propvr

PRODUCT WHITEPAPER

PROPVR SPATIAL OS

Spatial Touch

Interactive touchscreen kiosk, table & wall display for real estate experience centers

Hardware + Software + Content + Integration — one partner, one solution. GPU-powered Unreal Engine real-time 3D on a touchscreen.

KIOSK · TABLE · WALL | NVIDIA RTX 4090+ | UNREAL ENGINE + WEBLITE | 27" – 120"

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01 WHITEPAPER

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01 EXECUTIVE SUMMARY

The touchscreen, finally powered for real estate

Buyers across India, the Middle East, and global markets expect immersive, interactive experiences that go beyond static renderings. Yet most touchscreen kiosks in sales galleries today run lightweight web apps on underpowered hardware — flat, forgettable, and unable to convey the scale and quality of the project.

Spatial Touch reimagines the touchscreen experience centre. A purpose-built interactive system — available as a floor-standing **Kiosk**, an interactive **Table**, or a **Wall-mounted** display — engineered to run demanding real-time 3D applications. Powered by NVIDIA RTX 4090+ GPUs and built on Unreal Engine, Spatial Touch delivers photoreal real-time 3D walkthroughs directly on a touchscreen, at a visual fidelity that was previously possible only on VR stations or immersive rooms.

Also supports PROPVR WebLite — a browser-based lightweight 3D experience optimised for touch — for deployments where speed of setup and breadth of content matter more than maximum visual fidelity. Choose Unreal Engine, WebLite, or both per project.

Available in Kiosk and Table form factors from 27" to 65", and Wall-mounted from 65" to 120". Transforms any sales gallery into a high-impact, self-service interactive environment that runs 24/7, serves every visitor, and stays current via real-time CMS sync.

> ***"One platform. Every project. Instant updates. Spatial Touch replaces the generic kiosk with a GPU-powered, Unreal Engine-driven interactive experience that lets buyers walk through their future home before a single brick is laid."***
>
> THE SPATIAL TOUCH THESIS

02 THE PROBLEM

Generic kiosks fail real estate

Developers invest heavily in sales galleries to convert prospects. Yet the touchscreens in most galleries today have significant limitations.

HARDWARE

Underpowered hardware

Most commercial kiosks ship with integrated graphics or low-end GPUs. They render pre-recorded videos and simple web apps but cannot run real-time 3D environments at the visual quality buyers expect. The kiosk looks dated within months of installation.

SOFTWARE

Generic software

Off-the-shelf kiosk software is designed for wayfinding, menus, check-in flows — not real estate. Developers end up with a slideshow of renders wrapped in a touch interface. No spatial context. No 3D interaction.

NO 3D

No real-time 3D

The defining limitation: standard kiosks cannot run Unreal Engine. No real-time walkthroughs, no dynamic lighting, no interactive masterplan with physics-accurate materials. The buyer sees a flat approximation, not the spatial reality.

STALE

Disconnected content

Kiosk content is loaded manually and rarely updated. Pricing changes, availability shifts, and new renders arrive weeks late. Sales staff compensate with printed addendums — inconsistency between the kiosk, brochure, and verbal pitch.

BUILD

Poor design quality

Generic kiosks are designed for airports and fast-food restaurants, not luxury galleries. Their industrial appearance clashes with the curated interior of a premium experience centre — undermining the developer's brand investment.

RESULT

The forced trade-off

Galleries rely on touchscreens that look outdated, run flat content, and fail to create the experience modern buyers expect. The hardware investment is wasted because the kiosk lacks the technology layer to bring the project to life.

