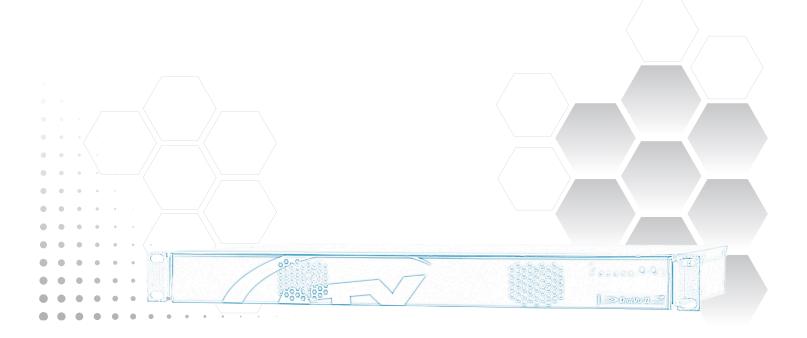


End-of-Sale as of March 31, 2017



# DigiVu<sup>®</sup> II Micro Encoder

Hardware Interface Manual



# **General Guide Notes**

Manual Release Date February 22 2016

#### **Cross Reference Hyperlink Usage**

Hyperlinks are used liberally throughout the guide to assist the reader in finding related information if the reader is viewing the Adobe PDF file directly. Hyperlinks may be identified by their blue text. Most links are to related pages within the document, but some reference outside documents if the reader needs that additional information. The Table of Contents is entirely hyperlinked and bookmarks are available but the bookmark feature must be turned on in your Reader application.

#### Symbol Usage

Throughout the manual, some symbols are used to call the readers attention to an important point. The following symbols are in use:



**NOTE:** This symbol usage will call the reader's attention to an important operation feature of the equipment which may be safety related or may cause a service outage.



**FYI:** This symbol indicates that there is helpful related information available in this note or elsewhere in the guide.

Although every effort has been taken to ensure the accuracy of this document it may be necessary, without notice, to make amendments or correct omissions. Specifications subject to change without notice.



GE	NERAL	_ GUIDE NOTES								
1.	<u>DEVICE OVERVIEW</u>									
	1.1	Controls & Indicators								
	1.2	Device Initial Network Configuration								
2.	CAPTURE CARDS									
	2.1	Chapter Contents								
	2.2	<u>1 Channel - HDMI<sup>®</sup> or Component or CVBS</u> 2-1								
	2.3	<u>1 Channel - HDMI<sup>®</sup> or SDI</u>								
	2.4	<u>1 Channel - SDI or CVBS</u>								
3.	REAR	PANEL CONFIGURATIONS								
	3.1	Chapter Contents								
	3.2	General Information								
	3.3	<u>IP Output Models</u>								
	3.4	SFP Output Models								
	3.5	QAM Output Models								
4.	<u>INST/</u>	ALLATION								
	4.1	Chapter Contents								
	4.2	Preparation for Installation								
	4.3	Precautions								
	4.4	General Mechanical 4-2								
	4.5	Gigabit Ethernet Ports 4-2								
	4.6	Install the Chassis in a Rack 4-2								
	4.7	Equipment Safety Grounding 4-4								
	4.8	Ethernet Cabling								
5.	<u>STAR</u>	<u>TUP</u>								
	5.1	Chapter Contents								
	5.2	Management Computer 5-1								
	5.3	Connecting to Your Computer 5-1								
	5.4	<u>SFP Output</u>								
	5.5	<u>QAM Output</u>								
6.	<u>SAFE</u>	<u>TY</u>								
7.	<u>SERV</u>	/ <u>ICE &amp; SUPPORT</u>								
	7.1	Contact ATX Networks								
	7.2	Warranty Information								

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# **DEVICE OVERVIEW**

# 1. Device Overview

The DigiVu® II Micro product is a single-channel HD&SD-SDI/HDMI<sup>™</sup>/Component/Composite PEG encoder offering MPEG-2 and H.264 encoding, IP/QAM output, advanced access security and network segmentation support. Installation of the device including Network and Capture Card connections are covered in this manual. See the DigiVu II Operation Manual for programming guidance.



