

Samsung LYNK REACH™ and REACH Server

Content management tools for simplified hospitality management of multi-displays



Integrated solutions for enhanced control of multiple TV environments

Samsung provides various choices for hospitality multi-TV management

Hospitality managers need efficient ways to manage multiple TV sets without having to update or adjust each unit individually. Typically, property managers enlist personnel to visit every guest room to perform system upgrades, set changes and other maintenance. Manually updating each TV throughout the property consumes valuable resources, time and operational costs.

Additionally, hospitality businesses want to enhance their guest services by providing guests with convenient, on-screen hotel information and a user-friendly electronic program guide (EPG).

Samsung provides management solutions that help hospitality establishments:

- Eliminate manual updates and visits to each guest room with a single-location remote solution saving resources
- Offer better guest services by providing important hotel information in a pleasant, clutter-free guest room environment
- Reduce operational costs by using existing infrastructure

Samsung offers the following two integrated hospitality options, which can be tailored to meet individual property requirements:

- **Samsung Remote Enhanced Active Control for Hospitality (Samsung LYNK REACH™).** An embedded software solution in REACH Server that offers a user interface (UI) designed for ease of use. It also provides an editing tool for updating content remotely or through Universal Serial Bus (USB) cloning on a room-by-room basis for customized updates.
- **Samsung Interactive Remote Control for Hospitality (REACH Server).** A remote controller device for Digital TVs (DTVs) that integrates with the Samsung LYNK REACH™ software to eliminate the need to make updates or adjustments in each guest room.

Perform upgrades and edit remotely from one centralized location.

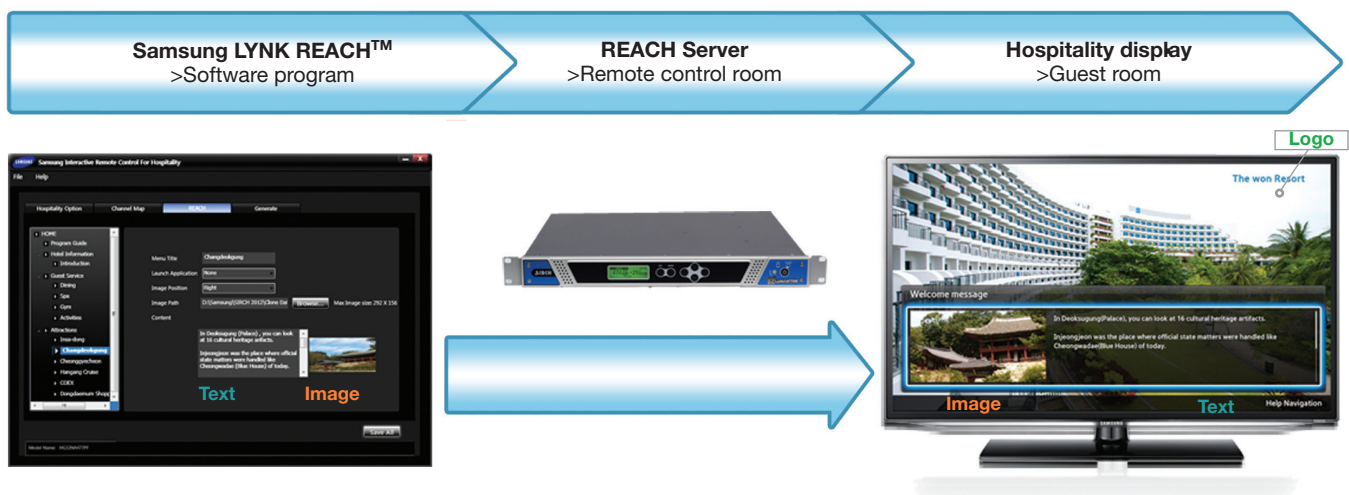


Figure 1. By integrating the Samsung LYNK REACH™ and REACH Server solution, valuable content can be remotely updated to each television set.

