

# zCore Unity Plugin 4.0.0: Release Notes

## Changes

- **General:** All APIs have been redesigned to closely mirror the native Core SDK API.
- **General:** All APIs that accept parameters or return values of type `UnityEngine.Matrix4x4` now ensure that they are in Unity's left-handed coordinate space. The only exceptions are the projection matrices corresponding to the user's right and left eyes since Unity expects projection matrices to be right-handed.
- **General:** All APIs will now throw exceptions when errors occur.

## Features

- **Configuration:** Supports both Unity 4 and 5.
- **Configuration:** Supports both 32-bit and 64-bit Windows.
- **General:** New APIs have been added across the board to expose all functionality available in the native Core SDK. Please see the new zCore 4.0.0 API documentation for details.
- **Debug:** New custom inspector organized in the following sections: General Info, Debug, Stereo Rig, Glasses, Stylus, and Displays.
- **Debug:** Now provides the ability to display custom Gizmos and debug visualizations corresponding to the application's viewport, current display, comfort zones, real-world up, ground plane, active targets, etc. in Unity's Scene View during edit/play mode.
- **Events:** Exposes new events to notify listeners when ZCore internal updates begin/end, tracker targets have moved, tracker target buttons have been pressed/release, etc.
- **Samples:** Includes the following new samples:
  - `CameraNavigationSample`
  - `StylusEventsSample`
  - `StylusLedSample`
  - `StylusObjectManipulationSample`
  - `StylusVibrationSample`

## Improvements

- **Coordinate Spaces:** World space has been added to the `CoordinateSpace` enum. This provides the ability to transform any `Pose` or `Matrix4x4` from any of the existing

coordinate spaces (Tracker, Display, Viewport, Camera) to Unity's world space and vice-versa.

- **Tracking:** New Pose class has been added to replace direct usage of Unity's Matrix4x4 when representing tracker target poses.
- **Tracking:** Added new inspector property MinimizeLatency responsible for minimizing the latency between querying the latest head pose information and applying it to the view/projection matrices used by the stereo camera rig.