#### Figure 1-1: DigiVu® II Micro Front Panel

## 1.1 Controls & Indicators

The device is designed to be plug and play and will be in a powered on state when the power cord is plugged in as there is no power switch. There may be instances where it is desired to reboot or power down the devices manually and recessed switches to enable that are located on the front panel, see Figure 1-2. Indicator lights are provided to allow monitoring of errors and alarms, See Table 1.1a for functional descriptions of front panel controls and indicators.



Figure 1-2: Front Controls & Indicators

Panel Label	Function	Description								
UID	Button	Universal Identifier: A switch that will turn on the adjacent "U" light.								
U	Indicator LED Blue	Universal Information LED: The Universal Information BLUE LED is used to indicate fan failure, power failure, overheat condition, or to identify the unit within a large rack installation. This may be activated by the IPMI or front panel button. State Indication:								
		<ul> <li>Fast Blinking Red (1 per sec) - Fan Failure</li> <li>Solid Red - CPU Overheated</li> <li>Slow Blinking Red (1 per 4 sec) - Power Failure</li> <li>Solid Blue - Local UID Button Depressed</li> <li>Blinking Blue - IPMI Activated UID</li> <li>Note: Deactivating the UID LED must be performed in the same way it was activated. (If the UID LED was activated via IPMI, you can only turn the LED off via IPMI and not with the UID button.)</li> </ul>								
HDD	Indicator LED Green	Indicates SSD/HDD drive activity when flashing.								
PWR	Indicator LED Green	Indicates power is being supplied to the system's power supply units. This LED should be illuminated when the system is operating.								
RST	Recessed Button	Used to reboot the encoder.								

#### Table 1.1a: Front Panel Controls and Indicators

Panel Label	Function	Description
PWR	Recessed Button	The main power switch is used to apply or remove power to the encoder. Activating this switch effectively turns the encoder off but keeps standby power supplied to the system. You must unplug the system before servicing. Press again to power up.

# 1.2 Device Initial Network Configuration



**NOTE:** Each individual Device must have default Management (ETH0) port IP address changed from 192.168.0.23 before connecting them to the Management Switch.

Each of the Devices are factory configured with identical ETH0 Management Port IP addresses. It is important to understand that the standard ATX Networks default IP address of 192.168.0.23 for the MGMT port is assigned to all products. Before connecting each management port MGMT (ETH0) to the management switch, the IP addresses must be re-configured.

# **CAPTURE CARDS**

# 2. Capture Cards

Capture Cards are used to ingest analog video/audio and SDI inputs to the DigiVu II Micro Device. They are installed in each encoder and may be changed in the field. The input connections are not all silk screened as to their function and not all connections are used, so this section of the guide will show which ports to use.

## 2.1 Chapter Contents

- "1 Channel HDMI® or Component or CVBS"
- "1 Channel HDMI<sup>®</sup> or SDI"
- "1 Channel SDI or CVBS"

## 2.2 1 Channel - HDMI<sup>®</sup> or Component or CVBS



Figure 2-1: HDMI<sup>®</sup> - Component - CVBS Input Card



Figure 2-2: Multi-Input Card With Adapter Cable

Single input

- HDMI digital with embedded audio on standard HDMI connector.
- · Component Video on RCA with unbalanced stereo audio on RCA (BNC Adapters provided).
- · Composite Video Baseband (CVBS) with unbalanced stereo audio on RCA (BNC Adapters provided).

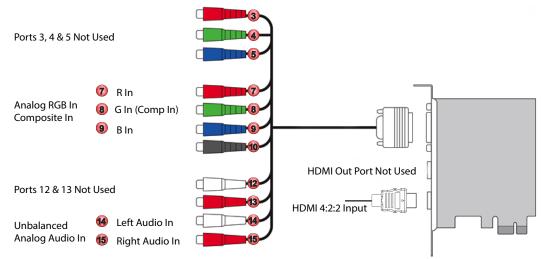


Figure 2-3: Multi-Input Card - Adapter Cable Connections

## 2.3 1 Channel - HDMI® or SDI



Figure 2-4: HDMI® - SDI Input Card

Two input ports:

- HD/SD SDI with embedded audio on BNC female jack.
- HDMI digital with embedded audio on standard HDMI connector.

# 2.4 1 Channel - SDI or CVBS



Figure 2-6: SDI - Analog Input Card

Two input ports:

- HD/SD SDI with embedded audio on BNC female jack.
- Composite Video Baseband (CVBS) on BNC female jack with Balanced Stereo on 3.5MM (1/8") TRS (Tip-Ring Sleeve), Unbalanced Stereo on RCA.

