User Manual / Installation Guide AV Over Ethernet Gigabit Adaptor Model No. ZE7000

Warning! It will cause malfunction if the AV Adaptor is operating with unspecified power supply adaptor or incorrect power voltage. Do not expose this unit in the rain or moisture environment to reduce the risk of fire or electric shock.

PRECAUTIONS

- Do not use the "AV adaptor" and "Power supply Adaptor" near water.
- The "AV adaptor" is featured with 75mm x 75mm and 100mm x 100mm VESA mount.
 For easy and safe use, it is recommended to mount "AV adaptor" on the rear cover of monitor with VESA mount.
- The "AV Adaptor" should be operated by an Ethernet cable with standard RJ-45 connector on both ends. One end to the "AV adaptor", the other end to host PC or server.
- Never spill liquids on the "AV Adaptor".
- Do not attempts to service "AV adaptor" yourself; opening or removing covers can degrade product EMC and performance. Please refer all servicing to qualified service personnel.
- For Wall mount "Power supply adaptor", wall socket shall be installed near the equipment and shall be easily accessible.





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I. Introduction

ZE7000 Zero Client operates as a stand-alone computing model without local CPU, memory, :

-Connected to Host PC only with a Ethernet cable,

-Video, audio and USB functions are all communicated through this cable.

ZE7000 Zero Client decodes Video, Audio from Ethernet to USB, then with video, audio decoders to translate USB to video (for monitor), audio amplifier and microphone.

It also includes a USB Hub, with 4 USB2.0 downstream ports, upstream is internally communicated to Ethernet and connected to Host PC.

II. <u>Features</u>

- Simple Ethernet connection for multiple extended displays

ZE7000 connect to Host server through Ethernet cable connection, this type of connection can exceed the length limit of other signal connection such as VGA, USB. This also gives the flexibility of system layout.

- Easy and convenient installation

Designed with VESA standard mounting on the adaptor box;

75mm x 75mm and 100mm x 100mm

- Provides two types of video signals for end user to select
 VGA (by an attached DVI to VGA dongle)
 DVI-D (through a DVI-D to DVI-D cable)
- Reset: To reset IP address
- Audio Line out
- Headphone out
- Microphone in/out

III. Unpack the Adaptor

- Put the AV Adaptor on a clean surface; make sure the box in upright position.
- Remove packing materials from inside of box.

IV. Check accessory

Please make sure the entire accessory is included:





DVI to VGA Dongle





ZE7000 User Guide & Driver CD

V. <u>Recommended network application and setting:</u>

The Phistek ZE7000 can be configured as below:

Microsoft Basic Extended Mode for multiple extended displays

Multiple extended displays block diagram : simple extended displays, no control center at Host PC



1. Set Up Procedures:

The ZE7000 Zero-Client: typically available directly from PHISTEK.

The hos	t computer:	should be	e scaled	according	to the	usage s	cenarios

СРО	Intel i7	Intel i5	Intel i3	Inel Atom D525
DRAM	8G	8G	4G	2G
OS	Win 8.1, Win7	Win 8.1, Win7	POS Ready7	POS Ready2009
Video 1080p	8 sets(max)	6 sets(max)	0 set	0 sets
Video 720p	8 sets(max)	8 sets(max)	1 sets(max)	0 sets
Photo 1920x1080	8 sets(max)	8 sets(max)	4 sets(max)	4 sets(max)

<u>The</u>

LAN network switch: 10/100M or 1000M Ethernet, recommend Gigabit-Switched, and ideally having a dedicated switch per each cluster.

2. Installation procedure:

- (1). Windows OS Preparations
- (2). Turn on Microsoft NET. Framework:
- (3). Drivers Installation:

Network USB Driver for ZE7000	Network_USB_Service_Setup_13_0731_1084		
DisplayLink Driver for ZE7000	DisplayLink USB Graphics Software for Windows* V		
	7.6.M1		
	Download from DisplayLink website		
	http://www.displaylink.com/downloads/windows		

(4). Network IP address setting

Detail procedure description:

(1). Windows OS Preparations

Run Windows-Update and install all available updates.

Make sure to install the latest driver for the graphic card (applies to on-board as well)

Turn off Windows-Update device driver searching

http://technet.microsoft.com/en-us/library/cc753091.aspx

(2). Turn on Microsoft NET. Framework:

Click Control Panel to enter Programs.

In Programs, Please check "Turn Windows Features on or off"



Find and turn on Microsoft. NET Framework (it shall be later than 3.5.1 version) Please see the Fig. below.



