
  "dir": 1,
  "rid": [
    8294
  ]
},
{
  "dir": 2,
  "rid": [
    7685
  ]
},
{
  "dir": 1,
  "rid": [
    8978,
    9015,
    8629
  ]
},
{
  "dir": 2,
  "rid": [
    9618,
    115794,
    8308,
    261355,
    261354,
    106592,
    261352,
    261353,
    106623,
    106624,
    106583,
    106640,
    106602
  ]
},
{
  "dir": 1,
  "rid": [
    106584
  ]
},
{
  "dir": 2,
  "rid": [
    106567
  ]
},
{
  "dir": 1,
  "rid": [
    106521
  ]
},
},
```

```
{
  "dir": 1,
  "rid": [
    268303,
    271145,
    268304
  ]
}
```