

QVidium™ TECHNOLOGIES, INC.  
Pro-MPEG DVB-ASI Gateway

Quick Start Guide

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© 2006 QVidium™ Technologies, Inc.  
12989 Chaparral Ridge Road, San Diego, CA 92130  
Phone 858.792.6407 • Fax 858.792.9131

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# 1 Introduction

Congratulations on purchasing the QVidium™ Pro-MPEG DVB-ASI gateway. This chapter introduces the features and functions of the product.

## 1.1 Unpacking

After unpacking the shipping carton, you should find these items:



QVidium™ Pro-MPEG FEC DVB-ASI Gateway



1 rail kit



4 rubber feet

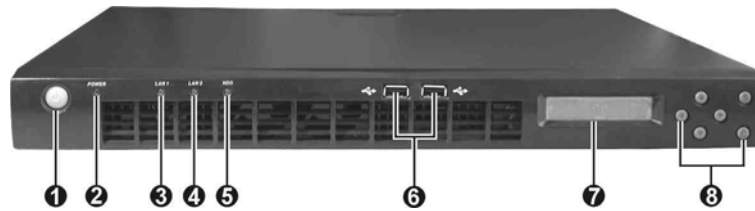


2 power cords (USA and Germany)

Inspect all the items. If any item is damaged or missing, notify your dealer immediately. Keep the shipping carton and packing materials in case you need to ship or store the system in the future.

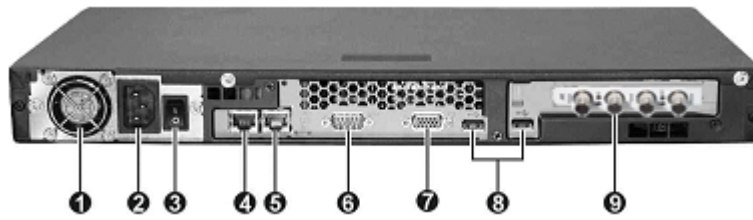
## 1.2 System View

### Front View



Ref	Component	Description
1	Power Button	Turns the power on and off. <b>You must press and hold the power button for 4 seconds to turn off the system.</b>
2	Power Indicator	Glows green when the power is on.
3	LAN1 Indicator	Indicates a media network connection
4	LAN2 Indicator	Indicates a management network connection
5	Flash Disk Indicator	Indicates activity on the flash disk drive.
6	USB Ports	Either of the ports connects to a USB keyboard.
7	LCD Screen	Displays messages and values entered.
8	Control Buttons	Allow you to enter network configuration information.

Rear View



Ref	Component	Description
1	<b>Ventilation Openings</b>	Maintain proper operating temperature. Do not cover or block the openings.
2	<b>Power Connector</b>	Connects the power cord.
3	<b>Power Switch</b>	Turns the main power of the system on and off.
4	<b>LAN1 Connector</b>	Connects the LAN cable for media.
5	<b>LAN2 Connector</b>	Connects the LAN cable for management.
6	<b>Serial Port</b>	Connects a serial device.
7	<b>VGA Port</b>	Connects an external CRT monitor.
8	<b>USB Ports</b>	Either of the ports connects to an USB keyboard.
9	<b>DVB-ASI connectors</b>	Allows you to connect ASI devices.

ASI Connector View Close-Up



Ref	Component	Description
1	<b>Ref Clock</b>	Reference for ASI transmit
2	<b>ASI Tx</b>	ASI transmit of network receive stream.
3	<b>ASI Loop-through</b>	ASI transmit of ASI receive stream.
4	<b>ASI Rx</b>	ASI receive to network transmit.

## 2 Configuring the System

This chapter tells you how to use the LCD Front Panel Console interface and how to configure basic system settings. However, the Front Panel Console is also capable of extensive control and configuration of the system. For a detailed view of the Front Panel menu structure and status screens, please see the Appendix.

### 2.1 Using the LCD Front Panel Console

After you have made the network and power connections, you can configure the network settings using the LCD Front Panel Console.

