

# Product Presentation: Hi-Target iRTK5 GNSS System

Applicant Name: D-Reality  
Consultancy Limited

Product name: iRTK5 GNSS  
RTK System (Base or Rover  
set)

Specification: iRTK5 GNSS  
RTK System-Tech Spec.pdf



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Core Functions:

- Real Time Kinematic(RTK) Surveying, Horizontal 8mm+1ppm RMS, Vertical 15mm+1ppm RMS
- E-bubble
- High-precision static: Horizontal 2.5mm + 0.1ppm, Vertical 3.5mm + 0.4ppm
- The battery capacity is 6800mAH

Technology Used:

- 336 channels, satellite constellations support: BDS 、 GPS 、 GLONASS 、 Galileo
- 30-degree tilt survey, IMU does not require calibration

Key Improvement in Construction Process:

- Productivity: Reduce manhours 33%
- Quality: Signal Channels +53%
- Safety: Reduce heavy equipment transportation 4%
- Environmental: Internal Data Storage 100%

Job Reference:

- Project Name(s): Etihad Railway Project; Location: Etihad, United Arab Emirates (UAE); Trial / adoption: adoption; Year: 2020

# Innovative Features

## Core Technology:

- 336 channels, satellite constellations support: BDS 、 GPS 、 GLONASS 、 Galileo; 30-degree tilt survey, IMU does not require calibration

## Patent (if applicable):

- IP Right Consent-20200224.pdf

## Comparison with current practice and popular models:

- Technology: 336 channels, satellite constellations support: BDS 、 GPS 、 GLONASS 、 Galileo; 30-degree tilt survey, IMU does not require calibration
- Specification: iRTK5 GNSS RTK System-Tech Spec.pdf
- Benefits including cost benefits (product prices vs merits): efficiency enhanced by core technology

## Comparison with similar Pre-approved list products and competitors:

- Technology: 336 channels, satellite constellations support: BDS 、 GPS 、 GLONASS 、 Galileo; 30-degree tilt survey, IMU does not require calibration
- Specification: iRTK5 GNSS RTK System-Tech Spec.pdf
- Benefits including cost benefits (product prices vs merits) : efficiency enhanced by core technology
- First Launch Date: the very first version-08/2018, and the latest version-07/2019
- Awards (if applicable): (International / Local) N/A



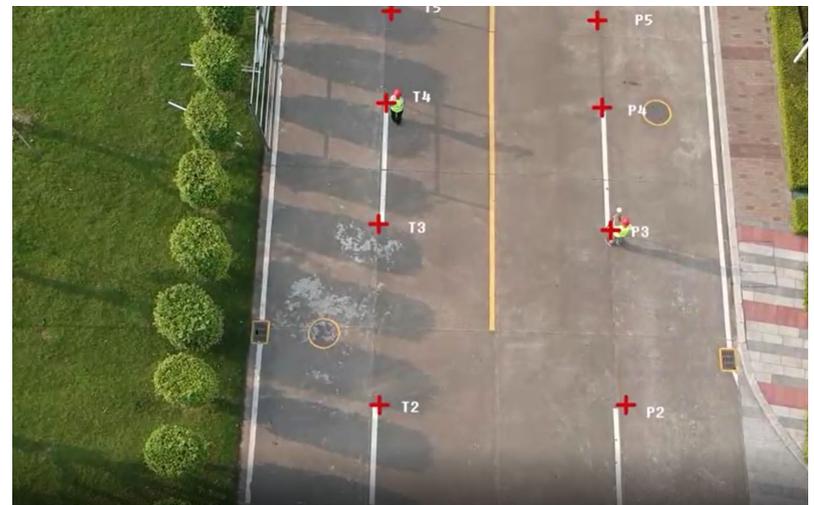
## Adoption Example

Project for Illustration: [Name, location, year]

- Project Name(s): Etihad Railway Project; Location: Etihad, United Arab Emirates (UAE); Trial / adoption: adoption; Year: 2020

