

ВИДЕОМЕНЕДЖЕРЫ

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## Warnings and Cautions



This symbol alerts the user that important information regarding the installation and/or operation of this equipment follows. Information preceded by this symbol should be read carefully in order to avoid damage to the equipment.



This symbol warns the user that un-insulated voltage within the unit may have sufficient magnitude to cause electrical shock. It is dangerous to make contact with any part inside the unit. To reduce the risk of electric shock, DO NOT remove cover (or back).

Note: There are no user serviceable parts inside. Refer servicing to qualified service personnel.



This symbol cautions the user that important information regarding the operation and/or maintenance of this equipment has been included. Information preceded by this symbol should be read carefully to avoid damage to the equipment.



This symbol appears next to the Potential Equalization Conductor on the VIMA.



This symbol denotes the manufacturer.

EC REP This symbol denotes the manufacturer's European Community representative.



This symbol indicates the device is a Medical Device. This product is intended only for use by healthcare professionals in professional healthcare environments.

**Note:** Any serious incident or adverse event that has occurred in relation to the device should be reported to the manufacturer and the competent authority of the Member State in which the user and/or patient is established.



#### Safety Compliance

This product is T.U.V. approved with respect to electric shock, fire and mechanical hazards only in accordance with CAN/CSA C22.2 No. 60601-1 and ANSI/AAMI ES60601-1.

### Safety Compliance

This device meets the requirements of EN60601-1 so as to conform to the Medical Device Regulation 2017/745.

This product is intended only for use by healthcare professionals in professional healthcare environments.

This product is designed to meet medical safety requirements for a patient vicinity device.

This product is a Class I medical device according to MDR in Europe. No modifications are allowed.

This product is intended for continuous operation.

## System Safety Requirements

External equipment connected to the signal input/output or other connectors of this product for use in a patient environment must comply with the requirements of ANSI/AAMI ES/EN/IEC 60601-1 safety standards. A person who connects such equipment to this product has by definition formed a system, and is responsible for compliance of that system to the same ANSI/AAMI ES/EN/IEC 60601-1 safety standards.

NDS recommends that VIMA installation be conducted by qualified personnel.

## **Power Requirements**

#### Power Cord

Model	Electrical Rating
VIMA Video Manager and Recorder	2 to 4A
VIMA Video Manager	2 to 4A
VIMA Video Recorder	1.25 to 2.5A
AC Input	100 - 240 Volts, 50 to 60 Hz

Use the supplied hospital grade power cord with the correct plug for your power source.

- The power cord is the only recognized disconnect device for this product. To power off the product, disconnect the power cord from the AC mains.
- The product and other medical equipment should be positioned so that the power cord and connection to AC mains is readily accessible.
- If an extension cord or power strip is needed for connection of this product to AC mains, confirm that the power cord plug can be securely connected to the cord or power strip.
- This product should be powered from a center tapped circuit when used in the US at voltages over 120 VAC.

#### Grounding

It is the responsibility of the installer to ensure that the equipment is installed in accordance with applicable hospital, local and national electrical codes.

An equipotentiality post, located on the back of the equipment, may be used for the purpose of bonding the VIMA chassis to other equipment to ensure that all devices are at the same potential. Any such bond must be installed in accordance with applicable electrical codes. The equipotentiality (ground) post is shown on page 4.

#### Data Storage

This product is designed to provide temporary data storage. Completed procedures and all corresponding data should be exported, or other otherwise transferred, at intervals to prevent VIMA from reaching 80% capacity. It is further recommended to backup all stored data.

## Recycling



Follow local governing ordinances and recycling plans regarding the recycling or disposal of this product.

## **About This Manual**

This manual is designed to assist the user with installation, setup and operation of VIMA.

## **General Information**

#### **VIMA Models:**

- VIMA Video Manager with Recorder
- VIMA Video Recorder
- VIMA Video Manager

### **Intended Use and Contraindications**

#### Intended Use

VIMA is a family of three product configurations with the intended use to enable a clinical user to manage image routing, the recording of videos, and capturing of images. VIMA will typically support the Operating Room and Endo/GI procedure room environment, and it shall integrate with the hospital electronic medical records (EMR) systems utilizing the DICOM interface standard.

VIMA, as a stand-alone device, shall support multiple digital video input and output standards and allows users to interconnect them regardless of their individual technologies. From an external touch screen display, VIMA will interface with the User utilizing a Graphical User Interface (GUI) that shall be appealing and intuitive to use by the User.

#### Contraindications

- 1. Do not use this product in the presence of flammable anesthetics mixture with air, oxygen or nitrous oxide.
- 2. To prevent fire or shock hazards, do not expose this product to rain or moisture.
- 3. No part of this product may come in contact with a patient. Never touch the product and a patient at the same time.
- 4. For mission critical applications, we strongly recommend that a replacement unit be immediately available.

## Overview

VIMA is a family of three product configurations that enable a clinical user to manage video and image routing, the recording of videos, and capturing of images. VIMA is used in the Operating Room and Endo/GI procedure room environment, and it integrates with the hospital electronic medical records (EMR) systems utilizing the DICOM interface standard.

VIMA, as a stand-alone device, supports multiple digital input and output standards. When used in combination with ScaleOR, various legacy analog input signals can also be supported. VIMA is controlled from an external touch screen display via an intuitive graphical user interface.

## **VIMA Models:**

- VIMA Video Manager with Recorder
- VIMA Video Recorder
- VIMA Video Manager

## **VIMA Installation**

- Place the unit on a flat surface.
- Stacking of the VIMA device on another device is allowed.
- Leave a space of at least 5 cm from other devices on the left-side, right-side, and rear of VIMA.



Leave a space of at least 5 cm from other devices on the left-side, right-side, and rear of VIMA, especially high-frequency surgical equipment.

**WARNING:** Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.

#### **Connection Procedure**

- 1. Connect the video source to video input (HDMI, 3G-SDI, or HDBaseT).
- 2. Connect the target device to output video signals (HDMI or HDBaseT).
- 3. Connect the control display to one of the display ports (DP++ or HDMI 1 Touch).
- 4. Connect the required accessories (touchscreen, keyboard, mouse, etc.) to the USB ports.
- 5. Connect the power source as indicated below.

#### **Power Supply**

The power supply voltage must match the voltage indicated on the label.

- Connect the power cable into the facility power outlet.
- Connect the power cable into VIMA receptacle.
- Connect the potential equalization plug into connection for potential equalization on VIMA.
- Connect the cable for the potential equalization to the facility.

#### **Connecting Accessories**

**WARNING:** Combinations of accessories that are not listed in the instruction manual may only be used if they are intended exclusively for a given use and do not affect the performance, safety, and EMC characteristics of VIMA.

**WARNING:** Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the (ME EQUIPMENT or ME SYSTEM), including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.

All devices that are connected to the interface must clearly meet the relevant IEC standard (eg. IEC 60950 devices for data processing and IEC / EN 60601-1 for medical electrical equipment).

All configurations must comply with the system standard IEC / EN 60601-1.

When connecting devices to each other, ensure that the configuration and system complies with standard IEC / EN 60601-1 or equivalent national standards.

For assistance, please contact your local distributor or manufacturer.