(3). Drivers Installation:

3.1 Install Network USB Driver:

Click "Network_USB_Service_Setup_13_0731_1084"

Installation is automatically run as below:

Network USB Setting Utility - InstallShield Wizard					
C	Preparing to Install Network USB Setting Utility Setup is preparing the InstallShield Wizard, which will guide you through the program setup process. Please wait. Preparing to Install				
	Cancel				

Network USB Setting	Utility - InstallShield Wiza	rd
Setup Status		
Network USB Setting Utility is configuring	your new software installation.	
stallShield		_
		Can

After installation, screen will display as below, please press "Finish"

Network USB	Setting Utility - InstallShield Wizard
	InstallShield Wizard Complete Setup has finished installing Network USB Setting Utility on your computer.
	< Back Finish Cancel

Screen will then display as below, please choose to restart your computer.

Network USB	Setting Utility - InstallShield Wizard InstallShield Wizard Complete The InstallShield Wizard has successfully installed Network USB Setting Utility. Before you can use the program, you must restart your computer. () Yes, I want to restart my computer now. () No, I will restart my computer later.
	Remove any disks from their drives, and then click Finish to complete setup.

After Host PC restart, there will be a shortcut Icon on the screen desktop.



Click "Launch Network USB Setting Utility" shortcut will reveal the utility as below: User can use this utility to assign/ clear connection, and configure IP address.



3.2 Install DisplayLink USB Graphics Software

Note: ZE7000 support windows from windows XP to windows10 Please visit DisplaLink download website to get latest windows driver. <u>http://www.displaylink.com/downloads/windows</u>

Example for window 7 driver; Windows* V7.6 M1 as below:

Click Installation The Displaylink software end user Licence agreement shown as below:

Install DisplayLink Software for Display	yLink Graphics				
	DisplayLink				
English 🔹	5.3.24251.0				
SOFTWARE END U	SER LICENCE AGREEMENT FOR				
DISPLAYLINK MIRROR DRIVE	R and DISPLAYLINK GRAPHICS ADAPTER				
(тн	E "PROGRAM")				
This is a legal agreement between you, the end user, ("You") and DisplayLink (UK) Limited ("DisplayLink"). BY INSTALLING THIS SOFTWARE, YOU ARE AGREEING TO BE BOUND BY THE TERMS OF THIS AGREEMENT.					
Some versions of this software, once installed, will check for updated system software at least once and then again at regular intervals unless you specifically disabled this feature when given this option. No personal information or information about your PC or the software installed on your PC is sent to our update servers during this process. Accepting the End-User License Agreement means that you accept this product feature.					
	I Accept Cancel				

Click I Accept, the DisplayLink Core Software start to install



Displaylink USB Graphic software installation will complete without notification.

Note: On some computers you may need to reboot before you can use your Displaylink enabled device

(4). Network IP address setting:

- Note: All zero clients' IP address shall be in the same segment
 - For example:

Host PC: IP address=192.168.1.10, Subnet mask=255:255:255:0

Zero clients shall be

IP=192.168.1.xxx, Subnet mask=255:255:255:0

• There are two ways to set up IP address:

DHCP:

See a general home network diagram below as an example:

Connect Host PC and zero clients to a network switch(better to use Gigabit switch). The Router will automatically assign IP via switch to devices connect to this switch



Check if zero clients are at DHCP status:

Click configuration, a set up table will appear, DHCP shall be ticked.

WMS Zero MAC: 04:C9 Assignment WMS Zero MAC: 04:C9	Client IP: 192.168.5.1 :91:6A:00:08 FW Ver: Free Connection: Free Client IP: 192.168.5.1 :91:60:01:0A FW Ver:	18 038.100 ee 13 038.100		
Assignment:	Free Connection: Fre	e		
	Configuration			
	Network Settings Server Name:	1S Zero Client		
IP Address: 192 168 5 113				
	Subnet 2 Set	Cance	4	
	Up	date Firmware		
		Reset		
Assign to thi	s PC (<u>A</u>)	Search (<u>S</u>)	Open Web page (Q)	
	this PC(I)		Configuration	

Set Host PC to DHCP: see below properties of IPV4

: tick "Obtain an IP address automatically

Control Panel >	Network and Internet Network and Sharing Center	✓ ⁴ → Search Cor
Control Panel Home Change adapter settings Change advanced sharing settings	医城連線 Statuc 23 bonection Image: Ima	See full
	Internet Protocol Version 4 (TCP/IPv4) Properties General Alternate Configuration You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings. 	connect or discon
	Subnet mask:	ection.
See also HomeGroup	Obtain DNS server address automatically Outring DNS server addresses: Preferred DNS server: Alternate DNS server: .	sharing settings.
Internet Options	Validate settings uppe avit	

