Network



Ітем	DESCRIPTION
Network State	Displays the network connection status.
DHCP	Press ◀▶ to turn DHCP On or Off. Note: If you select DHCP Off, complete the IP Address, Subnet Mask, Gateway, and DNS fields.
IP Address	Enter a valid IP address if DHCP is turned off.
Subnet Mask	Enter a valid Subnet Mask if DHCP is turned off.
Gateway	Enter a valid Gateway address if DHCP is turned off.
DNS	Enter a valid DNS name if DHCP is turned off.
Apply	Press

LAN_RJ45



Wired LAN Terminal functionalites

Remote control and monitoring of a projector from a PC (or Laptop) via wired LAN is also possible. Compatibility with Crestron / AMX (Device Discovery) / Extron control boxes enables not only collective projector management on a network but also management from a control panel on a PC (or Laptop) browser screen.

- ★ Crestron is a registered trademark of Crestron Electronics, Inc. of the United States.
- ★ Extron is a registered trademark of Extron Electronics, Inc. of the United States.
- ★ AMX is a registered trademark of AMX LLC of the United States.
- ★ PJLink applied for trademark and logo registration in Japan, the United States of America, and other countries by JBMIA.

Supported External Devices

This projector is supported by the specified commands of the Crestron Electronics controller and related software (ex, RoomView ®). http://www.crestron.com/

This projector is supported by AMX (Device Discovery). <u>http://www.amx.com/</u>

This projector is compliant to support Extron device(s) for reference. <u>http://www.extron.com/</u>

This projector supports all commands of PJLink Class1 (Version 1.00). <u>http://pjlink.jbmia.or.jp/english/</u>

For more detail of information about the diverse types of external devices which can be connected to the LAN/RJ45 port and remote/control the projector, as well as the related control commands supporting for each external device, kindly please get contact with the Support-Service team directly.

<u>LAN RJ45</u>

1. Connect an RJ45 cable to RJ45 ports on the projector and the PC (Laptop).



2. On the PC (Laptop), select Start \rightarrow Control Panel \rightarrow Network and Internet.



3. Right-click on Local Area Connection, and select Properties.



- 4. In the Properties window, select the Networking tab, and select Internet Protocol (TCP/IP).
- 5. Click Properties.

📮 Local Area Connection Properties
Networking Sharing
Connect using:
VIA Rhine II Compatible Fast Ethemet Adapter
Configure This connection uses the following items:
Client for Microsoft Networks Gas Packet Scheduler Gas Packet Scheduler File and Printer Sharing for Microsoft Networks Anternet Protocol Version 6 (TCP/IPv6) Anternet Protocol Version 4 (TCP/IPv4) A
Install Uninstall Properties
Description Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.
OK Cancel

6. Click Use the following IP address and fill in the IP address and Subnet mask, then click OK.

Internet Protocol Version 4 (TCP/IPv4)	Properties
General	
You can get IP settings assigned autor this capability. Otherwise, you need to for the appropriate IP settings.	natically if your network supports a sk your network administrator
Obtain an IP address automatical	ly
• Use the following IP address:	
IP address:	10 . 10 . 10 . 99
Subnet mask:	255.255.255.0
Default gateway:	· · ·
Obtain DNS server address auton	natically
• Use the following DNS server add	resses:
Preferred DNS server:	
Alternate DNS server:	· · ·
🔲 Vaļidate settings upon exit	Ad <u>v</u> anced
	OK Cancel

- 7. Press the Menu button on the projector.
- 8. Select Settings2 \rightarrow Advanced1 \rightarrow Network
- 9. After getting into Network, input the following:
 - ► DHCP: Off
 - ▶ IP Address: 10.10.10.10
 - ▶ Subnet Mask: 255.255.255.0
 - ▶ Gateway: 0.0.0.0
 - DNS Server: 0.0.0.0

Open a web browser

(for example, Microsoft Internet Explorer with Adobe Flash Player 9.0 or higher).

🖉 Navigatior	n Canceled - Windows Internet Explorer	
00-	e http://10.10.10.10/	• • ×
🔆 Favorites		
1	Navigation to the webpage was canceled	
	What you can try:	
	Refresh the page.	

- 11. In the Address bar, input the IP address: 10.10.10.10.