Efficient management with simplified UI and editing tool

Save valuable resources while enhancing the guest experience

The Samsung LYNK REACH™ solution helps eliminate the waste of valuable resources and time spent visiting each room to make up-grades or adjustments. Content such as an EPG, hotel information, logo and images are updated virtually seamlessly to each TV, providing guests with near real-time information on demand.

Use existing infrastructure

By implementing the Samsung LYNK REACH™ and REACH Server solution, hospitality establishments can use an existing coaxial cable without installing an Internet Protocol (IP) infrastructure. This helps lower the total cost of operation (TCO).

In addition, businesses can avoid purchasing a separate set-top box (STB) for every guest room, which reduces equipment purchases. Guests experience a more relaxed, clutter-free atmosphere, without needless STBs monopolizing valuable wardrobe and counter space.

Customize and update information on all TVs internally

Usually property managers must modify and edit customized content through a system integrator (SI). However, with the Samsung LYNK REACH™ solution, the effort required to change content and dependence on an SI are significantly reduced. Easier content modification enables the manager or staff employee to manage content internally, which saves staff time and resources. Even when an SI is engaged, the shortened content renewal process increases productivity of both the SI and the customer. Samsung LYNK REACH™ is embedded in the REACH Server professional interactive remote controller for easier use.

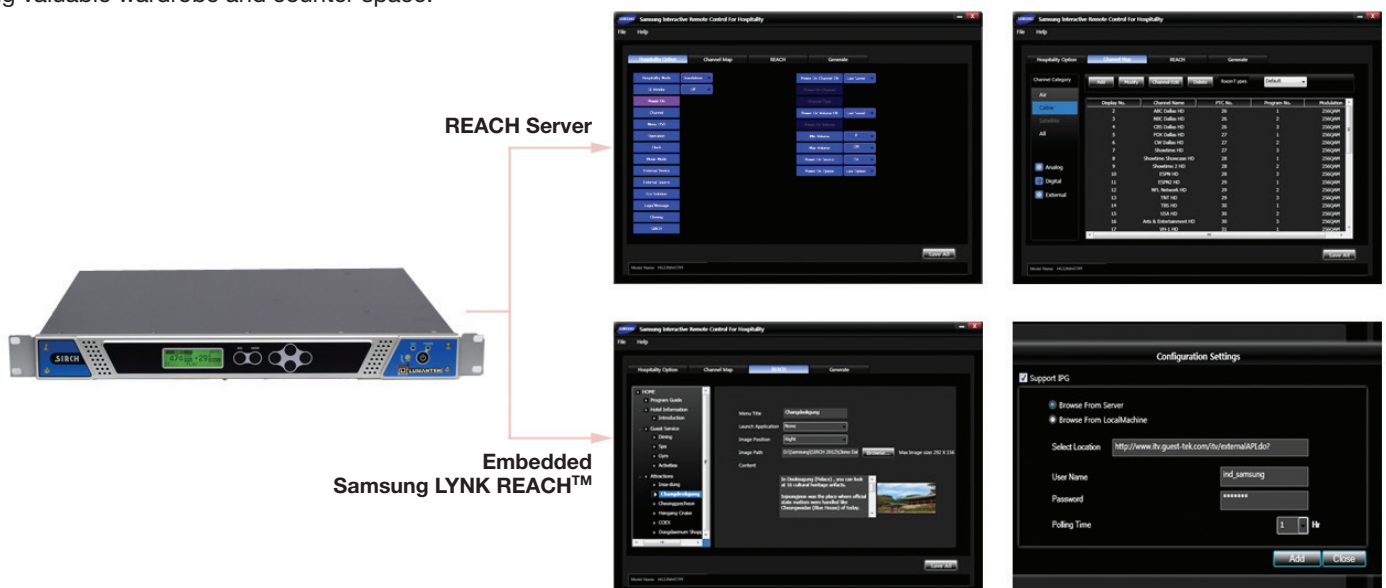


Figure 2. Samsung LYNK REACH™ embedded in the REACH Server application program enables managers to change content.