Before you begin, make sure that you have the following information ready:

- IP address assigned to the system
- Subnet mask of your network
- Gateway/router address (necessary only if communicating with other networks)

The LCD screen on the front of the system displays two lines of text. The first line shows the information required; the second line shows the data already entered. You can enter the data by using the arrow buttons to the right of the LCD screen.

The LCD screen has two modes of operation: status mode and control/configuration mode. In status mode, it rotates through a sequence of status screens. In control/configuration mode, it provides front-panel access to configuration, setup, and operation of the system.



- ◀ The Left arrow button moves the cursor to the left.
- ▶ The Right arrow button moves the cursor to the right.
- ▲ The Up arrow button increases the digit located at the cursor position
- ▼ The Down arrow button decreases the digit located at the cursor position.
- Ⓢ The S (Select) button accepts the data entered or selects the option displayed. In status mode, it toggles between holding and rotating among the status screens.
- Ⓒ The C (Cancel) button cancels the data entered or the option displayed. In status mode, it changes the mode to control/configuration mode.

## 2.2 Setting the Media Network IP Address

The Media IP Address corresponds to the LAN1 (Eth0) network interface. Follow the procedure below to set this IP address.

**NOTE:** Both Ethernet ports (media and management) on the QVidium™ Pro-MPEG DVB-ASI Gateway have identical functionality. Either Ethernet interface can be used for media, management, or both types of traffic. The designation here of Media or Management interface is therefore an arbitrary designation – you can reassign their use to best suit your needs.

1. Press the **C** (Cancel) button. You should see

```
>TransmitIP
```

on the second line.

2. Press the **▼** (Down) arrow button until you should see

```
>Setup
```

3. Press the **S** (Select) button. You should see the

```
>LAN1 IP Addr
```

option on the second line. LAN1 is the Media interface, although both LAN1 and LAN2 can be used for video traffic as well as system control.

4. Press the **S** (Select) button. You should see on the display:

```
LAN1 IP Addr  
192.168.000.031
```

5. Use the Left and Right arrows to move the cursor to the digit in the IP Address that you want to change.
6. Use the Up and Down arrow keys to change the digits.
7. Press the **S** (Select) button to save the change or use the **C** (Cancel) button to not change the address. The IP address change takes effect immediately upon pressing Select.
8. Press the **C** (Cancel) button twice to get back to the top level.

Now that you have the IP address configured, you can use the web interface for more extensive configuration, such as adding routes or a gateway address or turning on DHCP. Alternatively, you can use the serial port connected to a terminal (set to 19200 Baud, 8-N-1) to change the IP settings. Log in as user "root" (no password is initially set) and run "configp" at the command-line prompt to set any of the IP parameters via any standard RS-232 ASCII terminal interface.

## Setting the Management Network IP Address

The Management IP Address corresponds to the LAN2 (Eth1) network interface. The following procedure allows you to change the Management IP Address.

1. Press the **C** (Cancel) button. This takes you into Control/Configuration mode. You should see the following:

```
>TransmitIP
```

on the second line.

2. Press the **▼** (Down) arrow button until you should see the

```
>Setup
```

option.

3. Press the **S** (Select) button. You should see the

```
>LAN1 IP Addr
```

option on the second line.

4. Press the **▼** (Down) arrow button. You should see the

```
>LAN2 IP Addr
```

option on the second line. LAN2 is the designation for the management interface.

5. Press the **S** (Select) button. You should see on the display:


```
LAN2 IP Addr  
192.168.001.031
```

6. Use the Left and Right arrows to move the cursor to the digit in the IP Address that you want to change.
7. Use the Up and Down arrow keys to change the digits.
8. Press the **S** (Select) button to save the change or use the **C** (Cancel) button to not change the address.
9. Press the **C** (Cancel) button 2 times to get back to the top level.




## 2.3 Ethernet Port Configuration


The physical characteristics of each Ethernet port, such as full or half duplex, port speed, and auto-negotiation capabilities can be set through the LCD Front Panel interface (and not via the web interface). Use the following procedure to reconfigure these characteristics of the Ethernet ports.