The projector is setup for remote management. The LAN/RJ45 function displays as follows.

	Model Name	N
Projector Info	MouerName	Sustam
Alert Mail Settings		system
	System Status	Power On
Crestron	Display Source	No Source
	Lamp Hours	2
	Display Mode	Presentation
	Error Status	No Error
		LAN Status
	IP address	10.10.10
	Subnet mask	255.255.0.0
	Default gateway	0.0.0.0
	DNS Server	0.0.0.0
	MAC address	
		Version
	LAN Version	
	F/W Version	

Power	Vol -	Mute	Vol +	
Sourcel ist				Interface 2.7.2.4
SourceList				
				J 🔺 Auto
				Enter
			Blan	
Freeze	Contra	ast Brightnes	s Colo	r 🕑
Chestrick				Expansion Options
Croctron Control		Projector		Licor Pacoword
	Projector Name		_	
IP ID	Location	RM01	Passy	Vord
Control Port	Assigned To	Sir	Confin	med
Control Set		Set		Usr Set
	Network Config	DHCP Enabled		
	IP Address	10.10.10.10		Admin Password
	Subnet Mask	255.255.255.0		Adm Enabled
	Default Gateway	0.0.0.0	Passv	vord
	DNS Server	0.0.0.0	Confin	med
				Adm Set
		Net Set		
		Tools Exit		

CATEGORY	Ітем	INPUT-LENGTH
	IP Address	15
Crestron Control	IP ID	3
	Port	5
	Projector Name	10
Projector	Location	10
	Assigned To	10
	DHCP (Enabled)	(N/A)
	IP Address	15
Network Configuration	Subnet Mask	15
	Default Gateway	15
	DNS Server	15
	Enabled	(N/A)
User Password	New Password	10
	Confirm	10
	Enabled	(N/A)
Admin Password	New Password	10
	Confirm	10

For more information, please visit http://www.crestron.com.

Preparing Email Alerts

- 1. Make sure that user can access the homepage of LAN RJ45 function by web browser (for ex-ample, Microsoft Internet Explorer v6.01/v8.0).
- 2. From the Homepage of LAN/RJ45, click Alert Settings.

IVICEK		
VMd Color, VMd Dre		
jector Info	Model Name	
		System
t Mail Settings	System Status	Power On
tron	Display Source	No Source
	Lamp Hours	2
	Display Mode	Presentation
	Error Status	No Error
		LAN Status
	IP address	10.10.10.10
	Subnet mask	255.255.0.0
	Default gateway	0.0.0.0
	DNS Server	0.0.0.0
	MAC address	
		Version
	LAN Version	
	F/W Version	

3. By default, these input boxes in **Alert Setting**s are blank.

Projector Info Alert Mail Settings Crestron	Send E-Mail Enter the appropriate settings in the fields below: (Your SMTP server may not require a user name or password.)
	SMTP Server: Port: 25 User Name:
	Mail Server Apply From: To: CC:
	Mail Address Apply E-mail Alert Options: Fan lock : ✓ Oxer_Heat: ✓ Case Open: ✓ Lamp Hours Over: ✓ Weekly Report: ✓
	Alert Option Apply Send Test Mail

4. For Sending alert mail, input the following:

The **SMTP** field is the mail server for sending out email (SMTP protocol). This is a required field.

The **To** field is the recipient's email address (for example, the projector administrator). This is a required field.

The **Cc** field sends a carbon copy of the alert to the specified email address. This is an optional field (for example, the projector administrator's assistant).

The **From** field is the sender's email address (for example, the projector administrator). This is a required field.

Select the alert conditions by checking the desired boxes.

Projector Info Alert Mail Settings Crestron	Se Enter (Your	nd E-Mail	gs in the fields below: require a user name or password.)
		SMTP Server: User Name: Password:	mail.corp.com Port: 25 Sender.US
		From: To:	Mail Server Apply send@mail.corp.com rcvr1@mail.corp.com
		E-mail Alert Optio Fan lock : Case Open:	Mail Address Apply Mail Address Apply ons: V Over_Heat: Lamp Fail: V
		Lamp Hours Over Weekly Report:	Filter Hours Over: Alert Option Apply
			Send lest Mail

Note: Fill in all fields as specified. User can click **Send Test Mail** to test what setting is correct. For successful sending an e-mail alert, you must select alert conditions and enter a correct e-mail address.

