LG Cloud V SERIES

LG
Life's Good

Contents

- Information on the product or technology may be subject to change

- Some features including this document may vary or differ depending on counties

1. Introduction

The "Zero Client" is the newest trend where the client device does not run a full OS. The device initializes the network, starts up the necessary protocols and handles the display received from the server. Under the Zero Client system, the server takes care of most of the processing, while the device only deals with the minimum requirements. This approach explains why Zero Client does not require a CPU or local storage.

Zero Client system removes the need for CPUs and storage.

Centralized processing and storage resources are more cost effective than using local, stand-alone devices that carry out all of the necessary functions. In short, a Zero Client, which contains minimum components, costs less. This cost-effectiveness will increase with the number of end-devices, and grows further still when considering that the device lifetime for a Zero Client is longer than that of a conventional PC.

Zero Client system offers higher cost efficiency.

This effect is maximized in multiple-user environments, such as offices and government buildings. Not only does a Zero Client system create quieter surroundings, the system allows more efficient working area for employees. As Zero Clients have fewer components than PCs, it will also reduce energy consumption per device.

For crucial issues such as security and management, Zero Clients can provide a key solution. Zero Client system reduces the possibility of device malfunctions or being infected with a virus, while enabling IT managers able to manage the status of each device from a remote and central location. This aspect can also prove useful in case of end user's devices. As there are no local storage units, the device does not contain information that can be exploited.

Zero Clients reduce security concerns, energy consumption and create more pleasant working environment.

With all these benefits, implementing a Cloud Computing infrastructure using Zero Clients will significantly reduce TCO, simplify the IT asset management, agreement structure, and provide solid defense against security incidents.

Thick Client

Thin Client

Zero Client

		Thick Client	Thin Client	Zero Client
Hardware	CPU	High Spec CPU	Low Spec CPU	Embedded GPU(ARM SoC)
	Memory	High	Middle	Low
	Storage	General HDD	Flash Type	None
	Power Consumption	High	Middle	Low
Software	Operating System	Windows 7 / Linux	Embedded OS	None
	Application Installation	Many	Some	None
Usage	Security & Management	Difficult	Difficult	Easy
	Performance	High	Low	High
	Private Use	High	High	None

1) Introduction of LG Cloud V Series

The LG Cloud V Series maximizes the benefits of the Zero Client system that provides more energy and cost efficient business environment and stronger security measures.

LG Introduces Zero Client PC-over-IP Cloud monitor for Secure and Efficient Computing with Desktop Virtualization.

The LG Cloud V Series employs the Teradici Tera2 chipset to enhance the features offered by its predecessor. The LG Cloud V Series provides a better display environment compared to previous models and is an ideal solution for any company or large organization.

(1) LG Cloud V Series Monitor

The monitors are available in two sizes, 23-inches (16:9 aspect ratio) and 19-inches (16:10 aspect ratio), from November 2012.

Tera2 chipset is Teradici's next-generation PCoIP Zero Client chipset that includes new features and new flexibility for the virtual desktop.

The Tera2 chipset(TERA2321) helps reduce power consumption by operating at fewer than 6 watts of typical system power, compared to the Tera1 chipset which operates at fewer than 12 watts of typical system power. Adopting the new Tera2 chipset also gives Virtual Desktop Infrastructure (VDI) users a more powerful processor capable of processing pixels up to five times faster (50 Mega Pixels per second from 10 Mega Pixels per second) than previous P Series Cloud monitors containing the Tera1 chipset. This, by being optimized for diverse contents, can result in heightened productivity by helping users stay focused on managing business/ work efficiency. The new chipset supports DDR3 RAM for faster and more energy efficient memory and enhanced display quality.

The LG Cloud V Series offers six USB ports, a DVI port for a clone display. The six USB 2.0 ports enable accessories such as keyboards, mice, printers, scanners, card readers and cameras to attach to the LG Cloud V Series Zero Client for enhanced functionality.

(2) LG Cloud V Series Box

LG Cloud V Series box type offers space efficiency and low-cost effective for better working environment.