1. Press the  (Down) arrow button until you should see the
 


```
>Setup
```

 option on the second line.
2. Press the  (Select) button. You should see the
 




```
>LAN1 IP Addr
```




 option on the second line.
3. Press the  (Down) arrow button. You should see the
 

```
>LAN2 IP Addr
```

 option on the second line.
4. Press the  (Down) arrow button. You should see the
 

```
>LAN1 Phy
```

 option on the second line. (To set the physical characteristics for LAN2, press the  (Down) arrow button one additional time to `LAN2 Phy`.)
5. Press the  (Right) or  (Left) arrow buttons to select the desired setting. You select among the following configuration settings:
 

AUTO	Auto-negotiation: 1000/100/10 Mbps, Full/Half-Duplex
100FD	Force port to Full-Duplex at 100 Mbps data rate
100HD	Force port to Half-Duplex at 100 Mbps data rate
10FD	Force port to Full-Duplex at 10 Mbps data rate
10HD	Force port to Half-Duplex at 10 Mbps data rate
6. Press the  (Select) button to save the change, or use the  (Cancel) button to discard your changes and keep the previous setting.
7. Press the  (Cancel) button 2 times to get back to the top level.

## 2.4 Setting the Netmasks and Gateway Address

The netmasks and gateway IP address can be set from a web browser.

1. Enter `http://IPAddress` where `IPAddress` is the IP address of the management interface or the media interface.
2. The default netmasks are `255.255.255.0`. You may not need to change them.
3. The default gateway is an IP address of a router or gateway on the same network that the media interface is connected to.

For example if your media IP address is `192.168.0.30`, the gateway's IP address may be `192.168.0.1`.

4. Press the `Commit` button to make the changes.

You can also change the media and management interface's IP address.

**IMPORTANT:** If you change the IP address of the interface that the web browser is using, you will need to connect again to the system with the new IP address.

# 3 Transmitting a Stream

This chapter tells you how to use the web interface to create, start and stop media streams that you transmit on the network. However, you can also use the FrontPanel to control an IP network transmit stream. The Front Panel creates and uses a profile called FrontPanel that can also be edited and controlled via the web interface as described in this chapter.

## 3.1 Creating a network transmit stream

Enter `http://IPAddress` where `IPAddress` is the IP address of the management interface or the media interface.

1. Select the `TX Stream` menu on the left side of the web page.
2. Select the `Streams` menu option underneath the `TX Stream` menu.

A `Network Transmit Streams` interface should display in the main area to the right of the menu system.

3. Click on the `New Stream` button. The main area should display a form similar to the follow:

<b>Stream Name</b>	<input type="text"/>
<b>Destination IP Address or Hostname</b>	<input type="text"/>
<b>Tx UDP Port</b>	<input type="text" value="10000"/>
<b>TS packets per IP packet</b>	<input type="text" value="7"/>
<b>FEC Burst Size</b>	<input type="text" value="10"/>
<b>FEC Rows</b>	<input type="text" value="10"/>
<b>USE Row FEC</b>	<input type="checkbox"/>

4. Enter a multicast IP address or an unicast IP address of another Pro-MPEG FEC system on the network.
5. Enter the name of the stream.
6. Press the `Save` button create the stream or press the `Streams` menu option on the left to return to the streams main area.

## 3.2 Starting a network transmit stream

Enter `http://IPAddress` where `IPAddress` is the IP address of the management interface or the media interface.

1. Select the `TX Stream` menu on the left side of the web page.
2. Select the `Streams` menu option underneath the `TX Stream` menu.

A `Network Transmit Streams` interface should display in the main area to the right of the menu system.

3. Select a stream from the list.
4. Select the `Start` button. You should see:

```
Stream 'name' started.
```

where `name` is the stream you selected in step 3.

## 3.3 Stopping a network transmit stream

Enter `http://IPAddress` where `IPAddress` is the IP address of the management interface or the media interface.