#### **TRS Audio Connections**

The audio connection for the balanced stereo analog input is made with 3.5 MM (1/8") TRS (Tip - Ring - Sleeve) plugs, the connections of which are illustrated in Figure 2-8. Always use shielded cables for all balanced and unbalanced stereo connections.



Figure 2-8: 3.5 MM TRS Connections

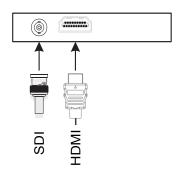


Figure 2-5: Input Card Connections

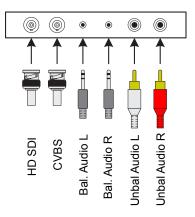


Figure 2-7: Input Card Connections

# **REAR PANEL CONFIGURATIONS**

# 3. Rear Panel Configurations

# 3.1 Chapter Contents

- "IP Output Models"
- "DVTM1DIP(Z)"
- "DVT1CIP(Z)"
- "DVTM1SIP(Z)"
- "SFP Output Models"
- "DVTM1DSFP"
- "DVTM1CSFP"
- "DVTM1SSFP"
- "QAM Output Models"
- "DVTM1D"
- "DVTM1C"
- "DVTM1S"

## 3.2 General Information

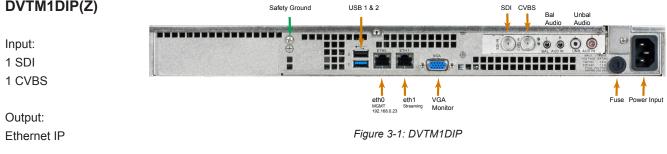
The DigiVu II Micro rear panel connections for each model is shown in the following section and described in Table 3.2a. Connections and more details for capture cards is shown in the chapter "Capture Cards" on page 2-1. The presence or absence of Zixi Feeder does not affect the rear panel configuration.

Port	Туре	Description
Safety Ground	Screw	Connect to a permanently grounded point for electrical safety.
eth0	GbE	The Management Port is eth0, used to configure the encoder. Not usually for streaming content. May also have VLAN virtual ports created.
eth1	GbE	Streaming or publishing exclusively for IP based streaming content or VLANs if configured.
VGA	DB15HD	Used to connect a monitor to access the MKIP system shell. MKIP may also be accessed by SSH client through ETH0 port.
USB 1 (Blue)	USB 3.0	Provided to connect a keyboard and mouse if required to access the MKIP system shell.
USB 2 (Black)	USB 2.0	Provided to connect a keyboard and mouse if required to access the MKIP system shell.
TSoIP	GbE	When provided, this is the Ethernet streaming input to the optional SFP module or QAM modulator. This requires a jumper cable (provided) connection to the ETH1 port.
SFP	SFP Receptacle	When provided, allows installation of any type SFP interface module for output flexibility. Requires TSoIP Ethernet cable jumper.
QAM	F Female	When provided, this is the QAM RF output port for direct connection to Cable TV RF distribution networks.

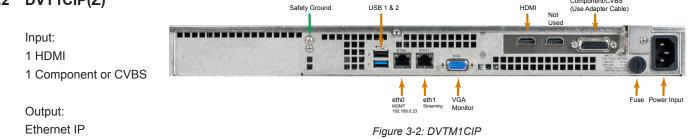
Table 3.2a:	<b>Rear Panel Connections Descriptions</b>

#### 3.3 **IP Output Models**

#### DVTM1DIP(Z) 3.3.1



## 3.3.2 DVT1CIP(Z)



#### 3.3.3 DVTM1SIP(Z) Safety Ground USB 1 & 2 HDMI SDI Input: P 1 SDI 1 HDMI eth0 MGMT 192.168.0.23 eth1 Streami VGA Fuse Power Input Monitor Output:

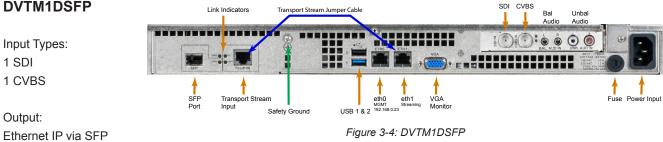
Ethernet IP

Figure 3-3: DVTM1SIP

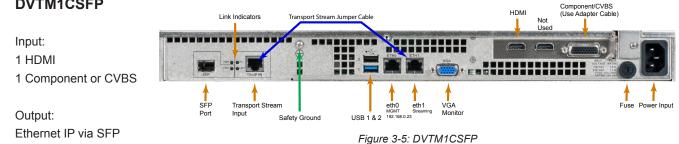
Component/CVBS

#### **SFP Output Models** 3.4

#### 3.4.1 **DVTM1DSFP**



## 3.4.2 DVTM1CSFP



#### DVTM1SSFP 3.4.3

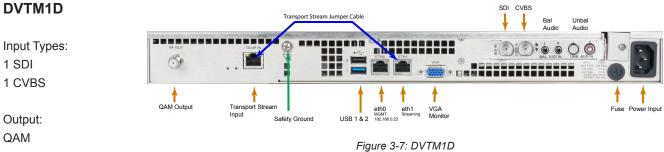
DVTM1SSFP	Link Indicators Transport Stream Jumper C	Cable SDI HDMI
Input Types 1 SDI		
1 HDMI	SFP Transport Stream Port Input Stream	eth0 eth1 VGA Fuse Power Input
Output:	Safety Ground USB	BI&Z

Output: Ethernet IP via SFP

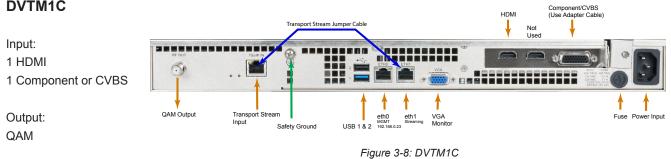
Figure 3-6: DVTM1SSFP

#### 3.5 **QAM Output Models**

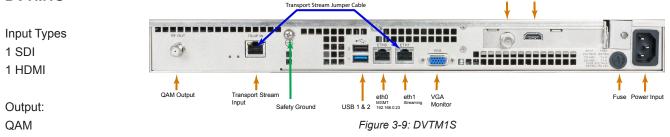
#### 3.5.1 DVTM1D



#### 3.5.2 DVTM1C



#### 3.5.3 DVTM1S



HDMI

SDI

# **INSTALLATION**

# 4. Installation

This chapter provides a guide to get your Device up and running. Following these steps should enable you to have the system operational within a minimum amount of time.

## 4.1 Chapter Contents

- "Preparation for Installation"
- "Precautions"
- "General Mechanical"
- "Gigabit Ethernet Ports"
- "Install the Chassis in a Rack"
- "Equipment Safety Grounding"
- "Ethernet Cabling"

## 4.2 Preparation for Installation

Carefully unpack the equipment from the shipping box. If the box or equipment is damaged, notify the freight company to make a damage claim. If you suspect that there is a problem with the equipment that may preclude safe operation, do not install or operate it. Contact ATX Networks immediately for instructions.



NOTE: This equipment is intended for installation in a RESTRICTED ACCESS LOCATION only.



**NOTE:** This equipment is NOT for use in a computer room as defined in the Standard for Protection of Electronic Computer/Data Processing Equipment, ANSI/NFPA 75.



**NOTE:** This equipment is intended for use in a fixed position and should be installed securely before operation is initiated.

## 4.3 Precautions

### 4.3.1 Electrical Precautions

Basic electrical safety precautions should be followed to protect yourself from harm and the Device chassis from damage:

- Be aware of the locations of the power on/off switch on the chassis as well as the room's emergency power-off switch, disconnection switch or electrical outlet. If an electrical accident occurs, you can then quickly remove power from the system.
- Power should always be disconnected from the system when servicing. When disconnecting power, you should first
  power down the operating system first and then unplug the power cord.
- When working around exposed electrical circuits, another person who is familiar with the power-off controls should be nearby to switch off the power if necessary.
- Use only one hand when working with powered-on electrical equipment. This is to avoid making a complete circuit, which will cause electrical shock. Use extreme caution when using metal tools, which can easily damage any electrical components or circuit boards they come into contact with.
- Do not use mats designed to decrease static electrical discharge as protection from electrical shock. Instead, use rubber mats that have been specifically designed as electrical insulators.
- The power supply power cords must include a grounding pin and must be plugged into grounded electrical outlets.
- Remove any jewelry or metal objects from your body, which are excellent metal conductors that can create short circuits and harm you if they come into contact with printed circuit boards or areas where power is present.
- This product may be connected to an IT power system. Ensure that the unit is reliably connected to Earth (ground).