#### **Compatible Device Management Displays**

Full-HD displays with a Display Port or HDMI input that accepts signals with 1080p or greater resolution. Full-HD displays with other inputs may be used with the use of adapters.

#### **Compatible VIMA Video Displays**

HD displays with HDMI or HDBaseT input that accepts signals with 720p or greater resolution. HD displays with other inputs may be used with the use of adapters.



VIMA provides a 12 VDC power output from the rear panel that is designated for use to only power an ELO 15.6" touch panel display ET1502L, when a touch control interface is desired within the patient vicinity.

## **VIMA Overview**

The front panel of VIMA contains the power switch, Record and System LED indicators, and a USB port.

The front USB port is used for software upgrades and exporting/download stored images and videos.

Note: The Record LED is not present on VIMA Video Manager.



The rear of VIMA contains video input and output ports, power input, network ports, USB control ports, and microphone and audio out. DC power supply for a control touch display is also provided. Each model of VIMA has a unique rear port configuration, as detailed in the following sections.



#### VIMA Video Manager with Recorder



VIMA Video Manager with Recorder has ten video input ports and eight video output ports as detailed in the Ports table below. Two Accessory ports are provided. Audio ports are provided for audio services.

VIMA Video Manager with Recorder has eight control ports. A display port (DP++) and an HDMI port (HDMI 1 Touch) are provided to connect one or two 1080p touch displays for VIMA GUI. Touch displays require a USB connection. One LAN port provides network connectivity and four USB ports for monitor touch, external keyboard and mouse, or USB devices to export captured images and videos.

Port Type	Number of Ports	Notes
Accessory Ports		
ACC	2	For use with video and still image control devices. ACC 1 is used for image capture trigger. ACC 2 is used for start/stop recording trigger.
USB (Front panel)	1	Connect a USB device to export captured images and videos, or external keyboard. This is USB 2.0. This USB port can be used in combination with the HDMI 1 or DP++ ports for a Touch screen connection, but is not recommended.
Video Output Ports	-	
HDBaseT Out	4	PoE feature is available only on HDBaseT Out 1 and HDBaseT Out 2. PoE is not available on ports 3 and 4. PoE (15 Watts) will be provided. (802.3at Type 2 Class 3)
HDMI Out	4	
Video Input Ports		
HDBaseT In	4	PoE (30 Watts) will be provided. (802.3at Type 2 Class 4)
3G-SDI In	2	
HDMI In	4	
Audio		
Line Out	1	
Mic In	1	
Management and Cont	rol Ports	
DP++	1	Only accepts a Display Port connector. Will automatically detect DP or HDMI signal.
HDMI 1 Touch	1	Accepts both DP and HDMI connector. Will only support an HDMI signal.
LAN	2	Only LAN 1 is active. LAN 2 is an inactive port and the control indicators do not work.
USB	4	Connect a USB device to export captured images and videos, or external keyboard to any of the USB ports. Any of the four USB ports can be used in combination with the HDMI 1 or DP++ ports for a Touch screen connection. These are USB 3.0.
Other Ports		
DC output	1	The DC output port is only for an ELO 15.6 touch display.



VIMA Video Recorder has three video input ports and no video output ports as detailed in the Ports table below. Two Accessory ports are provided for camera remote controls. Audio ports are provided for audio services.

VIMA Video Recorder has seven control ports. A display port (DP++) and an HDMI port (HDMI 1 Touch) are provided to connect one or two 1080p touch displays for VIMA GUI. One LAN port provides network connectivity and four USB ports for control devices (keyboard and mouse) and accessories.

Port Type	Number of Ports	Notes
Accessory Ports	•	
ACC	2	For use with video and still image control devices. ACC 1 is used for image capture trigger. ACC 2 is used for start/stop recording trigger.
USB (Front panel)	1	Connect a USB device to export captured images and videos, or external keyboard. This is USB 2.0. This USB port can be used in combination with the HDMI 1 or DP++ ports for a Touch screen connection, but is not recommended.
Video Input Ports		
HDBaseT In	1	PoE (30 Watts) will be provided. (802.3at Type 2 Class 4)
3G-SDI In	1	
DVI-D	1	
Audio		
Line Out	1	
Mic In	1	
Management and	Control Ports	
DP++	1	Only accepts a Display Port connector. Will automatically detect DP or HDMI signal.
HDMI 1 Touch	1	Accepts both DP and HDMI connector. Will only accept an HDMI signal.
LAN	2	Only LAN 1 is active. LAN 2 is an inactive port and the control indicators do not work.
USB	4	Connect a USB device to export captured images and videos, or external keyboard to any of the USB ports. Any of the four USB ports can be used in combination with the HDMI 1 or DP++ ports for a Touch screen connection. These are USB 3.0.
Other Ports		
DC output	1	The DC output port is only for an ELO 15.6 touch display.



The DC output port is only for an ELO 15.6 touch display.

Only devices without PoE or with PoE implemented according to 802.3at Type 2 Class 3 (resp.4) can be connected. Connection of devices which do not have PoE implemented according to this standard (for example with PoC or PoH marking) will cause the damage of VIMA.

Note: There are two LAN ports on VIMA, however only LAN 1 is active.



VIMA Video Manager has ten video input ports and eight video output ports as detailed in the Ports table below. Audio ports are provided for audio services.

VIMA Video Manager has seven control ports. A display port (DP++) and an HDMI port (HDMI 1 Touch) are provided to connect one or two 1080p touch displays for VIMA GUI. Four USB ports for control devices (keyboard and mouse) and accessories.

Port Type	Number of Ports	Notes	
Accessory Ports			
ACC	2	For use with video and still image control devices. ACC 1 is used for image capture trigger. ACC 2 is used for start/stop recording trigger.	
USB (Front panel)	1	Connect a USB device to export captured images and videos, or external keyboard. This is USB 2.0. This USB port can be used in combination with the HDMI 1 or DP++ ports for a Touch screen connection, but is not recommended.	
Video Output Port	ts		
HDBaseT Out	4	PoE feature is available only on HDBaseT Out 1 and HDBaseT Out 2. PoE is not available on ports 3 and 4. PoE (15 Watts) will be provided. (802.3at Type 2 Class 3)	
HDMI Out	4		
Video Input Ports			
HDBaseT In	4	PoE (30 Watts) will be provided. (802.3at Type 2 Class 4)	
3G-SDI In	2		
HDMI In	4		
Audio			
Line Out	1		
Mic In	1		
Management and	Control Ports		
DP++	1	Only accepts a Display Port connector. Will automatically detect DP or HDMI signal.	
HDMI 1 Touch	1	Accepts both DP and HDMI connector. Will only accept an HDMI signal.	
LAN	0	All LAN ports are inactive and the control indicators do not work.	
USB	4	Connect a USB device to export captured images and videos, or external keyboard to any of the USB ports. Any of the four USB ports can be used in combination with the HDMI 1 or DP++ ports for a Touch screen connection. These are USB 3.0.	
Other Ports			
DC output	1	The DC output port is only for an ELO 15.6 touch display.	





Only devices without PoE or with PoE implemented according to 802.3at Type 2 Class 3 (resp.4) can be connected. Connection of devices which do not have PoE implemented according to this standard (for example with PoC or PoH marking) will cause the damage of VIMA.