1. If the `TX Stream` menu is not shown, select the `TX Stream` menu on the left side of the web page.
2. Select the `Stop` menu option underneath the `TX Stream` menu. You should see the following message at the top of the web page main area.

```
Stopping network transmit stream...
```

```
Network transmit stopped. ASI no longer receiving stream.
```

## 4 Receiving a Stream

This chapter tells you how to use the web interface to create, start and stop media streams that you receive over a network. As with transmit stream control, you can also control network reception via the Front Panel. Setting network receive parameters from the Front Panel creates a network receive stream profile called FrontPanel that can also be edited and controlled via the web interface as described in this chapter.

### 4.1 Creating a network receive stream

Enter `http://IPAddress` where `IPAddress` is the IP address of the management interface or the media interface.

1. Select the `RX Stream` menu on the left side of the web page.
2. Select the `Streams` menu option underneath the `RX Stream` menu.

A `Network Receive Streams` interface should display in the main area to the right of the menu system.

3. Click on the `New Stream` button. The main area should display a form similar to the follow:

New Stream	
Stream Name	<input type="text"/>
Rx UDP Port	<input type="text" value="10000"/>
Multicast Address	<input type="text"/>
Network Jitter	<input type="text" value="50"/>
Bitrate	<input type="text"/>

**Note:** If the stream has no PCRs (such as IPDC DVB-H streams), set the bitrate, otherwise leave the bitrate blank.

4. If you want to receive a multicast stream, enter a multicast address, otherwise leave it blank.
5. Enter the name of the stream.
6. Press the `Save` button to create the stream or press the `Streams` menu option on the left to return to the streams main area.

## 4.2 Starting a network receive stream

Enter `http://IPAddress` where `IPAddress` is the IP address of the management interface or the media interface.

1. Select the `RX Stream` menu on the left side of the web page.
2. Select the `Streams` menu option underneath the `RX Stream` menu.

A `Network Receive Streams` interface should display in the main area to the right of the menu system.

3. Select a stream from the list.
4. Select the `Start` button. You should see:

```
Stream 'name' started.
```

where `name` is the stream you selected in step 3.

## 4.3 Stopping a network receive stream

Enter `http://IPAddress` where `IPAddress` is the IP address of the management interface or the media interface.

1. If the `RX Stream` menu is not shown, select the `RX Stream` menu on the left side of the web page.
2. Select the `Stop` menu option underneath the `RX Stream` menu. You should see the following message at the top of the web page main area.

```
Stopping ASI transmit...
```

```
ASI transmit stopped. Network no longer receiving stream.
```

# 5 Troubleshooting

For troubleshooting information, the latest software and to contact us, call or e-mail us at:

Phone: (858) 792-6407

E-mail: [support@QVidium.com](mailto:support@QVidium.com)