#### 4.3.2 General Precautions

- The Device weighs approximately 10 lbs (4.5kg).
- While working on the system, do not wear loose clothing such as neckties and unbuttoned shirt sleeves, which can come into contact with electrical circuits.
- After accessing the inside of the Device, close the chassis back up and secure it to the rack unit with the retention screws and ensure that all connections have been made.

#### 4.3.3 Chassis Precautions

- Determine the placement of each component in the rack before you install the rails.
- Install the heaviest components on the bottom of the rack first, and then work up.
- Use a regulating uninterruptible power supply (UPS) to protect the Device from power surges, voltage spikes and to keep your system operating in case of a power failure.

#### 4.3.4 Rack Precautions

- Ensure that the leveling jacks on the bottom of the rack are fully extended to the floor with the full weight of the rack resting on them.
- In single rack installation, stabilizers should be attached to the rack. In multiple rack installations, the racks should be coupled together.

### 4.4 General Mechanical

- The equipment will require 1RU of vertical rack space and may be mounted directly above or below other equipment
  without providing space between, however, 1RU space should be maintained from other equipment which generates
  significant heat. Leave enough clearance in front of the rack to enable you to work on the chassis (~25 inches) and
  approximately 30 inches of clearance in the back of the rack to allow for sufficient airflow and ease of servicing.
- Be sure to maintain freedom of air movement around equipment. Installation of the equipment in enclosed racks is not recommended due restricted air flow. The equipment is designed to operate to specification in an ambient temperature of +10°C to +35°C (+50°F to +95°F). Normal room temperature is recommended to ensure proper long term operation of the equipment.
- Consideration should be given to the connection of the equipment to the mains power and the effect that any possible overloading of circuits might have on over current protection and wiring.
- Rear support of the unit is mandatory and rails for attachment to rear supports are provided. Do not use the unit chassis to support other equipment. Alternately, if rear support rails are unavailable or impractical, install the unit on a well supported shelf.

### 4.5 Gigabit Ethernet Ports

The Ethernet ports eth0 and eth1 are auto-negotiating and intended to be connected to a network distribution switch using straight through wired Cat5e or better quality cable. The rear panel Management Interface (eth0) port allows connection to a notebook or desktop PC for managing and configuring the system. The port may be connected to directly, or in the case of a headend with many devices to manage, may be connected to a management network (recommended) or the distribution switch containing the video stream content. It is possible to set up virtual ports for a VLAN. Connections should be made with Cat5e or better network cables. The GigE management port is auto-negotiating and should be connected to a switch or router with a straight through wired cable. Direct connection to a PC may be made with the supplied crossover cable.

### 4.6 Install the Chassis in a Rack

This section provides information on installing the Device chassis in a rack unit with the rails provided. There are a variety of rack units on the market, which may mean that the assembly procedure will differ slightly from the instructions provided. You should also refer to the installation instructions or adapt these instructions to suit the rack unit you are using.



**NOTE:** The illustrations in Figure 4-1 and Figure 4-2 are for general guidance purposes only. Always install the Device chassis to the bottom of the rack first to avoid the rack becoming top heavy.

### 4.6.1 Mount the Chassis

- 1. Confirm that you have the four mounting screws required to mount the chassis into a rack.
- 2. Align the thru holes of the chassis with the thru holes of the rack.
- 3. Insert the mounting screws into the thru holes in the front of the chassis and through the thru holes in the rack as shown in Figure 4-1 and Figure 4-2.

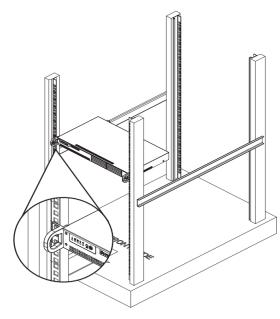


Figure 4-1: Install Chassis to Standard Rack

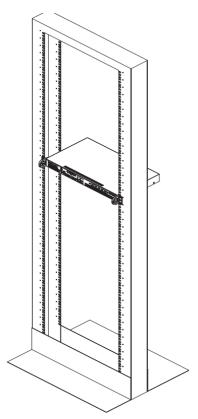


Figure 4-2: Install Chassis to Telco Rack

## 4.7 Equipment Safety Grounding

Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips). The following guidelines are provided to clarify the requirements for the installation to meet UL, CUL and CB standards. The use of the words "Ground" and "Earth" as well as "Grounding" and "Earthing" may be used interchangeably and in this context, have the same meaning.