Note: There are two LAN ports on VIMA, however only LAN 1 is active.

## **VIMA Control Options**

VIMA is controlled from its Graphical User Interface (GUI). Available control devices include:

- 1. A compatible touch display.
- 2. Mouse and keyboard connected via the USB ports.
- 3. Two ACC ports are available for use with video and still image control devices.

## **Powering on VIMA**

When the power switch is pressed, the LED indicator is illuminated, indicating power is on.

## **Fuse Replacement**

VIMA requires one Buss T 5A 250V or equivalent for fuse replacement.

- 1. Disconnect the power cord from the VIMA.
- 2. Using a small screwdriver, pry out the Fuse Box.
- 3. Replace the fuse with a Buss T 5A 250V or equivalent.
- 4. Slide the Fuse Box into its receptacle and press until it seats.



# **VIMA** Operation

Before VIMA is started, all power, network, video, and control connections should be completed. Refer to "VIMA Overview and Installation" on page 3 for installation information.

When VIMA is powered on, it will proceed through the start process. Once the start process is completed, the VIMA Start screen is displayed. Click the **Start** button to continue to the Video screen.



## **VIMA Models**

There are three VIMA device models, each with a unique set of features. This manual provides information about all available features.

#### VIMA Video Manager with Recorder

The VIMA Video Manager with Recorder contains all available VIMA device and software features. Features include "Video Tab" on page 14, "Worklist Tab" on page 20, "Procedure Tab" on page 27, and "Archive Tab" on page 35.



#### **VIMA Video Recorder**

The VIMA Video Recorder features include "Worklist Tab" on page 20, "Procedure Tab" on page 27, and "Archive Tab" on page 35.



#### **VIMA Video Manager**

The VIMA Video Manager features include "Video Tab" on page 14.



## Navigation

There are two primary navigation areas in VIMA interface: the top menu bar and the navigational tabs.

#### **Navigation Tabs**

VIMA interface has four Navigation tabs located on the right-side of the screen. The Navigation tabs are placed in the order of the standard process of operation (top to bottom). Each Navigation tab will open the corresponding work screen. The tabs include:

- Video
- Worklist
- Procedure
- Archive



## Video Tab

The Video tab opens the Video Management screen, as shown below.

- Input interface All video inputs (active and inactive) are listed. A blue camera icon indicates active inputs. A gray camera icon indicates an inactive video input.
- **Output interface** An overview of all video outputs. A blue monitor icon indicates active outputs. A gray monitor icon indicates an inactive video output.

Using the Video Management screen, select an input (video source) to be displayed on an output (video display). Using the Video Management screen, any input can be directed to display on any output by either drag and drop, or click on an input followed by a click on an output. Any input can be directed to any or all output displays.

#### About the Video Management Screen

The Inputs section can be filtered using any of three options: All Inputs, Active Inputs, or Inactive Inputs.

<b>NDS</b>		10:14 ам 3/29/2018				•
All Inputs	•	All Outputs				Video
Ultrasound	0	Left Display ×	📮 Right Display 🛛 🗙	HDMI 3		
Microscope	0					Worklist
	-	Endo Camera	Ultrasound			Procedure
Endo Camera	0					Arabiyo
HDMI 4	Ο	HDMI 4	🖵 Wall Display L 🛛 🗙	💭 Wall Display R 🛛 🗙		Archive
SDI 1	0					
SDI 2	0		Ultrasound	Vital Signs		
HDBaseT 1	0					
C-Arm	0	Remote ×	HDBaseT 4			
Vital Signs	0	Room Camera			4	*
Room Camera	0				\$È	j <b>∛ VIMA</b>

#### **Configuring Displayed Names for Inputs and Outputs**

The default configuration contains generic names for inputs and outputs. Refer to "Video Management Settings" on page 41 for instruction to configure the names of inputs and outputs.

#### **Filtering Inputs and Outputs**

The inputs (video source) and outputs (displays) can be filtered.

1. Select the Inputs menu to view All Inputs, Active Inputs, or Inactive Inputs. An active input is indicated with a blue video icon. An inactive input is indicated with a gray video icon.

<b>NDS</b>		10:22 AM 3/29/2018			•
All Inputs		Active Outputs -			Video
Active Inputs		Left Display ×	Right Display ×	💭 Wall Display L 🛛 🗙	
Inactive Inputs					Worklist
Microscope	Ο	Endo Camera		Ultrasound	Procedure
Endo Camera	Ο			_	
					Archive
C-Arm	0	U Wall Display R ×	Remote X		
Vital Signs	0				
Room Camera	0	Vital Signs	Room Camera		
					I ČĂŽ VIMA
					$\smile$

2. Select the Outputs menu to view All Outputs, Active Outputs, or Inactive Outputs. An active output is indicated with a blue video icon. An inactive output is indicated with a gray video icon.

<b>NDS</b>	10:23 AM 3/29/2018			•
Active Inputs -	All Outputs			Video
Ultrasound O	Inactive Outputs	Right Display X	💭 Wall Display L 🛛 🗙	Worklist
Microscope	Endo Camera	Ultrasound	Ultrasound	Procedure
Endo Camera				
C-Arm	U Wall Display R ×	Remote ×		◆ Archive
Vital Signs				
Room Camera	Vital Signs	Room Camera		

#### Directing an Input to an Output Display

1. Drag and drop the desired input on the selected output.



2. An alternative method is to click on the desired input and then click on the selected output.

#### **Previewing an Active Input**

Active inputs are indicated with a blue video icon. An active input can be previewed by clicking the eye icon.

Once preview is shown, the previewed input can be changed either by clicking to required input, or by dragging and dropping on preview screen. The preview can be closed either by clicking the close button (X icon) or by selecting the same input.



#### **Switching Presets**

Selecting the Switching Presets icon iii opens the Switching Presets menu. A switching preset is a saved input and output device configuration. Up to 100 switching presets can be configured and saved.



#### **Configuring a Switching Preset**

- 1. Set the inputs to the desired outputs. Refer to "Directing an Input to an Output Display" on page 16.
- 2. Select the Switching Presets icon 🗰 to open the Switching Presets menu.
- 3. Select Add New.
- 4. Enter the name of the new preset and select the checkmark to save the entry.



#### **Editing or Deleting a Switching Preset**

The available menu options for the Presets window include Edit, Replace, Delete, and Load actions.



#### Edit the Name of a Preset

- 1. Select the Switching Presets icon 🗰 to open the Switching Presets menu.
- 2. Select the desired preset.



3. Select the Edit icon.

4. Edit the name of the preset, as desired.

<b>NDS</b>		Switching Presets		\$
Active Inputs -	Active Outputs	Endoscopy 🥥 😵		Video
	Left Display	Microscope	🖵 Wall Display L 🛛 🗙	
		R. Sheen: Arthroscopy		Worklist
Microscope				
	Endo Camera			Procedure
Endo Camera				a Arabian
C-Arm	Wall Display R			Archive
Vital Signs				
Room Camera	Vital Signs			
		ADD NEW CLOSE		
	□ 1 w 2 A 123 📮	E <sup>3</sup> R <sup>4</sup> T <sup>5</sup> Y <sup>6</sup> U <sup>7</sup> I <sup>8</sup> O       S     D     F     G     H     J     K       X     C     V     B     N     M     .	9 P 0 €3 L ← . ? △ < >	

- 5. Select the checkmark to save the new name of the preset.
- 6. Select Close to close the Switching Presets window.