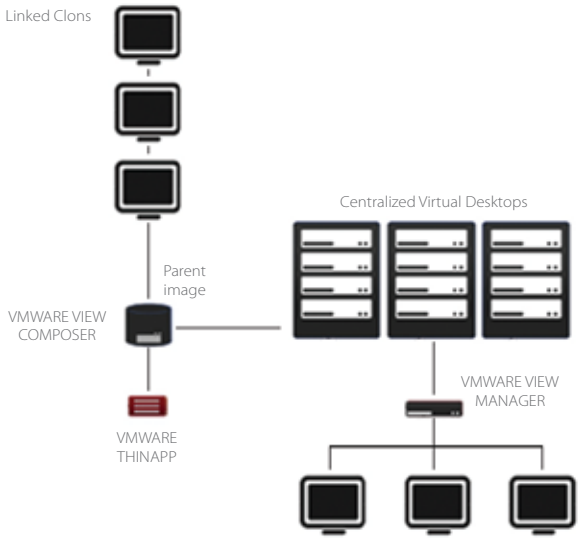
Independent from any monitor, the LG Cloud V Series box includes Tera2 chipset that will offer similar high-end display performance for any monitor it connects to. Additionally, LG Cloud V Series box can stand vertically with a cradle or it can attach to the backside of a monitor for increased space efficiency. This is a low-cost alternative to the V Series; advantageous for many Enterprises and even SMEs that have already invested in monitors.

2. Core Technology

1) VMware View Compatibility

The LG Cloud V Series supports VMware View software.
The LG Cloud V Series currently supports VMware View 5, and the support system map will correspond to the VMware View release schedule.

[VMware VDI System map for V Series]



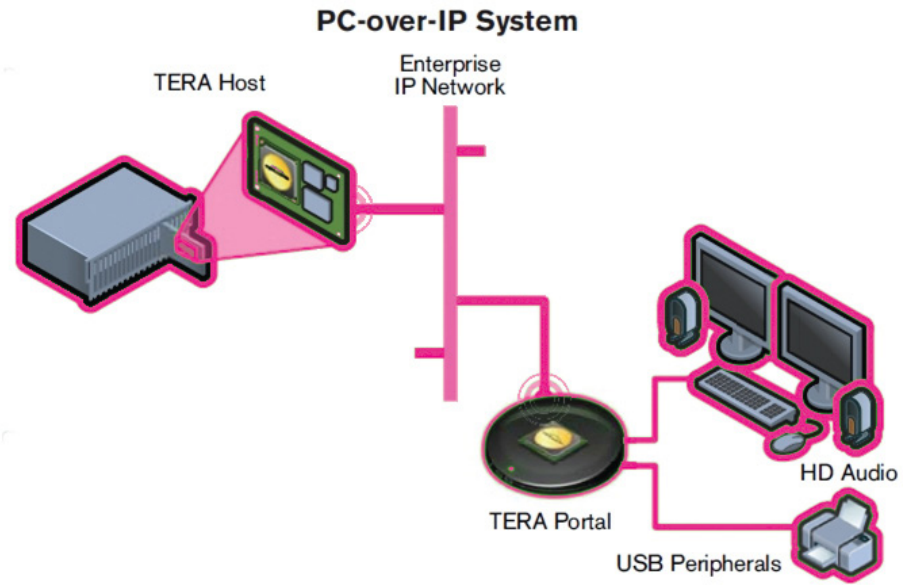
Full support corresponding to VMware View release schedule will be provided to maintain maximum efficiency.

The LG Cloud V Series utilizes PCoIP (PC-over-IP) as its core technology to enable a true Zero Client. PCoIP technology allows all Zero Clients to be centrally located and managed from the data center.
The PCoIP protocol is implemented in silicon hardware accelerated performance and utilizes VMware View in terms of software. The protocol supports high resolution, full frame rate, high-end visual contents, multiple large displays, full USB peripheral connectivity, and high definition audio, all connected on the corporate LAN or WAN.

2) TERADICI PCoIP Technology

LG Cloud V Series is based on TERADICI PCoIP Technology to support VMware View.

[PC-over-IP Technology Overview]



PCoIP® Zero Clients enable the ultimate virtual desktop and remote workstation experience.

PCoIP Zero Clients deploy VDI and desktop terminal services to deliver a great multimedia experience.

PCoIP Zero Clients not only let the organization take full advantage of the many benefits promised by virtualization, but also support better workstations and offer significant advantages over desktop PCs and traditional client solutions, well into the future.

