LiveU

LU2000 Server Installation Guide

Hardware Installation

This card will support 2 separate video input channels that should be connected as per the below photo:





Decklink Quad 2



Network Setup

Piotoco	Parts	Sic / Dest	Required / Optional	Comments
Inbound UOP	8503-8505	Anywhere	Required	Incoming video and audio from any LiveU device. Note: If these ports are not available, UveU support can work with you to use others
Inbound TCP	8601-8606	Asymbere	Optional	Used for session initialization when using the UveU & Panasonic solution where select camera models can stream directly to your UU2000. If you plan to trial or use the Panasonic solution, these ports are required
Inicound UDP	8509-8515	Anywhere	Optional	Used with the IPB feature available on LiveU units
Inbound UDP	8520-5567	Anywhere	Optionel	Used for video and audio delivery from a Panasonic camero that supports direct UneU streaming. If you plan to trial or use the Panasonic solution, these ports are required.
Intound TCP	1935, 18255	Anywhere (see purpose)	Optional (but recommended)	1935 is used for RTMP to see the video preview in EVeU Central, 18255 is used for http delivery of shared Ries from your UU2000 to your computer. Both are highly recommended. Note: if these ports are not available, UveU/Support can work with you to sur other parts.
Inbound UDF	Special: Any UDP Rood or attack protection	Asymptote	Required	If your firewall offers any form of UDP flood or attack prevention, the IP address of your UJ2000 needs to be whitelisted to disable this feature for this IP. The video and audio stream is a long-running, high bandwidth stream of UDP packets, and such features will interfere with rocaliving that stream.
Outbound TCP	973,1873, & 21222	rayne.lives.tv	Required (for updates)	Allows remote update of MMH servers through LiveU Control
Ourbound TCP	80, 443 & 8543	la-central. inves. tv (54.83.195.191) (18.208.108.178)	Required	Used by the LU2000 server to communicate configuration details to LUC. Required to allow for 6.0+ features to be recognized and available
Outbound DNS		Your organization's DNS conver (or 4.2.2.2)	Required	The 102000 must be able to reach a DNS server Any DNS, either internal or external to your network, is ecceptable
Outbound TCP	80, 443 8. 10020, 10021	hub1 Jiveu tv (23.21.38.175) hub2 Jiveu tv (45.137.77.107)	Required	Command and Control protocol. Note: if your firewall already allows all outbound sessions, you will not need to apon any explicit ports
Curbound TCP	8400-8600	modic 3veu tv (54.247.137.242) medic2 3veu tv (54.83.47.134)	Optional (But recommended)	LiveU's support tool that allows for remote upgrade of the LU2000 as well as diagnosis and debug when necessary. While optional, without this access, UveU cannot offer the same level of support on your LU2000. Note: If your filewolf directly allows all outbound setsions, you will not need to open any explicit ports
Outbound UDP	9000-9099	Azywhere	Optionel (but recommended)	Used only if your LU2000 will be a LiveU Mahlpoint distributor
Outbound TCP	80, 443 & 5938	Anywhere	Optionel NOT recommended	Used by TeamViewer, LiveU Support also uses the TeamViewer remote desktop tool for complete access when required & when initiated by the outcomer. Note: If your /irewall already allows all outbound sessions, you will not need to open any explicit ports.
Outbound UDP	9000-9010	".doud liveu.tv	Required (for UneU Metrix)	For LikeU Matrix to initiate transmissions to the cloud service, outbound UDP must be permitted. Note: if your firewall already allows all outbound sessions, you will not need to open any explicit ports





Software Installation

Turn the server on and login using: Username: liveu Password: 123123

By launching the **"liveu-config"** you will be brought to the LiveU Server Setup Utility. Press **"Enter"** to continue with the setup.