RS232 by Telnet Function

Besides projector connected to RS232 interface with "Hyper-Terminal" communication by dedicated RS232 command control, there is alternative RS232 command control way, so called "RS232 by TELNET" for LAN/RJ45 interface.

Quick Start-Guide for "RS232 by TELNET"

Check and get the IP-Address on OSD of the projector.

Make sure that laptop/PC can access the web-page of the projector.

Make sure that "Windows Firewall" setting to be disabled in case of "TELNET" function filtering out by laptop/PC.



Start => All Programs => Accessories => Command Prompt



Input the command format like the below:

telnet ttt.xxx.yyy.zzz 23 ("Enter" key pressed)

(ttt.xxx.yyy.zzz: IP-Address of the projector)

If Telnet-Connection ready, and user can have RS232 command input, then "Enter" key pressed, the RS232 command will be workable.

How to have TELNET enabled in Windows VISTA / 7 / 8

By default installation for Windows VISTA / 7 / 8, "TELNET" function is not included. But end-user can have it by way of "Turn Windows features On or Off" to be enabled.

Open "Control Panel" in Windows VISTA / 7 / 8

🚱 🕞 💌 🎽 🕨 Control Panel 🕨		• 4 ₇	<u>م</u>
<u>Eile E</u> dit <u>V</u> iew <u>T</u> ools <u>H</u> elp			
Control Panel Home Classic View	System and Maintenance Get started with Windows Back up your computer	User Accounts Add or remove user accounts	
	Security Check for updates Check this computer's security st Allow a program through Win Firewall	Appearance and Personalization Change desktop background Customize colors Adjust screen resolution	
	View network and Internet View network status and tasks Set up file sharing	Clock, Language, and Region Change keyboards or other input methods	н
	Hardware and Sound Play CDs or other media automat Printer Mouse	tically Ease of Access Let Windows suggest settings Optimize visual display	
Recent Tasks Callow a program through Windows Firewall Turn Windows Firewall on or	Programs Uninstall a program Change startup programs	Additional Options	
off Printer	Mobile PC Change battery settings Adjust commonly used mobility.		-

Open "Programs"



Select "Turn Windows features on or off" to open

Windows Fe	atures		X
Turn Wind	ows features on or off		?
To turn a feat check box. A f	ure on, select its check box. To turn a feature ïlled box means that only part of the feature	off, clear it is turned o	ts n.
E 📔 RIP	Listener		
🔲 📔 Sirr	ple TCPIP services (i.e. echo, daytime etc)		
🕀 🔲 🚺 SNI	MP feature		
🔽 📙 Tak	olet PC Optional Components		
🔽 🍌 Tel	net Client		
🔳 📗 Tel	net Server		-
🔽 脂 TFT	"P Client		
🔽 🆺 Wir	ndows DFS Replication Service		
🔽 🍌 Wir	ndows Fax and Scan		=
🔽 🆺 Wir	ndows Meeting Space		
🕀 🔲 🔒 Wir	ndows Process Activation Service		
2001 98 00 - 18 M			-
	ОК	Canc	el

Have "Telnet Client" option checked, then press "OK" button.

Mi	crosoft Windows
F	Please wait while the features are configured. This might take several minutes.
	Cancel

Specsheet for "RS232 by TELNET" :

- 1. Telnet: TCP
- 2. Telnet port: 23

(for more detail, kindly please get contact with the service agent or team)

- 3. Telnet utility: Windows "TELNET.exe" (console mode)
- 4. Disconnection for RS232-by-Telnet control normally: Close Windows Telnet utility directly after TELNET connection ready
- 5. Limitation 1 for Telnet-Control: there is less than 50 bytes for successive network payload for Telnet-Control application.

Limitation 2 for Telnet-Control: there is less than 26 bytes for one complete RS232 command for Telnet-Control.

Limitation 3 for Telnet-Control: Minimum delay for next RS232 command must be more than 200 (ms).

(*, In Windows built-in "TELNET.exe" utility, "Enter" key pressed will have "Carriage-Return" and "New-Line" code.)