**NOTE:** It is imperative that the encoder chassis be connected to a permanent building ground to comply with UL, CUL and CB standards.

It is important that the Device housing be connected to a permanent building ground in a manner that will ensure that the exposed metal parts are constantly connected to ground through independent means even when the power supply cord or wires may be disconnected temporarily. A ground connection screw is provided on the rear panel to conveniently effect such a connection.

### 4.7.1 Ground Connection to Earth

The supplementary equipment grounding conductor is to be installed between the rear panel ground screw and earth, that is, in addition to the equipment ground conductor in the power supply cord or wires. The screw terminals provided for this connection are located on the rear panel.

#### 4.7.2 Ground Conductor Size

The supplementary equipment grounding conductor may not be smaller in size than the branch-circuit supply conductors or a minimum #14 AWG. The supplementary equipment grounding conductor is to be connected at the rear panel terminal provided, and connected to earth in a manner that will retain the earth connection when the power supply cord is unplugged. The connection to earth of the supplementary grounding conductor shall be in compliance with the appropriate rules for terminating bonding jumpers in Part V of Article 250 of the National Electrical Code, ANSI/NFPA 70, and Section 10 of Part I of the Canadian Electrical Code, Part I, CSA C22.1.

#### 4.7.3 Ground Conductor Termination

Termination of the supplementary equipment grounding conductor may be made to building steel, to a metal electrical raceway system, or to any grounded item that is permanently and reliably connected to the electrical service equipment earth.

#### 4.7.4 Ground Conductor Type

Bare, covered or insulated grounding conductors are acceptable. A covered or insulated grounding conductor shall have a continuous outer finish that is either green, or green with one or more yellow stripes.

#### 4.7.5 AC Power Supply

The single power supply is an auto-sensing switching type power supply systems which may be operated on input voltages from 90 VAC to 264 VAC. There is no need to configure the power supplies to operate on any voltage in this range. A power cord appropriate to the locale where the unit is shipped are supplied.

#### 4.7.6 Power Cord Protection

Measures must be taken during installation to route or arrange the power supply cord to prevent physical damage and to avoid the possibility of future damage occurring. The cord shall be installed and routed such that, throughout it's length, the cord and it's points of connection are not strained in any way.

### 4.7.7 Power Cord Attachment

The unit AC power supply cord shall not be attached to a building surface, bundled with audio, video or RF coaxial cables, nor run through walls, ceilings, floors and similar openings in the building structure.

#### 4.7.8 **Provision of Electrical Power Outlet**

An AC electrical power outlet of appropriate type and rating shall be provided near the location where the unit is installed and easily accessible such that the provided power supply cord may be routed in an appropriate manner, without the use of extension cords, between the receptacle and the chassis. Alternately, the chassis shall be installed in close proximity to an existing AC electrical outlet such that the requirements of this paragraph are achieved.

#### 4.7.9 IEC Power Input Cord for AC

The AC power input receptacle is a standard IEC connector similar to that commonly used on computers and monitors. The

power cords provided with the product is a North American configuration with a NEMA 5-15 grounded plug for 115 VAC. If it is necessary to operate the product on 230 VAC, the installer must obtain IEC cords with a NEMA 6-15 grounded plug for use in North America. This may be obtained at time of order from ATX Networks or locally. If shipped outside of North America, the encoder will be supplied with an IEC cord set appropriate for the locale to which it is shipped.

#### 4.7.10 Input Power Requirements

When installing the equipment, it is the responsibility of the installer to determine that sufficient capacity is available in the electrical circuit feeding the unit to avoid overloading the supply circuit. The AC model will require power to be supplied from a properly grounded AC outlet. The installer shall determine that the AC power outlet, its wiring and receptacle is in compliance with local and/or national electrical codes as applicable. The AC input power requirement is constant over the range of input voltages. At higher input voltages, the current consumption is lower than it is at lower voltages where the input current is higher.

#### 4.7.11 Fusing

In the unlikely event of a condition that causes the fuse to blow, there is an external fuse to be replaced. Replace the fuse with one with the same ratings.