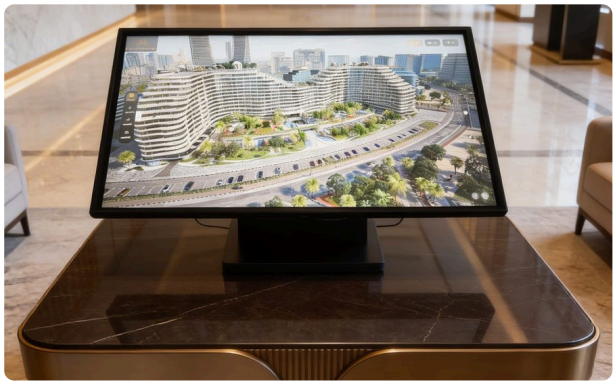
03 THE SOLUTION

GPU-powered, Unreal-Engine-driven, touch-native

A purpose-built interactive touchscreen system that runs on the PROPVR Spatial OS platform. Available in three form factors, each engineered to house the high-performance computing hardware required to run Unreal Engine in real time.

Unlike a standard kiosk that displays pre-rendered content on a basic touchscreen, Spatial Touch **renders the project environment in real time on the device itself**. Visitors interact with a living, responsive 3D model — walking through apartments, exploring amenities, viewing the project from any angle, at any time of day — all through natural touch gestures on a high-resolution display.

BRANDED PRODUCT CONFIGURATIONS



PREMIUM INSTALL — LUXURY SALES LOBBY

TWO SOFTWARE MODES

UNREAL ENGINE

Maximum visual fidelity

Full real-time 3D experience. Photoreal rendering, dynamic lighting, real-time walkthroughs with physics-accurate materials. Requires the built-in RTX 4090+ GPU. The flagship mode for premium deployments where visual impact is paramount.

WEBLITE

Speed & breadth

Browser-based lightweight 3D experience optimised for touch. Faster setup, broader content library, suitable when speed of deployment and multi-project coverage matter more than maximum fidelity. WebLite content updates instantly from the CMS.

Choose Unreal Engine, WebLite, or both per project — or offer both within the same experience centre.

04 IN THE ROOM

Touch the masterplan.

A single gesture turns floor plates, towers and views into something visitors can drive themselves — standing at the table, talking, deciding. No headset, no preamble, no help required.

04 FORM FACTORS

Three form factors — Kiosk, Table, Wall

Each configuration is designed for distinct deployment contexts and interaction styles — all powered by the same RTX 4090+ baseline.

KIOSK · FLOOR-STANDING

TABLE · INTERACTIVE SURFACE

WALL-MOUNTED · LARGE FORMAT

KIOSK

Floor-standing

Vertical unit for high-traffic environments. Touchscreen at standing height for walk-up self-service.
Orientation: Portrait or landscape
Sizes: 27", 32", 43", 55", 65"
Best for: Sales gallery floors, exhibition booths, mall activations, lobby deployments.

TABLE

Interactive surface

Horizontal, table-height unit for collaborative interaction. Multiple visitors or a sales consultant and buyer can explore together.
Orientation: Horizontal flat
Sizes: 32", 43", 55", 65"
Best for: Sales consultation rooms, broker offices, premium gallery spaces, consultant-led walkthroughs.

WALL

Large format mounted

Large-format touchscreen mounted directly on the wall — commanding visual presence for immersive presentation at scale.
Orientation: Landscape
Sizes: 65", 75", 86", 98", 110", 120"
Best for: Experience-centre feature walls, boardrooms, developer HQ.

FEATURE	KIOSK	TABLE	WALL-MOUNTED
Orientation	Portrait / Landscape	Horizontal surface	Landscape
Sizes	27" to 65"	32" to 65"	65" to 120"
Best for	Walk-up self-service	Collaborative sessions	Feature walls, immersive
Interaction	Individual visitor	Group / consultant-led	Presentation + touch
GPU	RTX 4090+	RTX 4090+	RTX 4090+

05 INTERACTION

How visitors interact — 6 steps

Designed for intuitive, self-service interaction. No instructions needed — visitors walk up and begin exploring through natural touch gestures.