## Worklist Tab

The Worklist tab opens the Worklist screen, as shown below. Worklist is where the user can plan or review the planned procedure. This is where the workflow starts. The Worklist displays a series of records sorted by Scheduled Date, with the oldest date on top. The planned procedure information contains detailed information about the patient and associated planned procedures. These records are required before starting a procedure and recording. Patient and Procedure records are listed on the left-side of the Worklist screen.

Planned procedures can be created manually using the Add icon + or fetched (downloaded) from the DICOM server using drop-down menu. Worklist records are sorted by Scheduled Date, with the oldest date on top.

The Worklist screen provides access to two types of worklists: Local Worklist and DICOM Worklist. You can switch between these worklists using the drop-down menu.

- The Local Worklist is utilized when a DICOM infrastructure is unavailable. The user creates and edits planned procedures in the Local Worklist.
- The DICOM Worklist is utilized in institutions with a DICOM infrastructure. Planned procedures are automatically fetched from the DICOM Worklist server. The user will schedule the intervals in which planned procedures are fetched from the DICOM server.

<b>NDS</b>	10:55 ам 3/29/2018	+ 🗾 🗈 🕨	•
Local Worklist			
DICOM Worklist			Video
0         7/18/72/2/63         1.1.3           IS         1/5/2017 7:22 PM         Atherectomy           A# 0754723-5468618         Atherectomy	Patient	Procedure	Worklist
Q James Taylor 59 y	Patient Name	Physician Name	
I/6/2017 6:58 AM         Fractured bone           A# 9909447-1993329         reconstruction		Dr. Jessica Green M.D.	Procedure
William Green 721812/9060         24 y	Patient ID	Accession Number	Archive
I/6/2017 7:03 AM           A# 7087189-4001755	11101212103	01041200400010	
Q Mia White 70 y 446893/0199	Date of Birth Sex	Scheduled Date and Time	
Image: 16/2017 10:17 AM         Fractured bone reconstruction           A# 1768061-4253464         reconstruction	0/20/1939	13/2017 7.22 FW	
Ava Evans 643863/2774 80 y	Patient Comments	Procedure Description	
Image: 16/2017 11:35 PM         Coronary Artery Bypass           A# 2465367-7834190         Graft		Atherectomy	
Q Alfie White 8 y			
③ 1/7/2017 7:51 PM         Apendictonomy           A# 5823240-8029165         Apendictonomy			
O <sup>R</sup> Oscar Wilson 84 y			
③ 1/8/2017 1:32 AM         Hip joint replacement           A# 9979753-4546742         Hip joint replacement			SAIV (A)
∩ <sup>7</sup> Mia Davies 33 v			U



#### **Menu Options**

The available menu options for the Worklist tab include creating a planned procedure, editing a procedure, deleting procedure, and starting a procedure.



#### Adding a New Procedure

To add a planned procedure to the worklists, select the Add icon +, the New Procedure: Patient Information screen opens.

#### **New Procedure: Patient Information**

Enter all required data into the New Procedure: Patient Information screen including the last name of the patient and patient ID. The arrows on the right-side of the screen allow the options to be expanded or collapsed. Select **Next** after all information has been entered to proceed to the Procedure Information screen.

All fields are validated when **Next** is selected. If any field is incorrect, the dialog will not move to the next screen and all incorrect fields are indicated by red color. An instruction to correct the issue is provided under each field.

#### **New Procedure: Procedure Information**

After all Patient information has been entered, the New Procedure: Procedure Information screen opens. The arrows on the right-side of the screen allow the options to be expanded or collapsed. All required procedure information is indicated in red highlight. Procedure information includes the name of the physician, date and time of the procedure, and an additional description of the planned procedure.

- Use the **BACK** button to return the Patient Information screen for the current procedure.
- After all information has been entered, select the **CREATE** button. The completed patient and procedure information is placed into the Worklist.
- When creating multiple Patient and Procedure records, select the CREATE AND NEW button. The completed
  patient and procedure information is placed into the Worklist and the New Patient screens opens to create
  another procedure.

<b>NDS</b>			\$
Local Worklist -		New Procedure: Patient Information	1 Video
Q Oscar Jones 39 y		Patient: First Name Patient: Last Name *	N VIGEO
Image: 1/2/2017 10:44 AM         Atherectomy           A# 3336426-4794440         Atherectomy	Patient	064 064	Worklist
Q Oliver White 43 y	Patient Name	Patient ID * Q 064	
© 1/3/2017 4:18 PM A# 8120526-0471014 Catarac removal	Oscar Jones	Date of Birth         Sex           (e.g. 6/27/2017)         Unknown	Procedure
Q Mia Robinson 49 y	Patient ID 199569/5213	0/10240	Archive
© 1/4/2017 11:28 PM Fractured bone A# 7604142-8136324 reconstruction		Patient Comments	
Oliver White 89 y	Date of Birth		
Image: 10 Tig: 12017 8:52 AM         Coronary Artery Bypass           A# 2322120-7313059         Graft	9/0/1978		
Alfie Robinson 58 y	Patient Comment	* Required field CANCEL NEXT	
Image: 1/5/2017 7:22 PM         Atherectomy           A# 0754723-5468618         Atherectomy		Atherectomy	
Q James Taylor 59 y	(	0 <sup>1</sup> W <sup>2</sup> E <sup>3</sup> R <sup>4</sup> T <sup>5</sup> Y <sup>6</sup> U <sup>7</sup> I <sup>8</sup> O <sup>9</sup> P <sup>0</sup>	
1/6/2017 6:58 AM         Fractured bone           A# 9909447-1993329         reconstruction		A S D F G H J K L +	
William Green 721812/9060         24 y		: Z X C V B N M , .? △	
I/6/2017 7:03 AM           A# 7087189-4001755	12		
Mia White 70 v			0

#### **Alternative Methods to Enter Patient Information**

VIMA can utilize DICOM Query and Retrieve service to retrieve patient information when a DICOM worklist is unavailable.

1. Enter at least the first three letters of the patient ID and click the blue magnifier icon (search) next to the patient ID field. A dialog with search results will appear.