APPENDIX I

Communication parameter setup

You can use the serial control command to input commands for projector control or retrieve its operational data through Windows client terminal software,

e.g. Hyper Terminal, with ASCII characters. You need to set up the following communication parameters in advance:

ltem	Parameter:		
Bit per Second	9600 bps		
Data Bit	8-bit		
Parity	None		
Stop Bit	1		
Flow Control	None		

Note:

? → Get

= → Set

- + → increase 1 step
- → Decrease 1 step

EX:

ASCII	Function
Op contrast ?	Get Brightness value
Op contrast = 58	Set Brightness value = 58
Op contrast +	Increase Contrast 1 step
Op contrast -	Decrease Contrast 1 step

OSD Function	ASCII	Settings/Return Values	
Picture Mode	Op pic.mode	0:Presentation 1:Bright 2:Game 3:Movie ? 4:Vivid = 5:TV 6:sRGB 8:DICOM SIM 9:User1 10:User2	
Input Select	Op input.sel	1 = VGA1 3 = DVI 4 = Video 6 = HDMI 1 7 = BNC 9 = HDMI 2 15 = HDBASET	

OSD Function	ASCII	Setting	gs/Return Values
Auto Power Off	Op auto.powoff	? =	0-180
Auto Power On	Op auto.powon	? =	0 = Off 1 = On
Blank Screen	Op no.signal	? =	0 = Black 1 = Red 2 = Green 3 = Blue 4 = White
Contrast	Op contrast	? = + -	0-100
Brightness	Op bright	? = + -	0-100
Saturation	Op saturat	? = + 	0-100
Hue	Op tint	? = + -	0-100
Sharpness	Op sharp	? = + -	0-31
Color Temperature	Op color.temp	? =	0 = Warm 1 = Normal 2 = Cold
White Balance /Red Offset	Op red.offset	? = + -	-100 ~ +100
White Balance /Green Offset	Op green.offset	? = + -	-100 ~ +100
White Balance /Blue Offset	Op blue.offset	? = + -	-100 ~ +100
White Balance /Red Gain	Op red.gain	? = + -	0-200
White Balance /Green Gain	Op green.gain	? = + -	0-200
White Balance /Blue Gain	Op blue.gain	? = + -	0-200
HSG/Red Gain	Op hsg.r.gain	? = + -	0-100
HSG/Green Gain	Op hsg.g.gain	? = + -	0-100

OSD Function	ASCII	Setting	gs/Return Values
HSG/Blue Gain	Op Hsg.b.gain	? = + -	0-100
HSG/Cyan Gain	Op hsg.c.gain	? = + -	0-100
HSG/Magenta Gain	Op hsg.m.gain	? = + -	0-100
HSG/Yellow Gain	Op hsg.y.gain	? = + -	0-100
HSG/Red/Saturation	Op hsg.r.sat	? = + -	0-100
HSG/Green/Saturation	Op hsg.g.sat	? = + -	0-100
HSG/Blue/Saturation	Op Hsg.b.sat	? = + -	0-100
HSG/Cyan/Saturation	Op hsg.c.sat	? = + -	0-100
HSG/Magenta/Saturation	Op hsg.m.sat	? = + -	0-100
HSG/Yellow/Saturation	Op Hsg.y.sat	? = + -	0-100
HSG/Red/Hue	Op hsg.r.hue	? = + -	0-100
HSG/Green/Hue	Op hsg.g.hue	? = + -	0-100
HSG/Blue/Hue	Op Hsg.b. hue	? = + -	0-100
HSG/Cyan/Hue	Op hsg.c. hue	? = + -	0-100
HSG/Magenta/Hue	Op hsg.m. hue	? = + -	0-100
HSG/Yellow/Hue	Op Hsg.y. hue	? = + -	0-100

