
CKAS OpenFRM Single



Introduction

The CKAS OpenFRM Single is a mid cost 6 degree of freedom (6DOF) simulation platform targeted at simulator builders who are seeking to quickly develop a **medium to high fidelity motion simulator** of any kind for up to 1 person. The OpenFRM Single comes with a choice of two different payload motion systems and can be turned into a motion simulator very quickly with little addition of parts from the simulator builder.

Target Applications

- **Medium Scale Light Weight Professional Fidelity Flight Training Simulators for up to 1 person**
- **Medium Scale Military Training Simulators for up to 1 person**
- **Medium Scale Professional Fidelity Commercial Vehicle and Truck Driver Training Simulators**
- **Medium Scale Mining Equipment Simulators and Heavy Earth Moving Equipment Simulators**
- **Medium Scale Professional Fidelity Train Driver Simulators for up to 1 person**
- **Medium Scale Professional Fidelity Research Platforms**

General Description and Capabilities

The CKAS OpenFRM Single is based around the CKAS V4 and V7 6DOF Motion Systems, which feature some incredible response and fidelity. The OpenFRM Single allows a professional simulator builder or very serious home user to "instantly" build a sizeable motion simulator from typically available components such as monitors, gaming controllers and seats, often already purchased for previous set ups, and finally adds the most sought after quality of a real simulator – true full motion.

The CKAS OpenFRM Single features a 2080mm total width with typical monitors mounted, and sits less than 2200mm high when parked. It is integrated with a V4 or V7 motion system, whose floor sits at 725mm high, therefore requiring the need for a specialised stair or gangway for stepping up onto it.

The expected life of the OpenFRM Single is extremely high for its price point, and the maintenance requirements are minimal, especially important in commercial or consumer based applications.

The CKAS OpenFRM Single comes with the following inclusions:

- CKAS V4 or V7 6DOF Motion Platform (choice of 2 payloads)
- Rigid Aluminium Alloy framework and assembling hardware (screws/brackets/etc) which requires some very basic assembly to hold the main structure on the motion platform
- Rigid prefabricated Aluminium Alloy structure to hold up to three typical 42" LCD or LED monitors / TV's (VESA 200 x 200 and VESA 200 x 100 mounting holes) for total immersion.
- Rigid 25mm multi-ply floor for installing all the cockpit components such as seats, controls and other components.

The following items are NOT included in a CKAS OpenFRM Single:

- Computer is not included – The computer is provided by the customer since CKAS has no control over the final application. The computer must run Microsoft Windows XP/Vista/7 to interface with the motion system.
- Monitors / TV's are not included – most customers already own monitors for gaming, or alternatively they can be purchased locally cheaper than being shipped from CKAS in Australia (42" with low profile bezel and 200mm x 100mm or 200mm x 200mm mounting systems at rear are recommended).
- Cockpit Hardware is not included – The cockpit hardware is purely at the discretion of the customer, since they are providing the end result simulator.
- Seats are not included – Due to the fact that all customers have a different specification for the type of simulator that is required, CKAS does not provide seats for the simulation platform.

For more information about software compatibility and performance characteristics, please see data sheet for CKAS V4 and V7 6DOF Motion Systems (6DOF Systems)

General Specifications

(Subject to change without notification)

Product Name	CKAS OpenFRM Single
Product Code	OPENFRMS
Product Number	24.0001.11
Product Description	Medium Scale 6 degree of freedom Simulation Platform
Harmonization Code (HS)	Electrical machines and apparatus, having individual functions, not specified or included anywhere. Typical numbers include: 854370 or 854380 or 8543.70.96.50 or 8543.70.90.99

Mechanical Specifications

Framework material	Pre-Painted Aluminium Alloy	
Visual System Architecture	Pre-Painted Triple Monitor Support Aluminium Alloy Prefabricated Bracket	
Visual Field of View (w monitors)	200° Horizontal x 40° Vertical (at the design eye point)	
Motion System Adaptability	CKAS V4 6DOF Motion System	CKAS V7 6DOF Motion System
Nominal Width (with monitors)	2250 mm (88.6")	2300 mm (90.6")
Nominal Length	2000 mm (78.7")	2050 mm (80.7")
Nominal Height (with monitors)	2200 mm (86.6")	2200 mm (86.6")
Approx unit weight (w/o monitors)	400 kg (880 lb)	570 kg (1,260 lb)
Anchoring Specification	6 places 13mm holes distributed to be anchored with 10-12mm fasteners	

Performance Specifications

Available User Payload	300 kg (660 lb)	550 kg (1,210 lb)
Available User Moment of Inertia	80 kg.m ² (1,900 lb.ft ²)	220 kg.m ² (5,220 lb.ft ²)
Payload CG horizontal offset	Less than 100mm from Centroid of Flying Platform	
Payload CG Vertical offset	Less than 600mm high from top of Flying Platform	

For more information about performance characteristics, please see data sheet for CKAS V4 and V7 6DOF Motion System (6DOF Systems).