	3:09 рм			*
E::NDJ	3/29/2018	New Procedure: Patient Information Searc	h Results	
Local Worklist -				Video
Q Oscar Jones 39 y		Patient: First Name Patient: Last Name *	BILLY FRANKLIN 26 y PID-M000199 26 y	
© 1/2/2017 10:44 AM Atherectomy	Patient	0/64 0/64		Worklist
A# 5530420#134440		Patient ID P	SARAH LONG 20 y	WORKING
Q Oliver White 998533/2711 43 y	Patient Name Oscar Jones	3/64		
I/3/2017 4:18 PM         Catarac removal           A# 8120526-0471014         Catarac removal		Date of Birth         Sex           (e.g. 6/27/2017)         Unknown	JUSTIN WEBB 91 y	
Q Mia Robinson 49 y	Patient ID	0/10240		Archive
© 1/4/2017 11:28 PM Fractured bone A# 7604142-8136324 reconstruction	199569/5213	Patient Comments		
2				
Oliver White 89 y	Date of Birth			
Image: 100 State         Coronary Artery Bypass           A# 2322120-7313059         Graft	9/6/1978			
C Alfie Robinson 58 y	Patient Comment	* Required field CANCEL NEXT	CANCEL SELECT	
Image: 10 state         Atherectomy           A# 0754723-5468618         Atherectomy		Atherectomy		
Q James Taylor 59 y 682624/7515 59 y		0 <sup>1</sup> W <sup>2</sup> E R <sup>4</sup> T <sup>5</sup> Y <sup>6</sup> U <sup>7</sup> I <sup>8</sup> O <sup>9</sup> P <sup>0</sup>		
Image: 16/2017 6:58 AM         Fractured bone reconstruction           A# 9909447-1993329         reconstruction		A S D F G H J K L ↔		
C William Green 24 y		≥ Z X C V B N M , .? ≏	<b>A</b>	-
Image: 16/2017 7:03 AM         Hip joint replacement           # 7087189-4001755         Hip joint replacement	1			
Mia White 70 v				

2. Click the patient name and click the **SELECT** button. The patient data is completed in the patient information dialog.

<b>NDS</b>	3:11 РМ 3/29/2018	New Presedure: Potient Infor	notion	- 2 🗊 🕨	\$
Local Worklist		New Procedure. Patient mon	nation		
O Oscar Jones 20 vi		Patient: First Name Pat BILLY FR	ent: Last Name *		Video
199569/5213 59 y	Dationt	5/56	8/59		
A# 3336426-4794440 Atherectomy	Pallent	Patient ID *	0		Worklist
Q Oliver White 43 y 998533/2711	Patient Name	PID-M000199	11/64		
© 1/3/2017 4:18 PM A# 8120526-0471014 Catarac removal		Date of Birth 7/16/1991	Sex Male		Procedure
Q Mia Robinson 49 y	Patient ID		0/1024	10	Archive
Image: Weight of the second	199569/5213	Patient Comments			_
Coliver White 89 y	Date of Birth				
Image: Second system         Coronary Artery Bypass           A# 2322120-7313059         Graft	9/6/1978				
2 Alfie Robinson 58 y	Patient Comment	* Required field	CANCEL NEX	(T	
Image: 50 1/5/2017 7:22 PM         Atherectomy           A# 0754723-5468618         Atherectomy			Atherectomy		
Q James Taylor 59 y	Q	1 W 2 E 3 R 4 T 5	Y U I O P 0	G	
Image: 10 //6/2017 6:58 AM         Fractured bone reconstruction           A# 9909447-1993329         reconstruction		A S D F G	HJKL	←	
William Green 721812/9060         24 y	<u></u>	z x c v	B N M , .	<b>^</b>	
I/6/2017 7:03 AM         Hip joint replacement           A# 7087189-4001755         Hip joint replacement	12	3	4		
Mia White 70 v		· ·			

#### **Worklist: Managing Procedures**

In addition to adding a procedure, managing the Worklist includes editing procedure information and importing procedures from a DICOM worklist.

<b>NDS</b>		Edit Bragedurg: Patient Information	۵
Local Worklist -			
		Patient: First Name Patient: Last Name *	Video
Q 199569/5213 39 y		Oscar Jones Trico	
© 1/2/2017 10:44 AM Atherectomy	Patient	Datient ID *	Worklist
		199569/5213 Q	
Q Oliver White 43 y 998533/2711	Patient Name	11/64	
Image: 1/3/2017 4:18 PM         Catarac removal           # 8120526-0471014         Catarac removal		Date of Birth         Sex           9/6/1978         Female	Procedure
Q Mia Robinson 49 y	Patient ID	0/10240	Archive
Image: 1/4/2017 11:28 PM         Fractured bone reconstruction           A# 7604142-8136324         reconstruction	199569/5213	Patient Comments	
Coliver White 89 y	Date of Birth		
Image: 10 style="text-align: center;">1/5/2017 8:52 AM         Coronary Artery Bypass           A# 2322120-7313059         Graft	9/6/1978		
Alfie Robinson 58 y	Patient Comment	* Required field CANCEL NEXT	
Image: 1/5/2017 7:22 PM         Atherectomy           A# 0754723-5468618         Atherectomy		Atherectomy	
Q James Taylor 59 y 682624/7515	C	1 W 2 E R 4 T Y 6 U 7 I 8 0 9 P 0	
Image: 16/2017 6:58 AM         Fractured bone reconstruction           A# 9909447-1993329         reconstruction		A S D F G H J K L ↔	
William Green 721812/9060         24 y	4	Z X C V B N M , .?	
1/6/2017 7:03 AM           A# 7087189-4001755	12		AMIV (S)
O Mia White 70 v			

To edit a planned procedure, select the Edit icon  $\checkmark$ , the Edit Procedure: Patient Information screen opens. Edit the data in the Edit Procedure: Patient Information screen as required. Select the **NEXT** button after all information has been edited to proceed to the Procedure Information screen.

	3:22 PM	. / i >	\$
	012012010	Edit Procedure: Procedure Information	
Local Worklist		Rhuzician: First Mana Rhuzician: Last Mana	Video
Oscar Jones 39 v		Mia Taylor *	
¥ 199569/5213	Detient	3/51 6/54	
A# 3336426-4794440 Atherectomy	Patient	Physician: Name Prefix Physician: Name Suffix	Worklist
- Oliver White	Datiant Name	Dr. Physician: Middle Name M.D.	
998533/2711 43 y	Oscar Jones	3/51 0/48 4/52	Davaselium
© 1/3/2017 4:18 PM A# 8120526-0471014 Catarac removal		Accession Number	Procedure
		15/16	
Q Mia Robinson 49 y	Patient ID	Scheduled Date * Scheduled Time	Archive
© 1/4/2017 11:28 PM Fractured bone	199569/5213	1/2/2017 10:44 AM	
A# 7604142-8136324 reconstruction			
Cliver White 89 v	Date of Birth	Procedure Description 11/10240	
562958/0849	9/6/1978	Atherectomy	
A# 2322120-7313059 Graft			
C Alfie Robinson 58 y	Patient Comment	* Required field CANCEL BACK OK	
Image: 1/5/2017 7:22 PM         Atherectomy           A# 0754723-5468618         Atherectomy		Atherectomy	
Q James Taylor 59 y	c	1 W E R T Y U I O P K	
Image: 10 style="text-align: center;">1/6/2017 6:58 AM         Fractured bone reconstruction           A# 9909447-1993329         reconstruction		A S D F G H J K L ↔	
William Green 721812/9060         24 y		Z X C V B N M , . ? 🗅	
Image: Second system         Image: Se	12		
Mia White 70 v			

#### Deleting a Procedure from a Worklist

A procedure can only be deleted from the Local Worklist.

- 1. Select the procedure to be deleted from the worklist. The procedure will be highlighted.
- 2. Select the Delete icon 👔 from the Worklist menu. The delete confirmation screen opens.
- 3. Select the **CANCEL** button to cancel the delete operation or select the **OK** button to continue to delete the procedure.