Now, LG Cloud V Series newly adopts a Teradici's 2nd generation chipset, Tera2(TERA2321). The new Tera2 PCoIP Zero Client chipset includes the TERA2321 dual display Zero Client processor.

Tera2 PCoIP Zero Client features include:

- 1920 x 1200 capable
- Imaging performance improvement: 5 times VDI
- Enhanced motion compensation
- USB 2.0 Support
- Full power management
- AES-256 encryption
- Lower power consumption

[TERA 1100 (1st Generation) vs. TERA 2321 (2nd Generation)]

Zero Client Processor	TERA1100	TERA2321
	Dual display ZC	Dual knowledge worker + WS ZC
TERA Device	TERA1100	TERA2321
Imaging Performance	10 Mpps(VDI) 100 Mpps (WS)	50 Mpps(VDI) 150 Mpps (WS)
Max Displays	2	2
Max Resolution	2x1920x1200	1x2560x1600 or 2x1920x1200
Video IO	2xDVI-I	2xDP or 2xDVI
Ethernet	10/100/GigE	10/100/GigE
USB	4x USB 1.1	4x USB 2.0
Audio	Stereo Audio	Stereo Audio
System Power	< 15W	< 7W (4W device est)
Power Management	Partial	Full Wake in LAN & Wake on USB
Memory	XDR	DDR3
Encryption	AES-128/Salsa256	AES-128/256

3. Product Specification

The LG Cloud V Series widens the Zero Client range of VDI offerings.

The LG Cloud V Series is a VMware-based Zero Client System. The Zero Client technology allows you to conduct computing tasks without a desktop. The centralized network management supports easy-maintenance and efficient business operations.

- Low Power Consumption with High Performance
- Next Generation Teradici Chip (Tera 2321)
- Optimized for VMware PCoIP and VMware View
- Wide Viewing angle and Full HD Resolution with IPS Panel (23")
- Built-in Speaker
- 6 x USB 2.0 / DVI-I for Extend Display

LG Cloud V Series Specification

Size	**19"** (19CNV42K)	**23"** (23CAV42K)	**Box Type** (CBV42)
DISPLAY	- LED TN Panel - 16:10 / 1440 X 900	- LED IPS Panel - 16:9 / 1920 X 1080	None
VIDEO	- D-Sub (Signal Input): For Ordinary Monitor Usage (Connect with Desktop or Laptop)	←	None
	- DVI-I (Signal Output): Extend Mode Display Extend Mode: Display the Stretch Image of Primary Monitor	←	-DVI-I (Signal Output) -DVI-D (Signal Output) Extend Mode Display Extend Mode: Display the Stretch Image of Primary Monitor
AUDIO	- Audio Input: Mic-in (Jack Location: Side)	←	←
	- Audio Output (1) Headphone Out (2) Speaker : Stereo / 1W X 2	←	←
LAN (Ethernet)	(10/ 100/ 1000) Sending Data at 10 mbps, 100 mbps or 1000 mbps (One Gigabit per second).	←	←
USB (Total USB Ports: 6)	(1) Side: USB 2.0 x 2 → USB Memory, USB HDD (Hard Drive Disk) (2) Rear: USB 2.0 x 4 → Mainly for Keyboard and Mouse Connection → Recharging Electronic Devices	←	-USB 2.0 x 6 Front: USB 2.0 x 2 Rear: USB 2.0 x 4
Power Adaptor	- Adapter (19 VDC) / 100V~ 240V	←	←
Power Consumption	(1) Monitor Mode: 20W (2) VDI Mode: 27W	(1) Monitor Mode: 24W (2) VDI Mode: 29W	VDI Mode: 6W
	- DC Off: Max 1W	←	←

1) LG Cloud V Series Monitor USP

LG Cloud V Series displays clear and accurate colors from all angles to guarantee better work efficiency.