## 4.8 Ethernet Cabling

#### 4.8.1 Management Port eth0

The rear panel Management Interface port allows connection to a notebook or desktop PC for managing and configuring the system. The port may be connected to directly, or in the case of a headend with many devices to manage, may be connected to a management network (recommended) or the distribution switch containing the video stream content. Connections should be made with Cat5e or better network cables. The 10/100 Base-T management port should be connected to a switch or router with a straight through wired cable. Direct connection to a PC can be made with the supplied crossover cable.

#### 4.8.2 Ethernet Streaming Port eth1

The port is auto-negotiating and intended to be connected to a network distribution switch using straight through wired Cat5e or better quality cable. The 100/1000 Base-T port negotiates an appropriate connection speed dependant on the type of external port it is connected to.

#### 4.8.3 Ethernet Input Port TSoIP (if Provided)

This port is auto-negotiating and intended to be connected to a network distribution switch using straight through wired Cat5e or better quality cable. The 100/1000 Base-T port negotiates an appropriate connection speed dependant on the type of external port it is connected to.

### 4.8.4 SFP Port (if Provided)

The SFP port is compatible with all standard available SFP modules. Plug the module in carefully to avoid damaging the receptacle.

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# **STARTUP**

# 5. Startup

Each of the Device chassis are factory configured identically with the standard ATX Networks default IP address of 192.168.0.23 assigned to port ETH0 (MGMT). Before connecting each Device to the management switch, the IP addresses must be reconfigured for your network.



**NOTE:** This equipment must have default ETH0 port IP addresses changed from 192.168.0.23 before operation is initiated.



**NOTE:** It is important to connect the eth1 streaming port to a **GbE capable switch** on IP Output models or risk uncontrolled continuity errors as a connected 100 Base-T network may be flooded.

## 5.1 Chapter Contents

- "Management Computer"
- "Connecting to Your Computer"
- "SFP Output""QAM Output"

### 5.2 Management Computer

It is required that the Management Computer meet these minimum requirements.

- Wired Ethernet network port.
- Web browser for Management GUI on 192.168.0.23.

## 5.3 Connecting to Your Computer

The DigiVu II Micro Devices have an ETH0 (MGMT) network port factory assigned IP address **192.168.0.23**, Figure 5-1. Use any browser to access the Management Interface GUI by entering the IP address in the URL window.

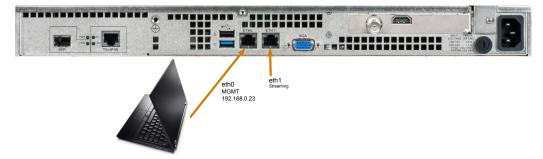


Figure 5-1: Rear Panel MGMT Port eth0 - 192.168.0.23



Note: Please refer to the Operation Manual for programming guidance.

## 5.4 SFP Output

Some Device models have SFP output capability for complete flexibility in providing a wide range of output modes such as single and multimode fiber, CWDM and DWDM among others. SFP modules are not provided with the DigiVu II Micro Device and must be purchased separately.

#### 5.4.1 Install the SFP Module

If your Device has been provided with an SFP port, the SFP module should be carefully inserted into the provided receptacle to avoid damage, Figure 5-2. Most brands of SFP modules are compatible with the DigiVu II Micro Device. There is no configuration of the SFP module required or provide for in the GUI.



Figure 5-2: Insert SFP Module

### 5.4.2 Connect the External Ethernet Cable

The SFP module is not internally connected to the DigiVu II Micro Device streaming output, this is done externally with the provided Ethernet cable by installing the cable between the ETH1 output port and TSoIP (Transport Stream over IP) input port, as shown in Figure 5-3.

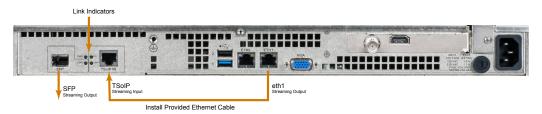


Figure 5-3: Connect ETH1 and TSoIP Port

### 5.4.3 Confirm Connection

Lights adjacent to the SFP module will help troubleshoot or confirm proper operation and streaming, see Figure 5-4 and Figure 5-5. The link light for the TSoIP port lights when the Ethernet cable is connected to ETH1. The link light for SFP confirms that a connection is present when an SFP connection is made to a compatible and active SFP switch or other device.