STEP	WHAT HAPPENS
1. Approach	The visitor walks up to the kiosk, table, or wall display. A welcome screen invites interaction with the project.
2. Explore masterplan	Navigate the project masterplan in 3D — rotate, zoom, tap on buildings, amenities, and landmarks.
3. Select a building	Tapping a building isolates it from the masterplan, revealing floor-by-floor layouts and available units.
4. View units	Select a unit to see floor plans, pricing, payment plans, and availability. In Unreal Engine mode, launch a full 3D walkthrough.
5. 3D walkthrough	Using touch gestures, walk through the apartment in real time — enter rooms, look out windows, check views from the balcony — all rendered at photoreal quality by Unreal Engine.
6. Capture	Save preferred units via QR code, send a digital brochure to phone, or submit contact details for follow-up. Lead data flows directly to the CRM.

06 CAPABILITIES

Features & capabilities

3D WALK

Real-time 3D walkthrough

First-person walks through apartments, villas, and penthouses with photoreal rendering. Dynamic lighting — morning, afternoon, sunset, night. Physically based materials — marble, wood, glass, fabric — with accurate reflections. Fly around the development or walk through landscaped areas.

MASTERPLAN

Masterplan navigation

Full 360° rotation from any angle. Zoom into individual buildings, clusters, or plots. Tap a tower to isolate. Toggle amenity overlays — pool, gym, park, retail, parking, mosque, school. Switch day/sunset/night lighting.

FLOOR & UNIT

Building & unit explorer

Select a floor to see layout and unit distribution. Tap units to view details. Colour-coded availability: available (green), reserved (amber), sold (red). Filter by type (studio, 1BR, 2BR, 3BR, penthouse).

SALES TOOLS

Sales & marketing tools

Floor-plan viewer with dimensions and area. Payment-plan display. Brochures and fact sheets accessible from the interface. Location map with landmarks, metro, highway distances. QR generation to save unit details. Side-by-side comparison tool.

CMS

Remote content management

Update pricing, availability, and content without site visits. Multi-project support — switch between projects on the same device. Scheduled content auto-plays when idle. Instant updates — status changes reflect across all Spatial products simultaneously.

ANALYTICS

Visitor analytics

Every interaction generates structured data — units explored, walkthroughs launched, dwell time, comparison patterns, lead-intent signals — feeding the Spatial OS analytics dashboard for actionable insight.

07 HARDWARE

Hardware design philosophy

Not a rebadged commercial kiosk. Every hardware decision is driven by a single requirement: the system must run Unreal Engine real-time 3D applications at the visual quality developers demand for their premium projects.

GPU-FIRST

NVIDIA RTX 4090+ as baseline

The defining hardware decision. RTX 4090 (or higher tier) GPUs as **standard** — not an optional upgrade. This GPU class enables real-time ray tracing, physically based rendering, and high-resolution output at frame rates that keep touch interaction smooth even during complex 3D walkthroughs.

PREMIUM

Premium build quality

Designed as premium furniture-grade objects. Clean lines, premium materials, minimal bezels ensure the hardware complements high-end interior environments — luxury galleries, branded experience centres, developer headquarters.

THERMAL

Thermal engineering

Running an RTX 4090 inside an enclosed kiosk requires careful thermal management. Engineered airflow paths, heat-dissipation surfaces, and temperature-controlled fan systems keep the GPU within operating limits without introducing audible noise into the sales environment.

TOUCH

Touch responsiveness

The touchscreen layer is calibrated for 3D navigation — multi-touch pinch-to-zoom, smooth pan and rotate gestures, responsive tap interactions. **Up to 20 simultaneous touch points** on larger displays, enabling collaborative interaction on the table form factor.