Reduced costs using existing infrastructures

Compatible with leading Interactive Program Guide (IPG) service providers

The Samsung LYNK REACH™ and REACH Server solution is compatible with the Guest-Tek Free-To-Guest (FTG) server, a prominent IPG service provider in the US.

In European markets, the Samsung program guide is embedded in TVs, allowing customers to edit items with Samsung LYNK REACH™. Additionally, European customers can use the My Channel feature in Samsung LYNK REACH™ to refine their channel search by country and genre.

The Samsung LYNK REACH™ and REACH Server solution delivers advanced features without STBs or IP networks.

Save the cost of purchasing STBs or installing IP networks

Samsung LYNK REACH™ is an ideal solution for most existing and standard hospitality businesses that have radio frequency (RF) infrastructures and want a more efficient TV content solution. These establishments typically already receive conventional analog and digital TV signals using RFs. By implementing the Samsung LYNK REACH™ and REACH Server solution, they can experience advanced features without purchasing expensive STBs or installing IP networks. Using the existing RF infrastructures results in



Figure 3. By using existing RF infrastructure connections, the cost of installing IP networks is eliminated.

Hundreds of sets managed from one remote location

Simplified one-click operation

The Samsung LYNK REACH™ and REACH Server solution is designed for easier multiple TV management from one central location. Hospitality managers can:

- Deliver updates, cloning and channel mapping changes to several hundred TV sets directly from one central location by using air broadcast
- Configure settings, such as initial and maximum volumes, and edit and update channel lists universally and remotely
- Upgrade important firmware on multiple TVs remotely, eliminating interruption of service or service limitations while providing an enhanced user experience for guests
- Reduce costs of manually updating each set, saving staff members' time and resources

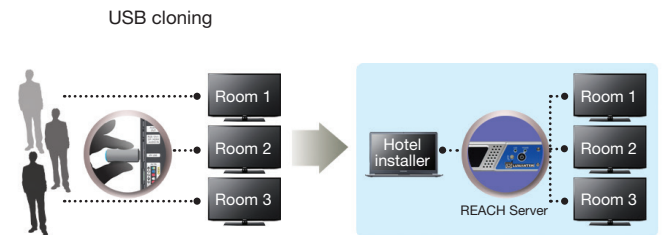


Figure 4. This diagram illustrates how the Samsung REACH Server solution reduces staff time versus USB cloning.

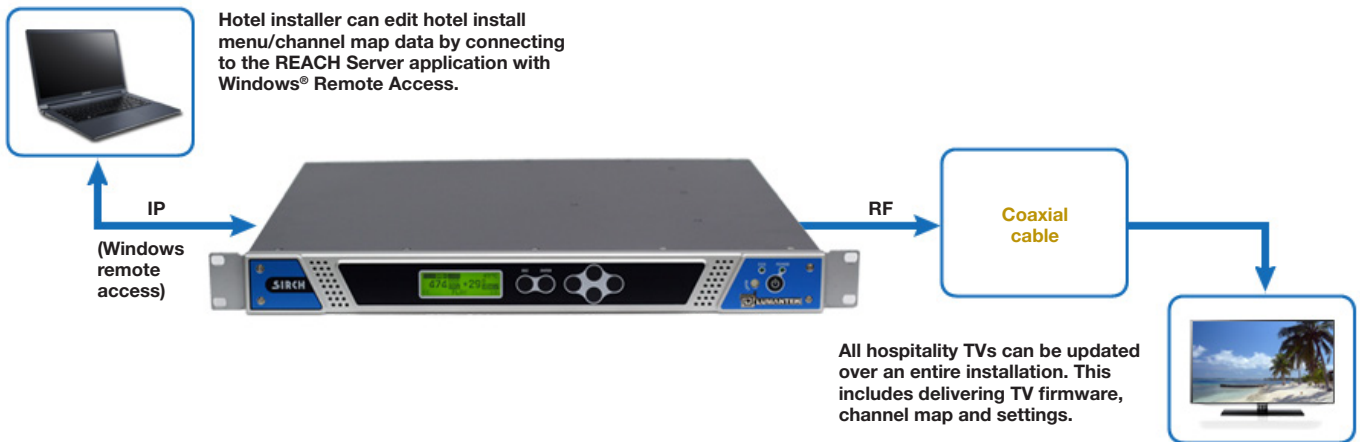


Figure 5. All guest room TVs can be more easily updated through the REACH Server application, as illustrated in this figure.