Electrical Specifications

For more information about electrical characteristics, please see data sheet for CKAS V4 and V7 6DOF Motion System (6DOF Systems).

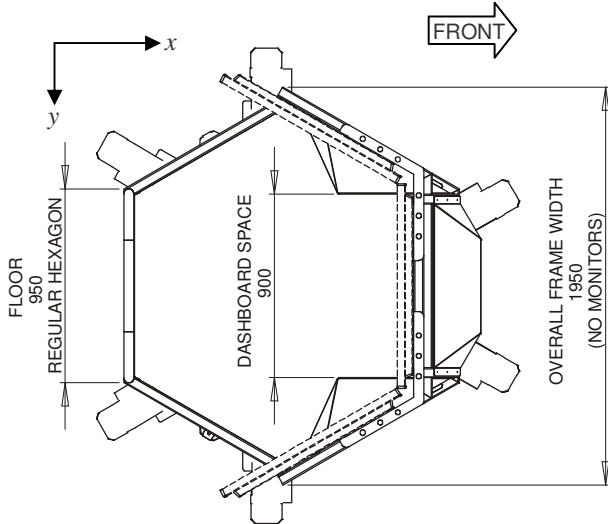
Software Specifications

For more information about software compatibility, please see data sheet for CKAS V4 and V7 6DOF Motion System (6DOF Systems).

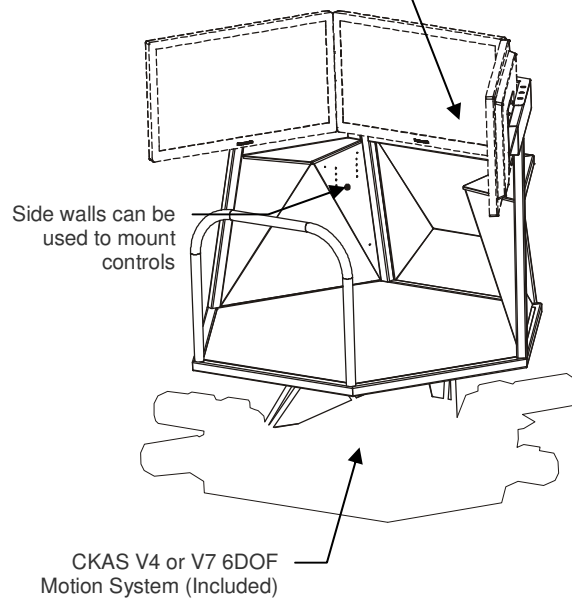
CKAS OpenFRM Single Engineering Dimensions

(Subject to change without notification)

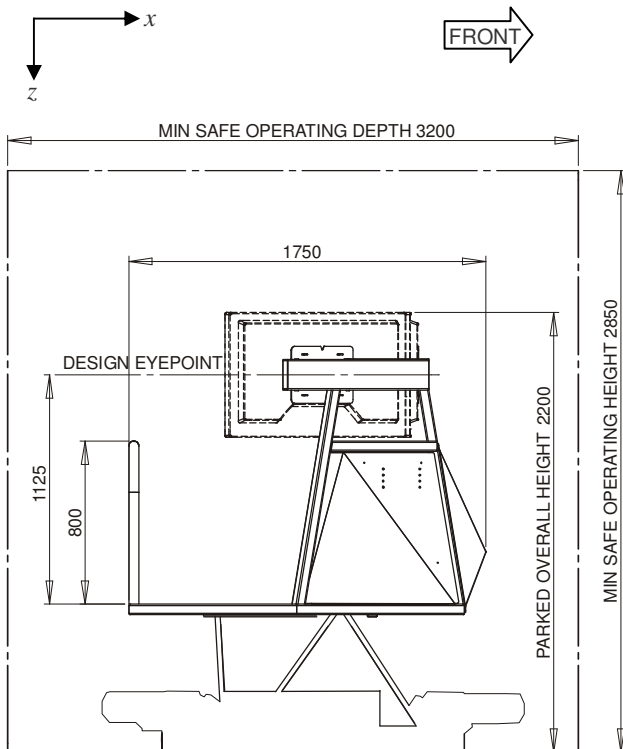
View of Simulation Platform from TOP



Typical 42" Widescreen Monitors (not included)



View of Simulation Platform from RIGHT



View of Simulation Platform from FRONT