LiveU Server Setup Utility - MMH Setup	
This utility allows you to configure Liv The utility supports two flows: A Wizard flow for ongoing updates of the server's In the Wizard flow, the utility advances the next stage	eU NHH servers flow for first time setup, and a Manual setup. automatically from one setup stage to
In Manual flow, you will need to choose of The Manual flow also includes some addit Wizard flow: Encryption, IfB volume conf	which configuration stage to execute lonal stages which are not part of the iguration and test Blackmagic output
Blackmagic firmware update will be check cards requires firmware update, then the upon which reboot will be required	ed on start. If any of the Blackmagic upgrade step will be initilized,
Scontinues	< Exit >

You are given the option for a Wizard setup or a Manual Setup. For the initial setup we recommend doing the **"Wizard Flow"** option. All the steps on pages 15-22 of the document follow the **"Wizard Flow"** option

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	1 1000 111	al Fim	

The next screen will let you know what the Wizard Setup will go through. The steps are very, very similar to the current MMH Configuration. Press "Enter" to proceed.

nts wirara includes the following steps: 1. Notworking Satup 2. On-Frentse / On-Coontry Environment 3. Registration 4. MMH Channels Setup	
5. 501 Output Setup 5. Verification	
idditional setup capabilities (Encryption Flackwagic output) can only be invoked th	, IF8 volume configuration, test rough the Manual Setup
e flutt >	« Exit »



First you will be asked to configure the network of the server. Hover over "Yes" and Press "Enter" to proceed.



Select the ethernet port that you will want to setup. The wizard install will let you know what ethernet port you are currently connected too. Select the one you want to configure and press "Enter"

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ected	

You will then be asked if you want to setup the connection for DHCP or Manual. We always recommend setting up a static connection. The steps below will show you setting up a static IP.

choose whether you would like to setup	the device in CHCP mode or in Parcel mode
Device Information:	
Nome: othl HW Address: OC:C4:78:98:63:F5	
	Bat .
	« Back »

Please fill in the network information and hit "Enter" to continue.

Gatew DNS1 DNS2 Searc	sk ay h-Domain			
	< 0K >	< Back >	< Exit >	



If done successfully you should get the following message



If you would also like to configure the other ethernet port you will select "**Yes**" on this screen. If you do not need to setup the other ethernet port select "**No**" and press "**Enter**" to continue.



Since you are connecting to the default LiveU-Central and HUB you will want to select "Yes"



This information is filled in for default. You can just hit "Enter"

ivel Central URLI	NECCONVAC	s attening Aliene ter 445	
Then and nars isebauated	ATCH COMMENTS STATUTE	AN PLACE PROVE LEAVE AND ADDRESS OF	

With 7.0 each server will have its own unique license. The server you configure should already have a license by default. Press "Enter" to proceed. IF IT ASKS FOR A LICENSE SELECT MANUAL AND THEN ENTER THE SERIAL NUMBER OF THE SERVER. IT IS LOCATED ON THE SERVER ITSELF.





This is the message you should be receiving as our servers are already registered.



The next step is configuring the channels. This step is similar to "**Step 3 MMH Configuration**" that we currently use on servers running 6.5.0 and below. You can select "**Yes**" and hit "**Enter**"

Would you like to configure t	he channels/instances	IThis configures the	e ports, firewall	and blackmagic!!
	- 100 -	- 10 -		

Select the number of channels that you want to configure. If it's a single server you can type 1 or more depending on how many preview channels you want. If it is a duo server select at least 2. If it is a quad select at least 4. In my image example I have a single server, but I want 1 preview channel so I wrote "2".

Select	the	number a	of instanc	es (channels)
2				

Here is the chart that you will want to configure the ports that the server will use to receive video. **By default our** network requirements document recommends 8601-8608 for the first column. The second column we recommend 8609-8612. The last column we recommend 8620-8648. IF YOU ARE SETTING UP A SECOND LIVEU SERVER PLEASE USE A DIFFERENT RANGE OF PORTS LIKE 8701-8750

	UDP port	IFB port (optional) Base RTP port (optional)
Channel 1	8601	8609
Channel 2	8602	8610



The next ports you are configuring are our Preview and Store and Forward Ports. By Default our network requirement recommends Preview port be 1935 and the File Server port is 18255.