Lower TCO and an enhanced guest experience

Competitive advantage

The following table outlines the advantages of using The Samsung LYNK REACH™ solution compared to conventional STB-equipped television sets.

Category	Samsung hospitality display with built-in Samsung LYNK REACH™	Conventional TV with additional STB
Usage	Support for creating and editing customized information for hotel	
Cost	No initial cost: Samsung LYNK REACH™ solution is embedded in the TV	Cost for additional STB
	Lower maintenance and electricity costs	Higher maintenance and electricity costs
Installation	No additional installation	Additional installation for individual guest rooms
Aesthetic	Space saving	Clutter with devices and lines

The Samsung LYNK REACH™ and REACH Server solution helps streamline the management of multiple TVs versus using manual USB cloning as explained in the following table.

Category	REACH Server	USB cloning
Usage	Guest room TV management (for example, firmware upgrade, content management)	
Ease of management	One central management tool to control all guest room TVs	Manual updates by visiting every guest room
	Efficient management	Time-consuming management
Software for content management	Embedded Samsung LYNK REACH™ content management software	Need to install additional software program for content management

Provide improved guest services while decreasing TCO

The Samsung LYNK REACH™ and REACH Server solution provides hospitality property managers the ability to manage multiple TV sets remotely and more efficiently. By implementing this solution, property managers can decrease their TCO in many ways.

With the advantage of upgrading and routinely managing multiple TVs remotely with a robust Content Management System (CMS) tool, labor costs are reduced. In addition, hospitality establishments not only can keep their currently installed TV sets, but they can provide new and enhanced service to their guests, such as hotel and program guide information. Because the existing RF infrastructure is used, there is no need to install an expensive IP infrastructure. Without the need for STBs, guests enjoy a more clutter-free atmosphere.

Features and benefits

Features	Benefits
Simplified UI and editing tool	Delivers easier and more efficient management
Use of existing RF infrastructure	Reduces TCO with no need to purchase STBs or install IP infrastructure
One-click operation that updates all room TVs at once	Saves labor costs by not having to visit each room

The Samsung LYNK REACH™ and REACH Server solution is an excellent choice for businesses that have multiple-room TVs, such as hotels, cruise ships and hospitals.

Samsung LYNK REACH™ and REACH Server

Specifications

Item	Feature	Detail
System	Embedded PC board	Intel® ATOM D510 (dual core) / 1 GB DDR/40 GB SSD HDD
	OS	Embedded XP
	Remote control	1,000/100 Base-T
	Front panel	GLCD, 6 keys control
RF	Frequency	50 - 870 MHz
	Frequency accuracy	± 5 ppm (approx. ± 2 ppm)
	Output power	29 - 56 dBmV
	Level accuracy	± 1 dB
	Spurious	< -55 dBc (approx. < -60 dBc)
	Phase noise	< -95 dBc at 10 kHz (approx. < -98 dBc)
	Return loss	> 15 dB
	Group delay	< 20 ns
Modulation: DVB-C (Europe)	Standard	ITU-T J.83 annex A/C
	Constellation	16 QAM/32 QAM/64 QAM/128 QAM/256 QAM
	Symbol rate	-10 MS/s
	MER	> 36 dB (without EQ)
	Channel BW	5/6/7/8 MHz
	Roll off	0.15
Modulation: Open cable (North America)	Standard	ITU-T J.83 annex A/C
	Constellation	64 QAM/256 QAM
	Symbol rate	5.057 MS/s or 5.38 MS/s
	MER	> 36 dB (without EQ)
	Channel BW	6 MHz
	Roll off	0.13 or 0.18

Legal and additional information

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2012-11