## 6

## Appendix

## 6.1 Front Panel Console – Control/Configuration Menu

```

TransmitIP >
  Tx Control >
    Enter to: Start | Stop
  Tx Config >
    Dest IP Addr
    Dest Port
    # TS Pkts/IP
    #FEC Columns
    #FEC Rows
    Row FEC Off | On
Receive IP >
  Rx Control >
    Enter to: Start | Stop
  Rx Config >
    Rcv Port
    Rx McastIP
    Net Jitter
    ASI Bitrate
System >
  Name
  Ping >
    Ping IP Addr
    Ping Count
    Enter to: Stop | Start
  Clear PW NO | Yes
  Console VGA | RS232
  Reboot NO | Yes
  Poweroff NO | Yes
Setup >
  LAN1 IP Addr
  LAN2 IP Addr
  LAN1 Phy Auto | 100FD | 100HD | 10FD | 10HD
  LAN2 Phy Auto | 100FD | 100HD | 10FD | 10HD

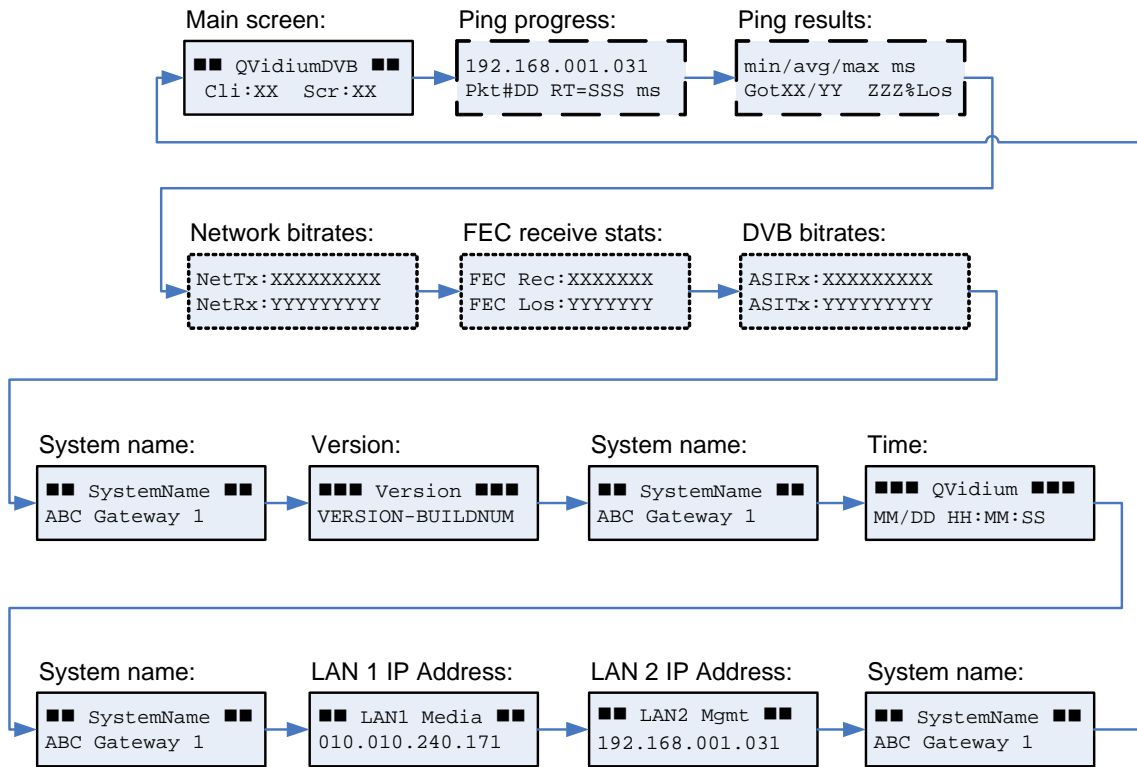
```



## 6.2 Front Panel Status Screens

During normal operation, the Front Panel rotates among various status screens as shown below. At any time, you can force the display to stop screen rotation and pause at a particular display.

### DVB-ASI Gateway Front Panel Status Screen Sequence



You can also use the left and right arrow keys to manually move to a different screen. Under certain conditions, such as when a transmit or receive session is started or during a Ping test, the Front Panel status display pre-empt the normal rotation of status screens to show current network or ping status screens (shown above with dashed or dotted outlines), as appropriate. After a brief period, the status screen rotation will revert to the standard order as shown above, but with the optional network status and/or ping status screens now enabled as appropriate.

## 6.3 Electromagnetic Emissions and Safety Certifications

### FCC – Notice for the USA

Compliance Information Statement (Declaration of Conformity Procedure) DoC  
FCC Part 15: This device complies with part 15 of the FCC Rules.

Operation is subject to the following conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received including interference that may cause undesired operation. If this equipment does cause harmful interference or radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try one or more of the following measures:
  - Reorient or relocate the receiving antenna.
  - Increase the separation between the equipment and the receiver.
  - Plug the equipment into an outlet on a circuit different from that of the receiver.
  - Consult the dealer or an experienced radio/television technician for help.

### Notice for Canada

This apparatus complies with the Class B limits for radio interference as specified in the Canadian Department of Communications Radio Interference Regulations.

### CE – Notice for Europe (CE Mark)

This product is in conformity with the Council Directive 89/336/EEC, 92/31/EEC (EMC).

### UL – Underwriter Laboratories Approval for the USA