Configure external ports:	
These TCP ports need to be forwarded to Video Freview to 1931. File Server (and HIPEC Preview) to 183	in NAPT and are farwarded as follows:
External Video Provise TCP port External File Server and M-Speg port	1733 E0000
× 0K ×	+ tack +

You are now going to configure the SDI outputs. Select "Yes" and press "Enter"

Would ye	ou like	to conflg	ure SDI o	utput per	channel
	:	· Yes >	< No	,	

Below is an example of configuring a server with 1 output channel and 1 preview channel. Select Channel 1 and hit "Enter" to configure.

Channel	01	CONTRACTOR OF STATE		
	a we	sabled	1	
•				

Since this server only has 1 Blackmagic output you will only see Card 0. Select Card 0 for instance 1 and hit "Enter".

1943.8	To carbor ro	the constantion a
	Disable SD	I Output
-	Recording	

This will take you back to the screen you saw earlier. Channel 1 is now set to card 0. Channel 2 will be disabled as it is my preview channel. Move over to "**OK**" with the arrow keys on the keyboard and hit "**Enter**".

Channel 2	Disabled
Configures	PT DO T



The last step is to perform the verification setup. This is "**Step 5 Verify Setup**" in our configuration folder on servers running software 6.5.0 or below. Press "**Enter**" while hovering over "Yes"

Would you like to perfe	orm configuration verific	ation?	
Note that it can take :	one time to process		
	SEXCILIE	< 10 >	

This will check if the server can reach google, our hubs, LUC, check the S&F port, Preview Port, Medic, and lastly the UDP ports for each instance setup in the chart earlier. You should see a "**SUCCESS**" at the bottom and get an "**All tests passed**" message.

CM.
<pre> Verifying Channel 2 ++ Verifying Channel 2 version configuration files /opt/liveu/estraccefigs/instance2/overiordestraconfig.py: dx ++ Verifying Channel 2 ffneed command configuration: OK ++ Verifying Channel 2 specific configuration files /etc/liveu/instance2/cellector.py: OK ++ Checking firewall rules for channel 2; * Verifying firewall rules: Checking if port 20070 is open: OK ++ Checking if port 20070 is forwarded, Waiting for backend to contact this port</pre>
<pre>OK Checking if port 20000 is forwarded. Waiting for backend to contact this port OK</pre>
<pre> Verifying system wide RMM Verifying MMM channels have unlique collector ports: 0K . Trying in connect in google.com un port RM OK . Checking that liveu service is running properly OM . Checking that liveu service is running properly OM . Checking if port 1825s is open: OK . Verifying firewall rules: Checking if port 1825s is open: OK . Checking C.ATMP service is running properly OM . Checking C.ATMP service is running properly OM . Checking connewd configuration: OK . Checking firewall configuration: OK . Checking connewd configuration of the medic.liveu.tv on port 8500 . Succeeded to connect to all Medics . LiveU Server is installed and configured propely</pre>
SUCCESS

You will then receive a wizard complete message. To finish the installation press "Enter" on your keyboard.



The basic configuration for the server is complete. If you made a mistake or want to configure a few additional settings please see the next page for the "Advanced Configuration" Setup.

LiveU

Advanced Configuration

By launching the **"liveu-config"** again you will be brought to the LiveU Server Setup Utility. Press **"Enter"** to continue with the setup.

LiveU Server Setup Utility - MMH Setup This utility allows you to configure Liv The utility supports two flows: A Wizerd Flow for oppoing updates of the server's	eU NHH servers Flow for first time setup, and a Manual setun
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Slackmagic firmware update will be check cards requires firmware update, then the upon which reboot will be required	ed on start. If any of the Blackmagic upgrade step will be initilized,
<pre>debnttnue></pre>	< Exit >

You are given the option for a Wizard setup or a Manual Setup. For the Advanced setup you will want to select Manual Flow. Hover over "Manual Flow" and press "Enter" on your keyboard to proceed.

serect the secup riow		
913	and Flow	
	a first a	

You will now see the select menu. To select what you want to configure hover over the option you want and press the spacebar. This will put an * in the []. This confirms what you have selected. Once you have everything checked that you want to configure press "Enter".