<b>NDS</b>	10:54 AM 3/29/2018	+ 🖍 🔋 🕨	•
Local Worklist			Video
O*         Oilver Walker 155260/6207         11 y           ☉ 1/29/2017 7:16 PM A# 6077427-8059366         Cholecystectomy	Patient	Procedure	Worklist
Ava Jones 903604/9516         45 y           I/30/2017 4:34 AM A# 9791989-4991906         Fractured bone reconstruction	Patient Name Oliver Walker	Physician Name Dr. James Robinson M.D.	Procedure
Emily Evans 726992/3225         47 y           S 1/30/2017 5:17 PM 4: 97/8332-4775502         Apendictonomy	Patient ID 155260/6207	Accession Number	Archive
William Thompson         64 y           ☉ 1/30/2017 9:23 PM         Hip joint replacement           ₩ 8780670.1646306         Hip joint replacement	Date of Birth Sex 1/8/2007 Male	lete selected item? tie and Time CANCEL OK 16 PM	
Sophie Wood         44 y           3         369903/5523         44 y           3         1/31/2017 12:56 PM         Fracture bore           4         969503/5523         Fracture bore	Patient Comments	Procedure Description Cholecystectomy	
Comparison         Thomas White 874254/8533         79 y           Initialization         1/3/2017.752 PM         Hip joint replacement			
3         Jessica Green 107248/3095         42 y           3         2/1/2017 4:39 AM Catarac removal			
O <sup>7</sup> Oscar Wood 9 v			CSS VIMA

#### Fetch the DICOM Worklist

VIMA can utilize DICOM worklist to fetch information to start a particular procedure. VIMA will fetch information to start a particular procedure.

To fetch the DICOM Worklist:

- 1. Select the DICOM Worklist from the Worklist drop-down menu.
- 2. Using the Relative Time Range parameters, select the time range to import. Select the Search icon to complete the process.

<b>NDS</b>	12:40 PM 3/29/2018			C 🕨		•
DICOM Worklist		Relative Time Range:	last 1 hour	next 1 day 🔹		Video
JUSTIN WEBB 91 y			last 2 hours			Video
Imperiod 123           Imperiod 123 </td <td>Patient</td> <td>Procedure</td> <td>last 3 hours</td> <td></td> <td>=</td> <td>Worklist</td>	Patient	Procedure	last 3 hours		=	Worklist
Q EVELYN HOLMES 54 y PID-F000145 54 y	Patient Name JUSTIN WEBB	Physician Name SHANE KNIG	last 8 hours			Procedure
Image: 11/7/2017 8:00 AM         Freeing Of Minor           A# AN-00018276         Abdominal Adhesions			last 12 hours			Procedure
JACK BUTLER 24 y	Patient ID PID-M000125	Accession Num	last 1 day last 2 days		•	Archive
Image: System 2         Image: Sys	· · · · · · · · · · · · · · · · · · ·		last 3 days			
Q ANA LEE 28 y	Date of Birth Sex	Scheduled Date	last 4 days			
I1/7/2017 8:00 AM           A# AN-00003135   Dynamic Graciloplasty	10/21/1926 Male	11/7/2017 8:00	last 6 days			
O <sup>T</sup> GLEN CHAVEZ PID-M000194         70 y	Patient Comments	Procedure Desc	last 7 days			
③ 11/7/2017 8:00 AM         Liver Lobectomy (Right Or A# AN-00000765		Laparoscopic	last 14 days			
Q SALLY MILLS 40 y						
③ 11/7/2017 8:00 AM         Splenectomy           A# AN-00022320         Splenectomy						
CATHY BAKER 24 y					Æ	*
I1/7/2017 8:00 AM         Right Hemicolectomy -           A# AN-00006554         With Formation Of Stoma					1 CC	
O JEANNE PORTER 61 v					•C	)•

- 3. Select the Refresh button C to refresh the DICOM worklist.
- 4. Select an item from the worklist and select the Start Procedure icon >.

## **Procedure Tab**

The Procedure tab displays the active procedure. Video recording and image capture controls are displayed when the procedure is started. The controls are displayed in the lower right corner.

Video recording and image capture controls include:

- microphone mute
- video recording and image capture input selector
- video recording control
- image capture control

#### **Starting a Procedure**

- 1. Select the required procedure from the Worklist.
- 2. Select the Start Procedure icon F from the Worklist menu. The Start New Procedure confirmation screen opens.
- 3. Select the **CANCEL** button to cancel the procedure or select the **OK** button to continue to start the procedure.



#### **Documenting a Procedure**

1. Using the video recording control 📕 , video recording can be start and stopped. Using the image capture

control **o**, still images can be captured. As video is start/stopped the video files will appear below the main screen.

2. Use the foot pedals connected to ACC1 and ACC2 to start/stop recording and to take photographs of the procedure. Recorded files are displayed below the main screen.



#### **Video Input Selection**

While performing a procedure, a different input maybe selected by selecting the input indicator, located in the lower right corner of the screen.

- 1. When the input is changed and recording is in progress, a prompt is shown.
- 2. When the prompt is acknowledged, video recording is stopped and new video recording is started for the new video source.

Note: When no recording is in progress, the input is changed without any prompt.



- 3. Select the icon for the action.
  - Select the Live Preview icon <a>o</a> to view a live preview of the video source.
  - Select the Video camera icon \_ to record video.
  - Select the Camera icon o to capture still images.



#### **Live Preview**

When a video source is changed, it is recommended to perform a live preview of the video source.

1. Select Live Preview icon o to view a preview. A Live Preview pane will display the live video source preview.



2. Select the Expand icon in the preview pane to expand the Live Preview.



#### **Adjusting Microphone Volume**

The recording levels of the microphone can be adjusted or muted as required.

1. Select the Microphone icon  $\P$  to open the recording volume adjustment.



- 2. Using the slide, adjust the recording volume up or down.
- 3. Select the Mute icon to disable audio recording.

#### **Stop Procedure**

- 1. When the procedure is complete, select the Stop icon from the Procedure menu. The procedure, captured images, and recorded video files will be placed into local archive.
- 2. The Close Procedure confirmation screen opens. Select the **CANCEL** button to cancel the closing procedure. When Cancel is selected, the procedure remains open and no recordings and pictures will be removed. Select the **OK** button to continue to archive the procedure.



**Note:** If the procedure is completed and no data has been recorded, it is only an empty procedure that is not moved to archive.

#### Viewing a Procedure (Media Viewing)

- 1. Select a video or image to be viewed from the open procedure.
- 2. Using the controls on the screen, the playback can be started/paused or stopped and recording volume adjusted or muted.
- 3. Select the box in lower-right corner of the playback screen (also known as the Full Screen icon) to expand the screen to the width of the monitor.



#### Deleting a Video or Image from a Procedure

**Note:** Use caution before deleting any file. The deletion of video and image files is a permanent action. Video and image files cannot be recovered once deleted from VIMA.

- 1. Select a video or image to be deleted from the open procedure.
- 2. Select the Delete icon 👔 from the Worklist menu.
- 3. The Delete Selected Image/Video confirmation screen opens. Select the **OK** button to continue to delete the image or video. Select the **CANCEL** button to cancel the deletion process and retain the image or video.



