



Technical Documentation

A technical overview of the KonnectTV+ hotel IPTV platform — architecture, capabilities, integrations, security and requirements.

 www.konnect-plus.com

Technical overview · prepared for the client

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1. Introduction & scope

KonnectTV+ is an enterprise interactive-television (IPTV) platform for hotels. It turns every guest-room television into a branded hospitality hub delivering live TV, video-on-demand and guest services, while giving hotel staff a single web console to manage content and rooms.

This document provides a technical overview of the platform for the client's IT and operations teams: how the solution is structured, what it integrates with, how it is deployed and secured, and what the property must provide. It complements the *KonnectTV+ Administrator User Manual*, which explains the console screen-by-screen. Proprietary implementation details are intentionally omitted.

Audience

Hotel IT, network and operations stakeholders evaluating or operating the platform. Assumes general familiarity with networks, television systems and hotel PMS.

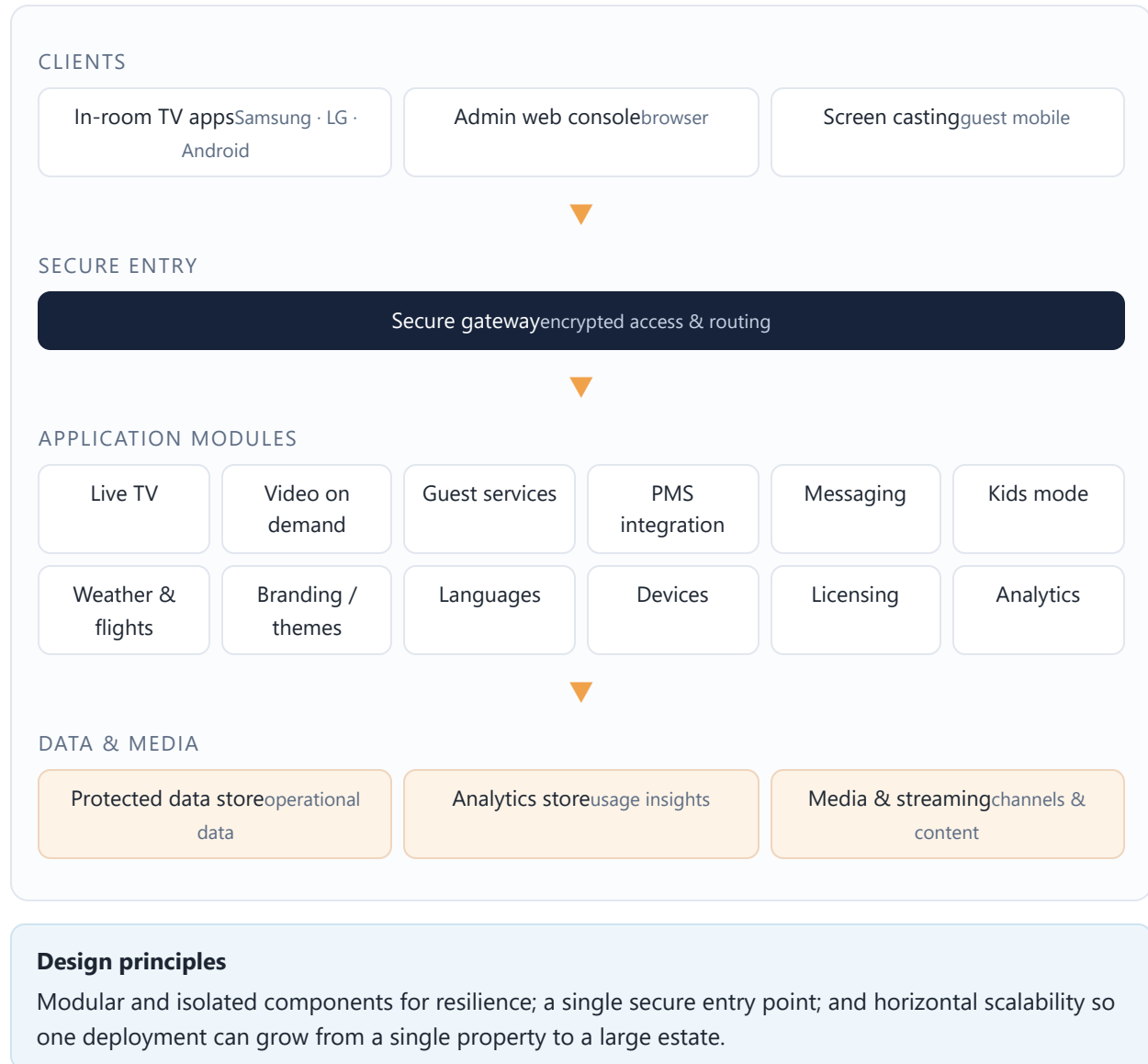
2. System overview

The platform is delivered as a self-contained, modular software system installed per property (on-premises or in the cloud). Guest televisions run a KonnectTV+ application and connect to the platform over the hotel network; live channels are delivered from the hotel's existing TV headend and optimised for smooth playback on any supported TV.