08 ARCHITECTURE

Technical architecture

SOFTWARE STACK

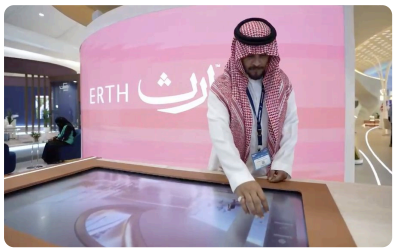
COMPONENT	DETAILS
Rendering engine	Unreal Engine (latest stable) + PROPVR WebLite (browser-based)
Platform	PROPVR Spatial OS — shared data pipeline across all Spatial products
Application	Spatial Touch — proprietary module optimised for touchscreen interaction
3D model formats	FBX, OBJ, GLTF/GLB, native Unreal packages
Data layer	Real-time sync with CMS for pricing, availability, and content updates
Touch input	Infrared or capacitive multi-touch overlay (up to 20 touch points)
Analytics	Session tracking, interaction heatmaps, unit popularity scoring, lead capture

HARDWARE SPECIFICATIONS

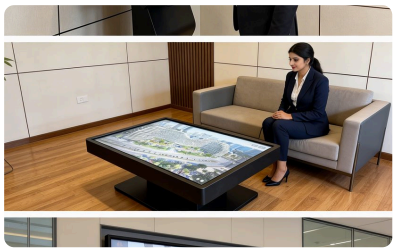
SPECIFICATION	DETAILS
Display	4K (3840 × 2160) high-brightness touchscreen panel
Form factors	Kiosk (floor-standing), Table (horizontal surface), Wall-mounted
Size range	Kiosk & Table: 27"–65" · Wall: 65"–120"
Touch	Infrared / capacitive multi-touch, up to 20 simultaneous touch points
GPU	NVIDIA RTX 4090 or higher (dedicated, not integrated)
Compute	High-performance embedded PC (Windows), 64GB+ RAM, NVMe SSD
Audio	Integrated speakers for ambient audio and presentation narration
Connectivity	Wi-Fi, Ethernet, HDMI, USB, optional 4G/5G SIM slot
Power	Standard AC, typically 300–800W depending on configuration
Setup	Plug-and-play, operational in under 30 minutes

09 DEPLOYMENT

Six ways to deploy Spatial Touch



EXHIBITION BOOTH · SAUDI PROPERTY SHOW


PREMIUM GALLERY · MULTI-FORMAT

CONSULTATION ROOM · AGENT + BUYER

GALLERY

Sales gallery (permanent)

The primary deployment. A 65" wall-mounted Spatial Touch as the feature wall where visitors launch real-time 3D walkthroughs. A 55" table in the consultation area. Standalone kiosks at the entrance for self-service. All devices sync to the same CMS.

EVENTS

Exhibition booth (temporary)

A 55" or 65" kiosk transported to Cityscape, IPS, CREDAI Natcon, or Arabian Property Show. Setup under an hour. Visitors interact with the full Unreal Engine walkthrough on the show floor — multiple projects loadable on the same unit.

BROKER

Broker office

A table-format Spatial Touch in a brokerage meeting room. Broker and buyer sit across the table, exploring the project together — selecting floors, walking through units, comparing layouts — a collaborative session that accelerates decisions.

MALL

Mall activation

Temporary pop-up in a high-footfall mall. Kiosks draw walk-up engagement; the Unreal Engine walkthrough creates a memorable impression that differentiates the brand. Lead capture forms integrated into the interface.

HQ

Developer HQ / Boardroom

A 98" or 120" wall-mounted Spatial Touch in the boardroom — dual purpose: client presentations at cinematic scale, and internal design review meetings where teams interact with the 3D model in real time.

INTERNATIONAL

Remote sales offices

International sales offices deploy Spatial Touch units to present projects located thousands of kilometres away — giving prospective buyers an interactive walkthrough-quality preview without travel to the development site.