After all devices' IP address has been set up to DHCP, the router will assign IP automatically,

the USB server utility will look like as below:

🕉 🔝 Netwo	rk USB Setting Utility			
	WMS Zero Client IP: MAC: 04:C9:91:6A:00	192.168.5.11 :0B FW Ver:0	8 38.100	
	Assignment: Free Con WMS Zero Client IP:	nection: Free 192.168.5.11	3	
	MAC: 04:C9:91:60:01 Assignment: Free Con	0A FW Ver:0 nection: Free	38.100	
6				
5				
-				
4				
4				
	Assign to this PC (A)	Q	Search (S)	Open Web page (<u>O</u>)
	Assign All to this PC([)	0	Clear All (<u>U</u>)	Configuration (I)
				Ver 1. 0. 8. 4

Click Assignment to this PC for each client, connection will be made:

I Netwo	🔋 Network USB Setting Utility				
	WMS Zero Client IP: 192.168.5.118 MAC: 04:C9:91:6A:00:0B FW Ver:038.100 Assignment: This PC Connection: This PC WMS Zero Client IP: 192.168.5.113 MAC: 04:C9:91:60:01:0A FW Ver:038.100 Assignment: This PC Connection: This PC				
L					
2					
G					
	Clear PC Assignment (C)	Open Web page (<u>O</u>)			
	Assign All to this PC()	Configuration (I) Ver 1. 0. 8. 4			

If the client IP is not in the same segment, the IP address shown is RED, see example below: Please tick "DHCP" to get DHCP IP.

Network USB Setting Utility						
WMS Zero Client IP: 192.168.5.118 MAC: 04:C9:91:6A:00:0B FW Ver:038.100 Assignment: Free Connection: Free						
WMS Zero Client IP: 169.254.10.10 MAC: 04:C9:91:60:01:0A FW Ver:038.100 Assignment: Free Connection: Free						
Configuration						
Network Setting Server Name	gs WMS Zero Client					
☑ DHCP						
IP Address	s 169 . 254 . 10 . 10					
Subne	t 255 . 255 . 0 . 0					
Set	Cancel					
Update Firmware						
	Reset					
Assign to this PC (A) Search (S) Open Web page (Q)						
Assign All to this PC()	Clear All (U)	Configuration (I)				
		. Ver 1, 0, 8, 4				

Manual assign IP:

If the system is for local use(not connect to router to website),

you may also assign IP manually,

The IP address shall be in the same segment, and Subnet mask shall be the same. For example:

Host PC:	IP=192.168.1.1,	subnet: 255:255:255:0
Zero Client A	IP=192.168.1.	11, subnet: 255:255:255:0
Zero Client B	IP=192.168.1.	12, subnet: 255:255:255:0.

VI. <u>Product Outline and I/O Description: dimension(mm)</u>



VII. <u>Product Input / Output Installation:</u>







type 2







type 4



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FCC Class A Warning



This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CISPR 22 Class A Warning



This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

X. <u>Product General Specification:</u>

Power	AC adaptor input	AC100V~240V, 50~60Hz		
	DC power output	12Vdc @1.5A		
	LED indicators	Yellow: to indicate power Adaptor attached		
		Blue: to indicate device connected to Host PC		
		Green: to indicate device identified		
Input / output connectors	Ethernet input	x1 RJ-45, 10/100/1000Mb Ethernet		
	USB downstream ports	x4 USB A type (USB 2.0)		
	Video output	VGA DVI-D		
	Video connector / Dongle	x1 DVI-I connector for DVI-D/ DVI-I Display		
		x1 DVI-I to VGA Dongle for VGA Display		
		Optional cable:		
		X1 DVI-I to DVI-D cable for DVI Display		
	Audio output 1	x1 Line out phone jack		
	Audio output 2	x1 headphone		
	Audio input	x1 Microphone		
Video resolution	Max. Resolution	1920 x 1080		
	Resolution by EDID	EDID read capability to provide different display timing mode resolution		
Environmental	Operating temperature	0º C ~ 35º C		
	Non-operating temperature	-30º C ~ 60º C		
	Operating Humidity	10% ~ 90% (non-condensing)		
	Non-operating Humidity	5 % ~ 95%		
	Cooling	Fan-less		
Mechanical	Mounting	4 VESA holes; 2 spaced at 100mm centers and 2 spaced at		
	Dimensions W x D x H	115mm x 115mm x 17.8mm		
	Weight	330g		
Regulatory		FCC, CE,		
Compliance		WEEE, RoHS		