Work Process: completed

Use/ Function in project: adoption in control survey and setting out



# Benefits – Productivity

| 建造業創科<br>基金目標<br>CITF<br>Objective | 評估範圍<br>Aspect for<br>Assessment | 量化表現 Quantitative Performance |                           |                               | 表現改善 Improvement in Performance<br>(與以往最好的方法相比)<br>(compared to best method available in the<br>past) |                |
|------------------------------------|----------------------------------|-------------------------------|---------------------------|-------------------------------|---|----------------|
|                                    |                                  | 此產品<br>This Product           | 過往型號<br>Previous<br>Model | 傳統方法<br>Traditional<br>Method | 項目內的絕對值<br>Absolute Value in<br>Project   | 百分比 Percentage |
| 促進生產力^<br>Productivity^            | Save mandays                     | 1                             | 1                         | 5                             | 0   | [0 ] %         |
|                                    | Reduce manhours                  | 8                             | 12                        | 48                            | -4  | [-33] %        |
|                                    | Reduce manpower                  | 2                             | 2                         | 6                             | 0   | [0 ] %         |



# Benefits – Quality

| 建造業創科<br>基金目標<br>CITF<br>Objective | 評估範圍<br>Aspect for<br>Assessment | 量化表現 Quantitative Performance |                  |                     | 表現改善 Improvement in Performance<br>(與以往最好的方法相比)<br>(compared to best method available in the<br>past) |                |
|------------------------------------|----------------------------------|-------------------------------|------------------|---------------------|---|----------------|
|                                    |                                  | 此產品<br>This Product           | 過往型號<br>Previous | 傳統方法<br>Traditional | 項目內的絕對值<br>Absolute Value in  | 百分比 Percentage |
| 提高建造質<br>素*<br>Quality*            | Enhance<br>precision             | 2.5mm                         | 2.5mm            | 3mm                 | 0   | [ 0 ]%         |
|                                    | Enhance data<br>quality          | 0.1 ppm                       | 0.1 ppm          | 1 ppm               | 0   | [0 ]%          |
|                                    | Signal<br>Channels               | 336                           | 220              | NIL                 | 116   | [53] %         |



# Benefits – Safety

| 建造業創科<br>基金目標<br>CITF<br>Objective | 評估範圍<br>Aspect for<br>Assessment            | 量化表現 Quantitative Performance |        |      | 表現改善 Improvement in Performance<br>(與以往最好的方法相比)<br>(compared to best method available in the<br>past) |                |
|------------------------------------|---|-------------------------------|--------|------|---|----------------|
|                                    |   | 此產品                           | 過往型號   | 傳統方法 | 項目內的絕對值   | 百分比 Percentage |
| 改善工地安<br>全+<br>Safety+             | Reduce workers in<br>exposing to risk       | 8                             | 8      | 48   | 0   | [ 0 ]%         |
|                                    | Reduce<br>workers on<br>site                | 2                             | 2      | 6    | 0   | [ 0 ]%         |
|                                    | Reduce heavy<br>equipment<br>transportation | 1.2kg                         | 1.25kg | 30kg | 0.05kg  | [ 4 ]%         |



# Benefits – Environmental

| 建造業創科<br>基金目標<br>CITF<br>Objective | 評估範圍<br>Aspect for<br>Assessment | 量化表現 Quantitative Performance         |                                       |                                       | 表現改善 Improvement in Performance<br>(與以往最好的方法相比)<br>(compared to best method available in the<br>past) |                |
|------------------------------------|----------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---|----------------|
|                                    |                                  | 此產品<br>This Product                   | 過往型號<br>Previous<br>Model             | 傳統方法<br>Traditional<br>Method         | 項目內的絕對值<br>Absolute Value in<br>Project   | 百分比 Percentage |
| 提升環保效<br>益@<br>Environmental@      | Reduce waste                     | 100%<br>paperless                     | 100%<br>paperless                     | 15nos A4<br>pages                     | 0   | [ 0 ]%         |
|                                    | Reduce<br>carbon<br>footprint    | light loading<br>in<br>transportation | light loading<br>in<br>transportation | heavy loading<br>in<br>transportation | 0   | [ 0 ]%         |
|                                    | Internal Data<br>Storage         | 16GB                                  | 16GB                                  | 8GB                                   | 0   | [ 0 ]%         |