Capability	Summary
Universal TV support	Runs directly on the television on supported sets (Samsung, LG and other compatible TVs), or via an Android set-top box where preferred — flexible, not set-top-box-only.
Multi-property	One platform can serve many properties, each fully branded and isolated.
Live TV	Hundreds of channels per property, optimised for reliable playback.
Video on demand	Managed movie/series library with posters and categories.
Guest experience	Personalised welcome, weather, flights, messaging, kids mode, dining, hotel information.
PMS integration	Room-based guest recognition and front-desk messaging via the property PMS.
Administration	Web console for channels, content, rooms, devices, branding and analytics.
Licensing	Per-property licensing with centralised activation.

3. Solution architecture

KonnectTV+ uses a modern, modular architecture. Guest and staff clients connect through a single secure entry point to a layer of independent application modules, which share a protected data and media layer. The design keeps each capability isolated for reliability and lets the platform scale with the property.



4. Functional modules

Each capability is delivered by an independent module, so features can evolve and scale without affecting the rest of the platform.

Module	Purpose
Live TV	Channel line-ups, groups, favourites and playback.
Video on demand	Movie/series library, categories, uploads.
Guest services	Dining & room-service ordering, facilities, hotel information.
PMS integration	Guest & room synchronisation and front-desk messaging.
Messaging	Reception-to-room messages and in-TV inbox.
Kids mode	PIN-protected, kid-safe environment.
Weather & flights	Local weather and multi-airport flight information.
Branding & languages	Per-property theming and multilingual interface.
Devices	Registration and remote management of televisions.
Licensing	Per-property entitlement and activation.
Analytics	Usage insights and reporting.

5. Guest applications & devices — universal TV support

KonnectTV+ works with **any television**, and the integration is flexible: it runs **directly on the television itself** on supported smart / hospitality TVs, **or** on a compact Android set-top box. A set-top box is **one option — not a requirement for every screen**; wherever the TV supports it, KonnectTV+ runs natively on the screen. The property is therefore never locked to a single vendor and can keep, mix or gradually replace its existing sets.

Television	How it runs
Samsung (Tizen)	Runs natively on the TV itself — no extra hardware.
LG (webOS)	Runs natively on the TV itself — no extra hardware.
Other compatible smart TVs	Runs directly on the screen where the set supports it.
Other brands / older sets — Sharp, Hisense, TCL, Philips, Panasonic, Toshiba, universal displays...	Run via a compact Android set-top box (HDMI) — the full experience on any screen.

Flexible, screen-agnostic integration

On-screen (native) where the television supports it, or via a set-top box where preferred or for older sets — the set-top box is an option,

not the only path

. Either way, hotels can deploy KonnectTV+ without replacing their current televisions.

Radio channels

Audio-only ("radio") channels are supported and presented with station branding and an on-screen audio visualiser.

6. Live TV & streaming

Live channels originate from the hotel's existing TV headend as standard IP multicast. KonnectTV+ optimises ("re-streams") these signals so they play smoothly and consistently on every supported television, adapting the delivery method to each device type. This removes the compatibility and buffering issues common when TVs consume raw multicast directly.

- Smooth, buffer-resistant playback across Samsung, LG and Android devices.
- Fast channel switching with a clean channel guide, categories and favourites.
- Support for standard-definition and high-definition channels, plus radio channels.

7. Video on demand

A managed video library lets guests browse and play movies and series on demand, with posters and categories. Content is curated by the property through the administration console; no additional app or guest login is required.

8. Guest experience features

Feature	Description
Personalised welcome	Guests are greeted by name and title, shown once per stay and in their language.
Kids mode	A PIN-protected space with only kid-safe channels and content; resets automatically at check-out.
Weather	Local weather for the property's location on the home screen.
Flight information	Live multi-airport flight board for nearby airports.
Guest messaging	Front-desk messages appear on the TV and are kept in an in-TV inbox.
Dining & services	Room service, à-la-carte and facilities information and ordering.
Screen casting	Guests can mirror their mobile device to the television.
Information channels	In-house information and digital-signage content.

9. PMS integration

KonnectTV+ integrates with the property's Property Management System (Oracle Opera) to personalise and automate the guest experience. The integration is read-oriented and non-intrusive to hotel operations.

Integration point	Behaviour
Guest & room synchronisation	Guests are recognised by room automatically — no guest login required; check-in/check-out state keeps the TV experience current.
Personalisation	Guest name and title drive the personalised welcome and language.
Front-desk messaging	"Send to room" messages from the front desk appear on the guest's television.
Multi-property	A single platform can integrate with multiple properties/schemas.

Requirement

A read interface to the property's Opera PMS (as agreed during onboarding) is required. Exact connectivity is arranged with the hotel's PMS vendor/administrator.

10. Administration console

Hotel staff manage everything from one secure web console:

Area	Function
Channels & VOD	Line-ups, groups, favourites; movie/series library.
Rooms & devices	Room mapping, device registration, live online status, remote actions.
Guest services	Dining/menus, facilities, hotel information, messaging.
Branding & languages	Per-property theme and interface languages.
Guest features	Welcome message, kids channels, weather, flights.
Analytics	Usage insights and reports.