	On-Premise Environment
]	LiveU Server Registration
ł	Configure Channel Output
ίí	Encryption
[]	IFB configuration
ł	Test Blackmanic output (TestPatterns)



Encryption

If you would like to setup an encryption password enter the password in the given field. Note if you accidently selected this option or you would like to disable the feature leave the box blank and hit **"Enter"** on your keyboard.

Enter the encryption password, Leave empty is disable encrypt	Les	
•		
C 0K 5	+Cancel+	

Once you enter your encryption password you will get a message stating that "Encryption password set successfully"



IFB Configuration

To setup IFB you will need the device plugged in beforehand. These are the devices that we support on 7.0

```
Komplete Audio 6 – 4 ports audio device (not recommended for new deployments)
Presonus AudioBox 22VSL - 2 port XLR audio interface
Presonus AudioBox 1818VSL – 8 port XLR audio interface
```

The first thing you will be asked is if you would like to configure the IFB Volume. Select "Yes" and press "Enter".



You will then be asked to configure the volume for each channel. You can go as low as 0 and as high as 127. Use your keyboard to enter the figure for each channel. Use the tab key to filter through Channels, OK, Reset, and Back. Once your values are correct press "Enter" to proceed.

anging from	0 to 127	Summer S
Channel 1	127	
< DK 3	-Reset>	«Back »



Test Blackmagic Output

This option is to test the Blackmagic Output. This will send Bars and Tone out of each individual SDI outputs and the server will appear offline in LiveU Central. Please select "Yes" to proceed with the test.



You will now need to select a card to test the output. In my case I have a single server and I will only see Card 0.

Please select a card	to test output on it:
Earc	0
	<finish></finish>

If you do choose to test your card you will be given the option of various resolutions. **Select the resolution you want selected using the up and down arrow keys and then to select it Press "Enter".**

251,59.94 NTSC
523923.98 N75C
621110 PAL
1080923.98
1080024
1000p35
1080029,97
1060p30
1000158
1080159.94
1080166
720550
728959194
720040

Once you select the resolution you should be receiving Bars and Tone. To stop the test hit "Enter" once again.



If you would like to test any other cards select them and hit "Test". If you are finished use the arrow keys to select "Finish" and hit "Enter" to finish.

LiveU

Installing Teamviewer

LiveU Support will use the TeamViewer remote desktop tool for complete access when required and when initiated by the customer. This will also allow for remote upgrades of the LU2000 as well as diagnosis and debug when necessary.

The necessary ports for Teamviewer to run on the server are the following:

PROTOCOL	PORT	DESTINATION / SOURCE
Outbound TCP	80	Anywhere
Outbound TCP	443	Anywhere
Outbound TCP	5938	Anywhere

To install Teamviewer first you will need to bring up the terminal which is done by pressing CTRL + ALT + T.



Please type and run the following command "sudo apt-get update" which installs newer versions of the packages you already have.





Once you let the latest updates install the next command you will run is "sudo apt-get install gdebi"

```
liveu@liveu:~$ sudo apt-get install gdebi
Reading package lists... Done
Building dependency tree
Reading state information... Done
gdebi is already the newest version.
```

Now that you have gdebi installed you will want to download the teamviewer deb. We will use Teamviewer 32 bit to avoid package conflicts.

Run the following command:

wget http://download.teamviewer.com/download/version_12x/teamviewer_i386.deb



Lastly you will need to install the package by running the sudo gdebi teamviewer_i386.deb command

```
liveu@liveu:-$
liveu@liveu:-$ sudo gdebi teamviewer_i386.deb
Reading package lists... Done
Building dependency tree
Reading state information... Done
Building data structures... Done
Building data structures... Done
```



Now that you have successfully installed teamviewer you can accept the license. You should see your ID and password populate. This is what LiveU uses to connect remotely. You will also get a green indicator in the bottom left. If none of these appear it could be that you are blocking Teamviewer on your network.

TeamViewer	- 🗆 X
Connection Extras Help 👱	Meeting
Allow Remote Control Your ID Password Unattended Access Start TeamViewer with Windows Assign device to account Grant easy access	Control Remote Computer Partner ID Remote control File transfer Connect to partner
Ready to connect (secure connection)	Computers & Contacts Sign In