10 ROI

Spatial Touch vs generic kiosk

FACTOR	GENERIC KIOSK	SPATIAL TOUCH
3D walkthrough	Not possible	**Real-time Unreal Engine**
Visual quality	Pre-rendered images/video	**Photoreal real-time 3D**
Content updates	Manual, often delayed	**Instant via CMS sync**
Multi-project	Manual content swap	**Switch projects in CMS**
Hardware design	Industrial / generic	**Premium, gallery-grade**
Exhibition staffing	Staff-dependent demos	**Self-service walkthrough**

BUSINESS IMPACT

DWELL

3–5× longer engagement

Visitors spend 3–5× longer interacting with Spatial Touch vs standard kiosks — deeper engagement, stronger emotional connection.

QUALITY

Visual match to CGI

Unreal Engine rendering matches or exceeds the developer's CGI marketing materials — the kiosk no longer looks like a downgrade.

CAPTURE

Lead capture rate

Self-service interaction means every visitor engages. Integrated lead capture ensures no walk-up goes unlogged.

QUALIFIED

Better-qualified conversations

Visitors who have explored units in 3D arrive at the sales desk with informed preferences, cutting qualification time.

24/7

After-hours engagement

Operates 24/7, serving evenings, weekends, and holidays when the gallery may be lightly staffed.

SOCIAL

Social amplification

The immersive touchscreen experience generates shareable moments — visitors record and share their walkthroughs.

11 ECOSYSTEM

Part of the Spatial OS ecosystem

One of nine products within the PROPVR Spatial OS platform. All share the same Unreal Engine core, project data pipeline, and CMS — content created once is deployed everywhere.

PRODUCT	DESCRIPTION
Spatial Touch	Touchscreen kiosk, table, and wall display for masterplan exploration and 3D walkthroughs
Spatial Holo	Interactive 3D holographic model viewer (Cube & Vista holobox)
Spatial Agent	AI-powered avatar assistant inside the holobox for conversational Q&A
Spatial Cave	Multi-wall immersive room for cinematic walkthroughs
Spatial Tour	VR headset station for first-person interior walkthroughs
Spatial Lens	AR on-site visualisation via phone or tablet
Spatial Table	Interactive tangible tabletop for collaborative sales presentations
Spatial Drive	Immersive buggy ride simulation through the community
Spatial Map	Projection mapping system for physical scale models

"A developer deploying Spatial Touch today can add Spatial Holo, Spatial Agent, or any other product later without rebuilding content. The same 3D assets power every product in the ecosystem."

12 IMPLEMENTATION

4–8 weeks from onboarding to go-live

A straightforward, phased process. Projects already onboarded to Spatial OS deploy faster by reusing existing 3D assets and data pipelines.

WEEK 1
01 Discovery & scoping

Discovery session to understand project specifics, deployment locations, form factors, and whether Unreal Engine, WebLite, or both. Output: scope document and hardware recommendation.

WEEKS 1 – 2
02 Data onboarding

Project data ingested — unit inventories, pricing, floor plans, amenities, brand guidelines, brochures. CRM and CMS connectors configured.

WEEKS 2 – 3
03 3D content optimisation

Unreal Engine assets optimised for real-time rendering — material tuning, LOD setup, lighting calibration. WebLite assets processed for browser delivery.

WEEKS 3 – 4
04 Application config

Spatial Touch interface configured with branding, navigation flow, unit data, interactive features. Walkthrough paths defined, camera positions set, touch model calibrated.

WEEKS 4 – 5
05 Hardware deployment

Hardware (kiosk, table, wall, or combination) delivered, installed, calibrated. Network, power, touch calibration finalised. Plug-and-play setup under 30 minutes per unit.

WEEK 5+
06 Go-live & support

System goes live with on-site support during the first week. Remote monitoring, monthly content reviews, priority support. CMS updates from your team at any time.

Existing Spatial OS deployment? Reuse the 3D assets and data pipeline — faster turnaround on every additional product, including Spatial Touch.

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CONTACT US

Touch the project before it's built.

Whether you are launching a single project or building a multi-project experience centre — PROPVR delivers the complete touchscreen solution from one partner: hardware, software, 3D content, integration, and support.

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