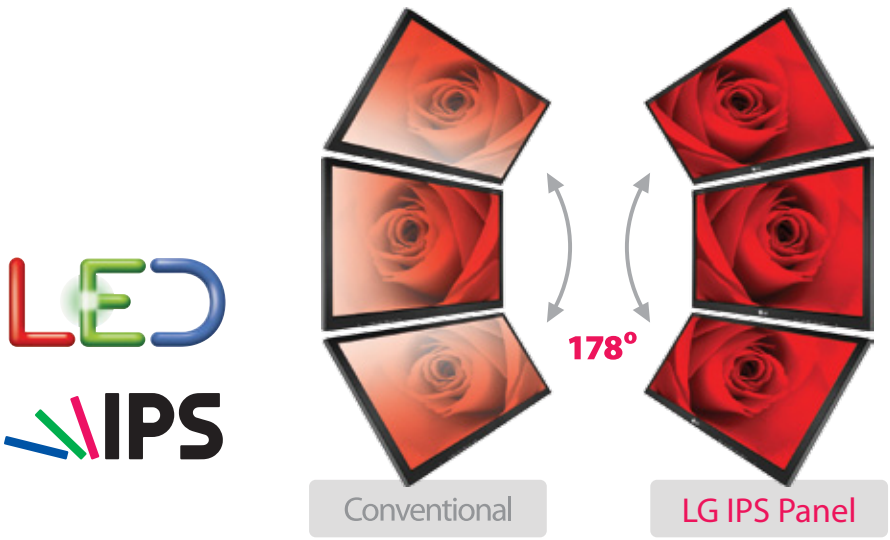
LG Cloud V Series is optimized for VMware VDI Solution with Monitor type as well as Box type Form Factor.

(1) IPS panel (23")

Exceptional Display Quality

▸ Lifelike Color

It offers a color impression identical to that of the original image.



▸ Wide Viewing Angle (Viewing Angle 178˚)

LG IPS Monitor allows you to enjoy realistic display quality without eye-fatigue whether you are standing or watching from the side.

▸ Smooth Color Changes

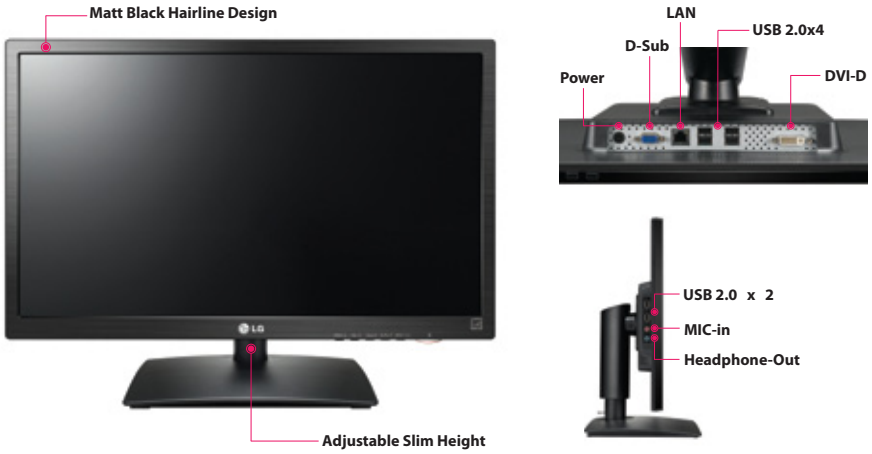
The LG IPS monitor provides a comfortable display environment where the strain on the eyes is lower even working on high-definition graphics and video images for prolonged periods.

(2) Ergonomic Design

LG Cloud V Series is ergonomically designed to offer more space efficiency from a lack of cables and seamless interoperation with other wireless products.

- User-compatible Side Interface
- Easy Set-up & Cabling
  (Simple connection with 1 power + 1 LAN + 1 Keyboard + 1 Mouse)
- Swivel / Tilt
- Matt Black Hairline design
- Adjustable Slim Height

[LG Cloud V Series 23CAV42K]



(3) Additional Features

- Built-in Speaker
- UPoE Ready (Optional / UPoE Power Splitter)

*UPoE (Universal Power Over Ethernet): UPoE is supported when the product is connected to UPoE-capable Cisco Catalyst 4500E switches.

2) Box Vs Monitor type

LG Cloud V Series is available as either a monitor or a standalone box to connect to an existing screen.

Not only is it space-efficient, the simple and minimalistic design is also a pleasure to view. An AIO approach also mean less cables, which means less hassle for each user. Instead of connecting multiple cables, an AIO form-factor reduces this to the minimum.