

EPTS Performance Test Report

July 1st, 2019

STATSports Apex

This report details the performance test carried out in accordance with the test protocol for Electronic & Performance Tracking Systems

 **FIFA**[®]

Product details

Manufacturer	STATSports
Product Name	Apex
Serial number	
Firmware version	
EPTS Type	GPS

Test details

Date	21st November 2018
Location	Barcelona Mini Estadi
Submission deadline met	1 hour post testing
Satellite availability (GPS)	12 - 14
Certification Expiry Date	31/11/2021
Age of participants	Under 13

Fulfilment of test requirements

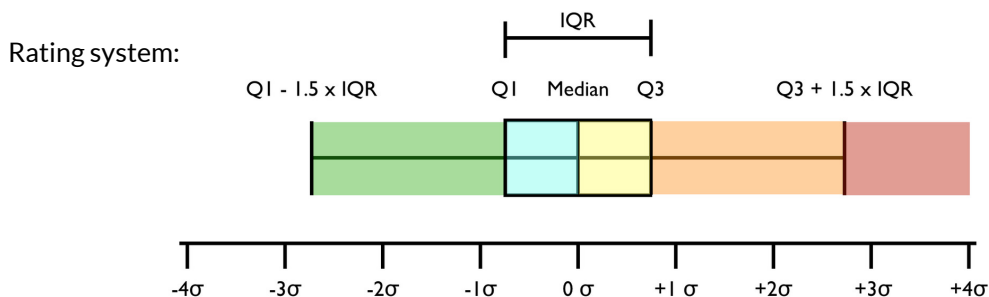
Test block	Capture & Submission
Circuit	√
2 v 2 Game	√
3 v 3 Game	√
5 v 5 Game	√
Complete Pitch Coverage	√

Data processing

Process	Comments
Data export	No issues noted - och file format provided for each player
Time stamp	Consistent 10 Hz file format provided
File matching	Files matched using cross-correlation method
Other	

Analysis interpretation

Measure	Definition
Root mean square difference (RMSD)	A commonly used measure of accuracy based on the sample standard deviation (σ) of the differences between the manufacturer and Vicon system. A large sample of RMSD values from GPS, LPS & Optical manufacturers comparisons were used to set the ranking criteria.
Data points	Varies depending on the quality of Vicon capture, as only the highest quality data is used for compared with Vicon comparative purposes.



Legend:

- Well-above industry standard
- Above industry standard
- At industry standard
- Below industry standard
- Well-below industry standard

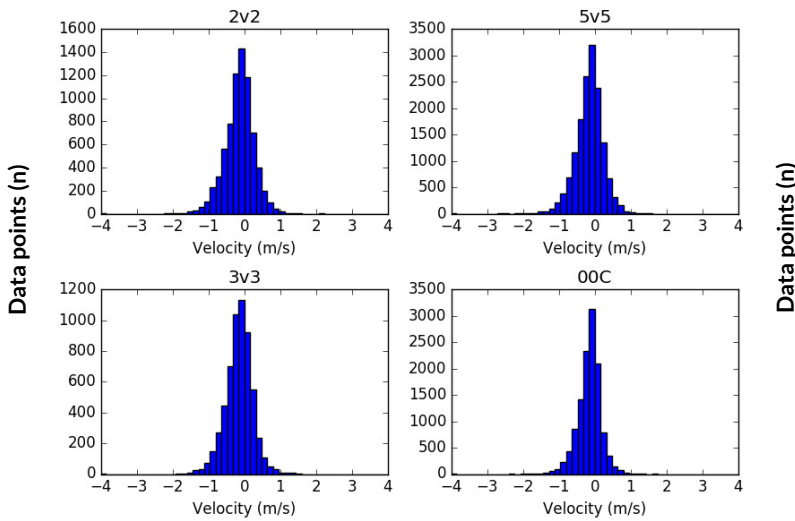
Rating by FIFA Velocity Band

	0-7 km/h	7-15 km/h	15-20 km/h	20-25 km/h	25+ km/h
Velocity RMSD (m/s)				N/A	N/A
Position RMSD (m)					

Legend	Well-above	Above	Standard	Below	Well-below

*N/A : No comparison available due to velocities not being achieved by participants

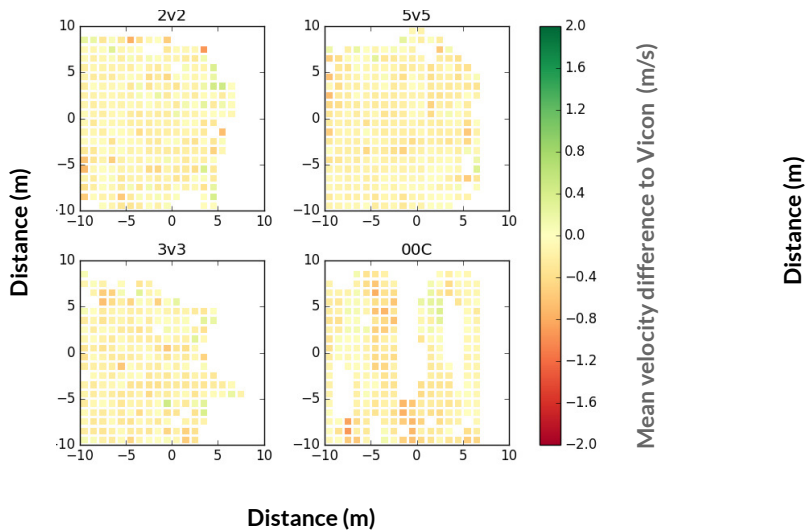
Histogram of Velocity Differences (m/s)



Histogram of Position Differences (m)

Not assessed

Mean velocity difference to Vicon (m/s)



Mean position difference to Vicon (m)

Not assessed

Mean Position different to Vicon (m)