

MR STUDIO Solution Brief

Enterprise Mixed Reality Collaboration and Visualization

Mixed Reality Platform

Arvizio's MR Studio™ platform provides a multi-user and multi-site shared mixed reality experience for working with 3D models from CAD/BIM systems or complex real world 3D scan/LiDAR data. Features include the ability to walk through designs at life size, align models with the real world for AR/MR digital twin scenarios and conduct virtual design reviews or training programs with multiple participants sharing a synchronized view of virtual objects.

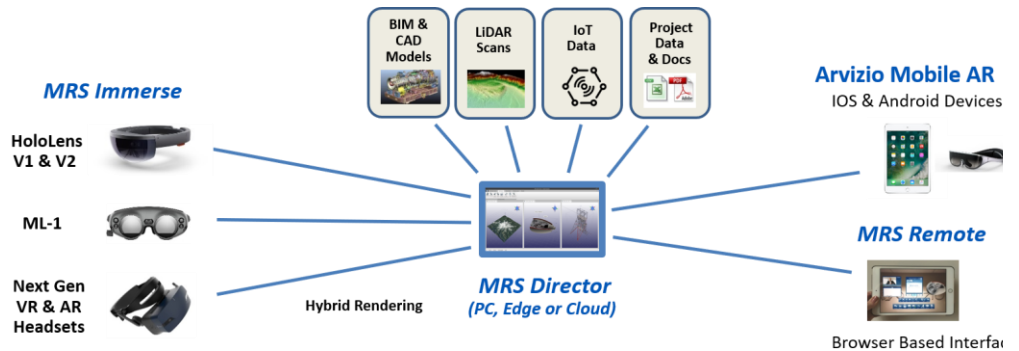
MR Studio Solution Architecture

The Arvizio MR Studio platform combines advanced 3D visualization, real-time collaboration and data integration in a single comprehensive solution with these key components:

- **MR Studio Director** – An extensible platform that manages the full MR experience including import, processing and preparation of complex 3D models optimized with automatic Level of Detail (LOD). Director also provides real-time sharing, multi-site and multi-user collaboration, data integration, document viewing and annotation capabilities.
- **MR Studio Immerse** – A mixed reality application for complex 3D holographic model viewing and collaboration. Immerse enables both standalone and fully synchronized operations with MR Studio Director. It allows users to load, rotate, zoom and manage models as well as view integrated data and associated documents.
- **MR Studio Remote** – Provides cross platform remote collaboration for web browser based devices. It provides active viewing and full participation for customers and internal stakeholders in the mixed reality experience without the need of a mixed reality device.
- **Arvizio Mobile AR** – Leverage MR Studio Director in conjunction with ARCore & ARKit to visualize 3D models on mobile devices and tablets in augmented reality. Offers alignment, annotation, sharing and large model streaming capabilities with the ability to share in the experience via iOS or Android devices.

Key Features

- Optimize and manage large and complex 3D models
- 20+ spatial data formats supported including CAD, BIM/IFC, OBJ, FBX, STL, etc.
- Support of large LiDAR point cloud models (billions of points)
- Hybrid Rendering for high definition model visualization
- Metadata handling for structured models
- Dynamic LOD capabilities
- Real-time collaboration with local and remote participants
- Rapidly connect and synch headsets with QR Code
- Integrate with IoT streams, Database and Big Data systems
- 1:1 scale interaction with holographic models
- Automatically scale and align models with the physical world
- Accurate in-model and real-world measurement tool
- Real-time and persistent annotation capabilities
- Project data and document viewing and collaboration
- Easy installation



Visualize 3D Models with LOD
Multi-User Collaboration
Walk Through At Life Size

Optimize & Stream Complex 3D Models for Use with XR Devices
Manage Multi-User XR Collaboration Sessions
Integrate Project Info, Docs & IoT Data

About Arvizio

Arvizio delivers enterprise solutions for augmented and mixed reality experiences utilizing Microsoft HoloLens™, Magic Leap and virtual reality devices. Our MR Studio software platform brings new levels of efficiency with state-of-the-art 3D collaboration, visualization and real-time data integration capabilities, to a variety of industry verticals including AEC, industrial engineering, technical training and education.

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MR Studio Key Features

Advanced 3D Visualization

MR Studio incorporates an advanced spatial processing engine (ASPEN) that tames large scale 3D data for rapid visualization of complex 3D objects. MR Studio has the ability to process and manage large, complex 3D models and maintain precise Level of Detail (LOD) including real-world scanned images, CAD files, LiDAR sources, BIM/IFC, GIS, OBJ, FBX and numerous other spatial data formats. Advanced management allows 3D models to be viewed in different positions and scale whether as life sized images or dynamically sectioned for closer inspection.

Real Time Collaboration

MR Studio optimizes the mixed reality experience by enabling multi-party collaboration on disparate devices including real-time sharing of holographic images, pdf documents, multi-way video and audio streaming and annotation and highlighting capabilities. Single site and multi-site options are available by sharing spatial anchors to allow multiple users to view the same model concurrently. A master device can be nominated, and other devices slaved to the device using the HoloSync feature, allowing many participants to share a common viewing experience. MR headset participants can be represented as individually labeled avatars.

Flexible Data Integration

MR Studio provides data integration of both real-time and static data streams without the need to update existing external IT systems. MR Studio streams more than 100 types of processors from connectors and databases to IoT sensors allowing participants to diagnose and isolate performance issues as they occur.

MR Studio Director