## **Archive Tab**

The Archive screen contains all completed and saved procedures that have images or videos and were not deleted. All recorded images and videos are saved with each procedure. The Archive is a local, temporary storage before exporting the data to PACS or other distribution. Data in the Archive is organized chronologically by date of procedure completion, from the newest procedure to the oldest procedure. The Archive only contains archived procedures that contain visual information (images or videos). If the record does not contain video information, or is deleted during editing the record, then the whole record is deleted.

NDS	1:14 РМ 3/29/2018		Q D Z	•
	Oliver Walker 398378/4268         92 y           © 2/7/2018 12:57 AM         His isist responsed	EDITH FOX PID-F000186         64 y           © 12/6/2017 9:56 AM         Transanal Endoscopic	ANITA PAYNE PID-F000166         24 y           © 12/6/2017 9:48 AM         E.P.C.P. And Sobinetentromy	Video
	A# 1434181-6840550 http://init/tepiadement	A# AN-00003706         Microsurgery (TEM)           O <sup>R</sup> Jiří Nováček 680821/2385         28 y	A# AN-00003502 E-A-C- AN Splinicariounity Q Miranda HOLMES 54 y PID-F000145 54 y	Worklist
	් 11/29/2017 4:33 AM A#	ී 11/22/2017 3:17 AM A#	Il/6/2017 4:34 PM     Freeing Of Minor Abdominal       A# AN-00018276     Adhesions	Procedure
	Operation         Jocelyn GREEN PID-F0000225         65 y           I 11/6/2017 4:29 PM         Freeing Of Minor Abdominal A# AN-00018276         Adhesions	Jaroslav Novák         17 y           ℃         11/1/2017 3:28 PM           A#	Jacob Brown         34 y           12/17/2016 9:31 PM         Hip joint replacement	
	Q George Williams 66 y 408213/4349 66 y	් Sophie Jackson 77 y 942771/6423 77 y	С George Taylor 3 у 104046/6604 3 у	Archive
	Image: Signal and Sig	Image: The second sec	Image: Spinor	Endo Camera
	O"         Jack White 523780/3922         19 y           Image: Signal state	O1         Poppy Robinson 221021/0707         81 y           IS         8/13/2016 9:49 AM A# 0255247-4805331         Coronary Artery Bypass Graft	O         Isla Jackson 340442/9083         28 y           Image: T/9/2016 7:03 PM A## 3208908-7053116         Coronary Artery Bypass Graft	
	Olivia Hall 47 y	Q Jessica Williams 25 y 911303/4812	Q Ava Jackson 42 y	
	③ 7/5/2016 7:25 AM           A# 4823082-8297906	Image: 5/12/2016 11:18 AM         Hip joint replacement           A# 2822112-1743933         Hip joint replacement	☑ 4/30/2016 9:47 PM         Atherectomy           A# 7438435-1912222         Atherectomy	
	Poppy Inompson 571247/5298         17 y           Image: State of the state o	Poppy Johnson         15 y           3/7/2016 10:59 AM         Cholecystectomy           A# 2344610-3750624         Cholecystectomy	Isabelia Inompson         24 y           974658/5232         24 y           0 3/1/2016 6:37 AM         Angioplasty           A# 1854033-8986845         Angioplasty	
	Sophie Smith 948829/7947         56 y	George Roberts 397970/9228         42 y		
	I/20/2016 9:56 PM         Apendictonomy           A# 3590305-2784381         Apendictonomy	Image: Transformation         1/8/2016 1:30 AM           A# 3301903-1509170         Fractured bone reconstruction		CS4 VIMA
## Searching the Archive

Use the search function to find the desired recording.

- 1. Select the select the Search icon **q** from the Archive menu. The Search screen opens.
- 2. Enter the search criteria into the Search screen.
- 3. Select the **SEARCH** button to search the Archive using the criteria entered. Select the **CLEAR** button to delete the search criteria. Select the **CANCEL** button to close the Search screen.

<b>NDS</b>		۹ 🗖 🖌 🖡	\$
	Offiver Walker         92 y           © 2/7/2018 12:57 AM         Hip joint replacement           # 4404184 6840550         Hip joint replacement	Q         EDITH FOX PID-F000186         64 y         Q         ANITA PAYNE PID-F000166         24 y           Anita Payne         24 y         Anita Payne         24 y         Anita Payne         24 y	Video
	Jiří Nováček         28 y           11/29/2017 4:33 AM         40	First Name 54 y Miranda Last Name or Abdominal	Worklist
	A#	7/64     0/57     Adhesions       Middle Name     Patient ID     34 y	Procedure
	C 11/6/2017 4:29 PM Freeing Of Minor Abdominal A# AN-00018276 Adhesions	0/57         0/64         t replacement           Date From         Date To         (e.g. 6/27/2017)         3 y	Archive
	11/7/2016 4:33 AM         Catarac removal           -7         Lack White	clear cancel search	U Endo Camera -
	Image: Signal State	O         2210210707         0 1 y         O         3404429083         28 y           © 81/3/2016 9:49 AM A# 0255247-4805331         Coronary Artery Bypass Graft A# 3209908-7053116         Coronary Artery Bypass Graft         0         7/8/2018 7:03 PM A# 3209908-7053116         Coronary Artery Bypass Graft         28 y	
	Olivia Hall 610663/9686         47 y           Image: 7/5/2016 7:25 AM A#/4823082-8297906         Hip joint replate	Q         Jessica Williams         25 y         Q         Ava Jackson         42 y           911303/4812         25 y         Q         239666528         42 y           1         W2         3         4         5         6         1         8         9         0         6	
	Bigs         Poppy Thompson           571247/5298         571247/5298           3/11/2016 8:31 PM         Apendix           A# 9940224-5290855         Apendix	A S D F G H J K L ← issty	
	Sophie Smith 948829/7947            3 1/20/2016 9:56 РМ А# 3590305-2784381         Аренскі         1	S Z X C V B N M <sup>?</sup> △ 23 ₽	

4. The search results are displayed. The search criteria is shown on the top of the screen, when in effect, and can be removed one by one to broaden the search.

<b>NDS</b>	1:18 РМ 3/29/2018		९ 🗖 🖍 🧵	*
		First Name Miranda		Video
	Miranda HOLMES         54 y           PID-F000145         54 y           I 11/6/2017 4:34 PM         Freeing Of Minor Abdominal A# AN-00018276			Worklist
				Procedure
				Archive
				🕛 Endo Camera 👻
				0
				$\cup$

#### 5. Selecting the record displays the recordings.



### Deleting a Video or Image from the Archive

**Note:** Use caution before deleting any file. The deletion of video and image files is a permanent action. Video and image files cannot be recovered once deleted from VIMA.

- 1. Select a video or image to be deleted from the open procedure in the Archive.
- 2. Select the Delete icon 👔 from the Worklist menu.
- 3. The Delete Selected Image/Video confirmation screen opens. Select the **OK** button to continue to delete the image or video. Select the **CANCEL** button to cancel the deletion process and retain the image or video.



# **Exporting Data**

Video and still images can be of exported to a USB device or DICOM PACS (if configured). Exporting to USB exports the raw video and image captures only, whereas an export to DICOM wraps this raw data with patient information and thus becomes a DICOM file.