11. Interfaces & standards

The platform is built on open, widely-supported standards, which simplifies integration and operation:

Area	Standard / approach
Client ↔ platform	Encrypted web protocols (HTTPS) and real-time messaging.
Live video	IP multicast in; adaptive HTTP streaming (HLS) / direct IP out per device.
PMS	Oracle Opera integration.
Televisions	Samsung (Tizen), LG (webOS), Android.

12. Multi-property & scalability

- One deployment serves many properties; each is independently branded, configured and isolated.
- Modules scale horizontally, so capacity grows with the number of rooms and properties.
- Content, branding and language are configured per property.

13. High availability & continuity

- Componentised design contains faults — a single module issue does not take down the whole system.
- Regular backups and a documented recovery process protect configuration and content.
- Standby/recovery deployments can be maintained for rapid restoration in a disaster scenario.

14. Security & data privacy

- **Encrypted access:** guest and admin traffic is served over encrypted web protocols.
- **Single secure entry point:** internal components are not directly exposed.
- **Role-based administration:** console access is controlled by user roles, with an audit trail of changes.
- **Data minimisation:** the platform stores only the guest data needed to operate the service (e.g. room, name for personalisation), sourced from the property PMS.
- **Privacy:** guest personal data is treated as confidential and handled in line with the property's data-protection obligations; it is not shared between properties.
- **Licensing controls:** service entitlement is centrally managed per property.

15. Installation & deployment

KonnectTV+ is delivered as a self-contained installation image (ISO) that bundles the operating system and the complete platform — there is no separate software to install. Deployment is straightforward:

1. Download the latest KonnectTV+ installation image (ISO) from the Konnect Plus portal at **<https://www.konnect-plus.com>**.
2. Provision a physical server or a virtual machine that meets the recommended specification for the property size (see §16).
3. Boot the server / VM from the ISO and follow the guided installer; it installs the operating system and the full KonnectTV+ platform automatically.
4. Complete the first-boot setup wizard: network settings, property details and the administrator account.
5. Activate the property license.
6. Configure channels, branding and PMS integration from the administration console.

Deployment options

The image installs on bare-metal servers or on virtual machines (VMware, Hyper-V, Proxmox/KVM), on-premises or in a private/public cloud. Platform updates are delivered as managed updates / refreshed images from the same portal.

16. Sizing & specifications

Recommended server specification scales with the property size (number of guest rooms / televisions) and usage. The figures below are a starting-point guideline for a single-node deployment; final sizing is confirmed at onboarding based on channel count, VOD library size and peak concurrency.

Tier	Rooms / TVs	CPU	RAM	Storage	Notes
Small	up to 150	4 vCPU	16 GB	250 GB SSD	Single node.
Medium	up to 500	8 vCPU	32 GB	500 GB SSD	Single node.
Large	up to 1,500	16 vCPU	64 GB	1 TB SSD (NVMe)	Consider a standby node.
Enterprise / multi-property	1,500+	24+ vCPU	128 GB+	2 TB+ NVMe	High-availability pair; dedicated streaming capacity.

Factor	Guidance
VOD storage	Add storage for the on-demand library on top of the base figures (sized to the content volume).
Live channels	Re-streaming is CPU/network-intensive; capacity scales with the number of concurrent channels — allow headroom on larger line-ups.
Network	Managed Gigabit LAN carrying multicast to rooms; 1 Gbps+ server interface.
Virtualisation	Allocate the CPU/RAM above as dedicated (reserved) resources on shared hosts.

Note

These are recommended minimums for smooth operation. Exact specification, redundancy and any dedicated streaming nodes are agreed during onboarding.

17. Requirements & prerequisites

To deploy KonnectTV+ the property should provide:

Area	Requirement
TV headend	Live channels available as IP multicast on the property network.
Network	A managed LAN that carries multicast to guest rooms; adequate bandwidth for HD channels and VOD; guest-VLAN separation recommended.
Televisions	Any television. KonnectTV+ runs directly on the screen on supported smart/hospitality TVs (Samsung, LG and other compatible sets), or via a compact Android set-top box where preferred or for older sets — a set-top box is an option, not required for every screen.
Hosting	An on-premises server or cloud instance meeting the sizing agreed at onboarding.
PMS access	A read interface to Opera for guest/room synchronisation.
Internet	Outbound access for weather/flight information and platform updates.

18. Support & service assurance

- **Monitoring:** platform health is monitored, with alerting for storage and service conditions.
- **Updates:** features and fixes are delivered as managed updates.
- **Backups:** configuration and content are backed up on a regular schedule.
- **Support:** issues are handled through the agreed support channel and SLA.

Document status

This client-facing overview describes the platform's capabilities and technical approach. It deliberately omits proprietary implementation details. For onboarding specifics (sizing, connectivity, PMS interface) refer to the project's deployment plan.