OSD Function	ASCII	Setting	s/Return Values
HSG/White/Red Gain	Op hsg.wr.gain	? = + -	0-100
HSG/White/Green Gain	Op hsg.wg.gain	? = + -	0-100
HSG/White/Blue Gain	Op Hsg.wb.gain	? = + -	0-100
Aspect Ratio	Op aspect	? =	0 = Fill 1 = 4:3 2 = 16:9 3 = LetterBox 4 = Native 5 = 2.35:1
VGA Frequency	Op h.phase	? = + -	0-31
VGA Tracking	Op h.total	? = + -	-5 ~ +5
VGA H Position	Op h.pos	? = + -	-5 ~ +5 -100 ~ +100(Auto Sync Off)
VGA V Position	Op v.pos	? = + -	-5 ~ +5 -100 ~ +100(Auto Sync Off)
Auto Sync	Op auto.img		(execute)
Zoom	Op zoom	?	-10 ~ +10
Lamp Mode	Op Lamp.mode	?=	0: Normal 1: Eco 2: Eco plus 3: Dimming 4: Extere dimming 5: Custom
Fan Speed	Op altitude	?	0 = Normal 1 - High
Lamp 1 Statu	Op lamp1.stat	?	0 = Off 1 = On
Projection Mode	Op proj.mode	? =	0 = Desktop Front 1 = Desktop Rear 2 = Ceiling Front 3 = Ceiling Rear
Gamma	Op gamma	? =	0 = 1.8 1 = 2.0 2 = 2.2 3 = 2.4 4 = B&W 5 = Linear

OSD Function ASCII		Settings/Return Values		
Test Pattern	Op pattern	? =	0 = None 1 = RGB Ramps 2 = Color Bars 3 = Setp Bars 4 = Checkboard 5 = Grid 6 = Horizontal Lines 7 = Vertical Lines 8 = Diagonal Lines 9 = Horizontal Ramp 10 = Vertical Ramp 11 = White 12 = Red 13 = Green 14 = Blue 15 = Black	
V Keystone	Op v.keystone	? = + -	-30 ~ 30	
H Keystone	Op h.keystone	? = + -	-25 ~ 25	
Network/IP Adress	Op net.ipaddr	? =	<string></string>	
Network/Subnet	Op net.subnet	? =	<string></string>	
Network/Gateway	Op net.gateway	?	<string></string>	
Network/DHCP	Op net.dhcp	?	0 = Off 1 = On	
Menu Position	Op menu.pos	?	0~4	
Startup Logo	Op startup.logo	?=	0 = STD 1 = Black 2 = Blue	
Auto Search	Op auto.src	? =	0 = Off 1 = On	
Language	Op lang	? =	0 = English 1 = French 2 = German 3 = Spanish 4 = Portugues 5 = Simplified Chinese 6 = Traditional Chinese 7 = Italian 8 = Norwegian 9 = Swedish 10 = Dutch 11 = Russian 12 = Polish 13 = Finnish 14 = Greek 15 = Korean 16 = Hungarian 17 = Czech 18 = Arabic 19 = Turkish 20 = Vietnamese 21 = Japanese 22 = Thai 23 = Farsi 24 = Hebrew 25 = Danish 26 = French Canadian	

OSD Function	ASCII	Setting	gs/Return Values
Model	Op model	?	<string></string>
Serial Number	Op ser.no	?	<string></string>
Software Version	Op sw.ver	?	<string></string>
Active Source	Op Act.src	?	1 = VGA1 3 = DVI 4 = Video 6 = HDMI 1 7 = BNC 9 = HDMI 2 15 = HDBASET
Pixel Clock	Op pixel.clock	?	<string></string>
Signal Format	Op signal	?	<string></string>
H Refresh Rate	Op h.refresh	?	<string></string>
V Refresh Rate	Op v.refresh	?	<string></string>
Lamp1.Time	Op lamp1.hours	?	<string></string>
Lamp1 Time Reset	Op Lamp1.reset		(execute)
Power On Time	Op proj.runtime	?	<string></string>
Factory Reset	Op fact.reset		(execute)
Blank	Op Picture.mute	? =	0 = Off 1 = On
Power On	Op power.on		(execute)
Power Off	Op power.off		(execute)
Projector Status	Op status	?	0 = Reset 1 = Standby 2 = Active 3 = cooling
Low Power Mode	Op lowpower.mode	? =	1 = On 2 = On By Lan
3D Sync	Op threed.mode	? =	0 = Off 1 = DLP-Link 2 = IR
3D Sync Invert	Op threed.sync.invert	?	0 = Off 1 = On
3D Sync Format	Op threed.format	? =	0 = Frame Sequential 1 = Top / Bottom 2 = Side by side 3 = Frame Packing

Note:

The projector returns string "NA" when the input command does not apply to current projector status or setup.