



Office of the Government Chief Information Officer
The Government of the Hong Kong Special Administrative Region

多功能智慧灯柱的功能总览 (数据字典)

Summary of Functions on Smart Lampposts (Data Dictionary)

Version 1.1

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Version	Details of Change	Effective Date
1.0	Initial Release	25 July, 2019
1.1	Updates on item names for traffic, meteorological, and air quality data	16 October, 2020

此数据集提供多功能智慧灯柱功能总览 This dataset provides summary of functions on smart lampposts

项目 Item	说明 Description	细节 Note	容许空白内容 Allow null value
位置 / 路段 Location / Road Segment	灯柱的所在位置 / 路段 Location / Road segment that the smart lamppost located	例如 e.g.: Sheung Yuet Road	不容许 No
灯柱编号 Lamppost Number	路政署的灯柱编号 Lamppost number assigned by Highways Department	例如 e.g.: DF3633	不容许 No
位置坐标 Location coordinates	灯柱位置的经度数值 单位数值：小数位数值 (DDD.DDDDDDD) Latitude value that the smart lamppost located Unit: decimal degree (DDD.DDDDDDD)	例如 e.g.: 22.321646	不容许 No
	灯柱位置的纬度数值 单位数值：小数位数值 (DDD.DDDDDDD) Longitude value that the smart lamppost located Unit: decimal degree (DDD.DDDDDDD)	例如 e.g.: 114.207771	不容许 No
功能和应用 Functions and Applications	收集交通数据的装置 Devices for collection of traffic data 收集实时交通数据 To collect real-time traffic data	例如 e.g.: Y	容许 Yes

	项目 Item	说明 Description	细节 Note	容许空白内容 Allow null value
功能和应用 Functions and Applications	气象传感器以收集地区层面的试验性数据 Meteorological Sensors for collection of experimental data at district level	收集地区层面的气象和相关数据，包括气温和相对湿度、风速和风向、降雨量、环境伽马辐射等 To collect meteorological data at district level including temperature, humidity, wind speed and direction, rainfall, gamma radiation, etc.	例如 e.g.: Y	容许 Yes
	收集地区层面空气质素数据的装置 Devices for collection of air quality data at district level	收集地区性的空气质素数据，包括一氧化氮、二氧化氮和细微悬浮粒子 (PM2.5)的浓度 To collect air quality data at district level, including concentration of nitrogen oxide, nitrogen dioxide and concentration of PM2.5	例如 e.g.: Y	容许 Yes
	定位服务 - 蓝牙传送器 Positioning services - Bluetooth Beacon	提供 2.4 GHz 蓝牙低功耗讯号，智能手机用户可用作实时定位应用。每枝多功能智慧灯柱安装了 4 个蓝牙传送器，其中 2 个安装在距离地面约 4 米，另外 2 个安装在距离地面约 2 米的高度。 To transmit 2.4 GHz Bluetooth Low Energy (BLE) signals for use in real-time positioning applications by general smartphone users. Four Bluetooth beacons were installed on each multi-functional smart lamppost, two were installed at about 4m above ground and two others were installed at about 2m above ground	例如 e.g.: Y	容许 Yes

	项目 Item	说明 Description	细节 Note	容许空白内容 Allow null value
功能和应用 Functions and Applications	定位服务 - 无线射频识别标签 Positioning services - RFID tag	<p>透过无线射频识别标签提供定位服务。无线射频识别标签储存相应的灯柱编号和相关位置数据。这些数据可通过一般的无线射频识别标签阅读器进行检索，范围可达 10 米，适用于各种定位工作，尤其适用于视障人士的导航应用。每一组无线射频识别(RFID)标签 由三个超高频（UHF）射频识别标签组成。它们沿着每枝灯柱的圆周平均安装，离地面约 0.1 米。</p> <p>To provide positioning service via RFID tag. The RFID tag stores the corresponding lamppost number and relevant location information. The information can be retrieved by common commercial RFID readers remotely at range up to 10 m for various location-based applications, especially for navigation application for visually impaired persons. The RFID tag pack consists of 3 passive Ultra-High Frequency (UHF) RFID Tags. They are installed evenly along circumference of each lamppost base and at height of 0.1m above ground.</p>	例如 e.g.: Y	容许 Yes
	定位服务 - 地理二维码标签 Positioning services - Geo-QR Code Tag	提供准确的定位讯息及链接一个能搜寻附近地理信息的网页及为用户提供高安全规格的定位数据和灯柱数据给不同的定位应用。地理二维码卷标包括近场通讯（NFC）卷标及地理二维码。它安装在面向人行道及离地面约 1.3 米高的灯柱位置上。	例如 e.g.: Y	容许 Yes

	项目 Item	说明 Description	细节 Note	容许空白内容 Allow null value
		To provide accurate positioning information and a webpage to access nearby geographical information and to provide users with high security positioning data and lamppost information for various location-based applications. The Geo-QR code tag consists of a passive Near Field Communication (NFC) tag readable by smartphones and one Quick Response Code (Geo-QR Code) printed on the cover panel of the pack. It is installed at about 1.3m above ground, facing towards pedestrian walkway.		
功能和应用 Functions and Applications	定位服务 - 地理标记 Positioning services - Geo marker	提供准确的位置讯息给各类定位服务使用。地理位置标记是一块 150 毫米 x 300 毫米的铝板，由一个地理二维码和一个目标标记组成，安装在面向行车道及离地面约 3 米的位置上。 To provide accurate positioning information for various location-based applications. The Geo-marker is a 150mm x 300mm aluminum plate consists of one Geo-QR code and one Target Marker mounted at about 3m above ground facing carriageway.	例如 e.g.: Y	容许 Yes
	免费 Wi-Fi 服务 Free Wi-Fi service	提供免费 Wi-Fi 服务 To provide free Wi-Fi service	例如 e.g.: Y	容许 Yes