Figure 5-4: Lights Indicate no Streaming



Figure 5-5: Lights Confirm Active Streaming

# 5.5 QAM Output

Some Device models have QAM output capability for direct output to Cable TV networks. QAM output parameters are configured within the GUI. See the Operation Manual for programming guidance.

#### 5.5.1 Connect the External Ethernet Cable

The QAM module is not internally connected to the DigiVu II Micro Device streaming output, this is done externally with the provided Ethernet cable by installing the cable between the ETH1 output port and TSoIP (Transport Stream over IP) input port, as shown in Figure 5-6.



Install Provided Ethernet Cable

Figure 5-6: Connect ETH1 and TSoIP Port

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# SAFETY

# 6. Safety

WARNING! FAILURE TO FOLLOW THE SAFETY PRECAUTIONS LISTED BELOW MAY RESULT IN PROPERTY DAMAGE OR PERSONAL INJURY. PLEASE READ AND COMPLY WITH THE FOLLOWING:

**SAFETY GROUND:** The connection to earth of the supplementary grounding conductor, if provided, shall be in compliance with the appropriate rules for terminating bonding jumpers in Part V of Article 250 of the National Electrical Code, ANSI/NFPA 70, and Section 10 of Part I of the Canadian Electrical Code, Part I, CSA C22.1.

GROUNDING OR POLARIZATION: Electrical cord grounding and polarization means must not be defeated.

**WATER AND MOISTURE:** Care should be taken to prevent entry of splashed or dripping water, other liquids, and physical objects through enclosure openings.

DAMAGE: Do not operate the device if damage to any components is suspected.

**POWER SOURCES:** Only connect the unit to a power supply of the type and capacity specified in the operating instructions or as marked on the device.

NOTE: a) For 115 VAC operation, use the power cord supplied for operation from a 115 VAC source.

b) For 230 VAC operation, use the power cord supplied for operation from a 230 VAC source.

c) For DC operation, use insulated power leads of #12 AWG stranded wire for operation on -40 to -72 VDC

**POWER CORD PROTECTION:** Power supply cords should be routed so that they are not likely to be pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the device.

**SERVICE:** Do not attempt to service the device beyond procedures provided in the operating instructions. All other servicing should be referred to qualified service personnel.

**MODIFICATIONS:** Modifications should not be made to the device or any of its components for applications other than those specified in the operating instructions.

**SAFETY CODES AND REGULATIONS:** The device should be installed and operated in compliance with all applicable local safety by-laws, codes and regulations.

**REDUNDANT POWER SUPPLY REMOVAL:** Power must be disconnected from the BOTH power modules before removing for replacement or service. This is accomplished by removing both of the AC IEC plugs or operating the DC power disconnects.

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# **SERVICE & SUPPORT**

# 7. Service & Support

# 7.1 Contact ATX Networks

Please contact ATX Technical Support for assistance with any ATX products. Please contact ATX Customer Service to obtain a valid RMA number for any ATX products that require service and are in or out-of-warranty before returning a failed module to the factory.

### DIGITAL VIDEO TECHNICAL SUPPORT

Tel: (905) 428-6068

Toll Free: (800) 565-7488 (USA & Canada only)

► Press \*3 for **Technical Support** 

► Then press 1 for Digital Video Products (DVIS, DigiVu, UCrypt, VersAtivePro, DigiStream) Email: digitalvideosupport@atxnetworks.com

#### **CUSTOMER SERVICE**

ATX Networks 1-501 Clements Road West Ajax, ON L1S 7H4 Canada

 Tel:
 (905) 428-6068

 Toll Free:
 (800) 565-7488 (USA & Canada only)

 ▶ Press \*1 for Customer Service

 Fax:
 (905) 427-1964

 Toll Free Fax:
 (866) 427-1964 (USA & Canada only)

 Web:
 www.atxnetworks.com

 Email:
 support@atxnetworks.com

# 7.2 Warranty Information

All of ATX Networks' products have a 1-year warranty that covers manufacturer's defects or failures.

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1-501 Clements Road West, Ajax, ON L1S 7H4 Canada Tel +1 (905) 428-6068 Toll Free +1 (800) 565-7488 Fax +1 (905) 427-1964 Toll Free Fax +1 (866) 427-1964 www.atxnetworks.com support@atxnetworks.com