- Before exporting files to a USB device, a USB drive must be inserted into a USB port. If more than one USB device is inserted, a prompt will be displayed to select the device.
- Before exporting files to a DICOM server, the network connection to the DICOM server must be established.
- 1. Select the **Export Image/Video** button 1. The Export Image/Video menu is displayed.



2. From the Export image/video menu, select the device to export to (DICOM or USB). The Export Image/Video progress is displayed.

**Note:** If export to DICOM is disabled in Settings or if the DICOM connection not set up, export to DICOM will not be available. An error message will be displayed. If a USB is not connected, no error message will be displayed.



3. A notification will be displayed when the export is complete. Click **OK** to continue.



# **VIMA Settings**

#### **General Settings**

The General Settings includes two sections Language & Keyboard and Date & Time.

#### **Configuring Language & Keyboard**

Use the menu selections to select the language and keyboard layout. Select the **SAVE** button to save the changes.

**Note:** Changing the Language requires an application restart to take effect. After you click Save, the confirmation dialog is shown. When the confirmation dialog is approved, the application is automatically restarted.

#### **Configuring Date & Time**

The configured date and time will be displayed in VIMA menu bar. Enter the current date, time, and time zone. Select the **SAVE** button to save the changes.

<b>NDS</b>	1:44 РМ 3/29/2018					۵
GENERAL	General					Video
VIDEO MANAGEMENT RECORDING	Language English					Worklist
NETWORKING	Date & Time					Procedure
DICOM	Date         Time           3/29/2018         1:44 PM	Time Zone (UTC-08:00) Pacific Time (US & Ca	anada) -			_
				DISCARD	SAVE	Archive
	101 - Marca					🌓 Endo Camera 💌
	Video Management					0
	HDMI1 Ultrasound	HDMI2 Microscope	HDMI3 Endo Camera	HDMI4 HDMI 4		
	10/16 SDI1	10/16	11/16		6/16	
	SDI 1 Q 1	W <sup>2</sup> E <sup>3</sup> R <sup>4</sup> T <sup>5</sup>	Y <sup>6</sup> U <sup>7</sup> I <sup>8</sup> O <sup>9</sup>	P 🛛	5/16	
	HDBASET3 Vital Signs	A S D F G	H J K L	$\leftrightarrow$		
	Outputs	Z X C V	B N M ,	. ?		
	HDMI1 Left Display 123	ē		< >	6/16	CS4 VIMA

#### **Video Management Settings**

Video Management Settings are used to set the displayed names of video inputs and video outputs. The port label is not editable and will be displayed with the name of the inputs and outputs. Select the **SAVE** button to save the changes.

**Note:** The labels above the fields point to the port labels on the rear panel of the device. These labels are shown only here and help the installer to match them with real inputs/outputs.

<b>NDS</b>	1:44 PM 3/29/2018				•
GENERAL	Video Management				Video
RECORDING	HDMI1 Ultrasound	HDMI2 Microscope	HDMI3 Endo Camera	HDMI4 HDMI 4	Worklist
NETWORKING	10/16 SDI1 SDI 1	10/16 SDI2 SDI 2	11/16 HDBASET1 HDBaseT 1	6/16 HDBASET2 C-Arm	Procedure
	5/16 HDBASET3 Vital Signs	5/16 HDBASET4 Room Camera	9/16	5/16	• Archive
	11/16 Outputs	11/16	НОМІЗ	номи	🕛 🛛 Endo Camera 👻
	Left Display 12/16	Right Display 13/16	HDMI3 HDMI 3 6/16	HDMI4 HDMI4 6/16	0
	HDBASET1 Wall Display L	HDBASET2 Wall Display R	HDBASET3 Remote	HDBASET4 HDBaseT 4	
	Q 1	W <sup>2</sup> E <sup>3</sup> R <sup>4</sup> T <sup>5</sup>	Y 6 7 8 9 P	DISCARD SAVE	
	Recording	A S D F G	H J K L	↔	
	Video Format 1920x1080p60	Z X C V	B N M , .	? △	
	Remote Control		<	· · · ·	•34

### **Recording Settings**

The Recording settings have two sections: Recording & Image Capture and Remote Control.

<b>NDS</b>	1:45 PM 3/29/2018	•
	Recording Recording & Image Capture	Video
RECORDING	Video Format Video Quality Video Chapter Length Image Format 1920x1080p60 • Medium • 2 GB • BMP •	Worklist
NETWORKING	Remote Control     Image Capture Trigger (ACC 1)     Start/Stop Recording Trigger (ACC 2)       On leading edge     On leading edge     On leading edge	Procedure
	DISCARD SAVE	Archive
	Networking           Network Adapter LAN 1           Network Configuration         IP Address         Subnet Mask         Gateway         Primary DNS           Manual         •         10.0.0.149         255.255.255.0         10.0.0.1         10.0.0.1         Secondary DNS	<ul> <li>Endo Camera</li> <li></li></ul>
	DICOM A S D F G H J K L ← General I cred & ETIIce A Z X C V B N M , ? △	
	Institution Name	

#### **Configuring Recording & Image Capture**

Video format refers to the resulting resolution of recorded video file. An input video is always scaled to this video format (eg: NTSC to 1280x720p60).

There are four options of two resolutions and two frame rates:

1280x720p50

1280x720p60

1920x1080p50

1920x1080p60

Supported resolutions table refers to resolutions that are supported on input. And this has no relation to output format (resolution).

NDS	1:45 PM 3/29/2018	•
GENERAL	Recording Recording & Image Capture	Video
RECORDING	Video Format         Video Quality         Video Chapter Length         Image Format           1280x720p50         Medium         2 GB         BMP         -	Worklist
NETWORKING	1280x720p60 1920x1080p50 Start/Stop Recording Trigger (ACC 2) On leading edge	Procedure
	1920x1080p60 DISCARD SAVE	Archive
	Networking	Endo Camera •
	Network Adapter LAN 1 Network Configuration IP Address Subnet Mask Gateway Primary DNS Network Configuration IP Address Subnet Mask Gateway Primary DNS	0
	Imenual         •         10.0.0.149         2002002000         100.0.1         100.0.1         Secondary Dris           0         1         2         2         3         4         5         7         1         0.00.1         DiscARD         Save	
	DICOM A S D F G H J K L ←	
	Local AE Title VIMA 123 ↓ Z X C V B N M , ? △	
	Institution Name	$\smile$

### Video Quality

Video quality options are Low, Medium, and High.

<b>NDS</b>	1:45 PM 3/29/2018	•
GENERAL VIDEO MANAGEMENT	Recording Recording & Image Capture Video Format Video Chapter Length Image Format	Video
RECORDING	1920x1080p60 • Low 2 GB • BMP •	Worklist
DICOM	Remote Control     High       Image Capture Trigger (ACC 1)     High       On leading edge     On leading edge	Procedure
	DISCARD SAVE	Archive
	Networking Network Adapter LAN 1	<ul> <li>Endo Camera •</li> <li>Image: Image: Image</li></ul>
	Network Contiguration     IP Address     Subnet Mask     Gateway     Pmmary DNS       Manual     •     10.0.0.149     255.255.255.0     10.0.0.1     10.0.0.1     Secondary DNS       DISCARD     SAVE	
	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	
	Local AE Title VIMA 123 💭	

# Video Chapter Length

Video chapter length options are 2GB, 4GB, and unlimited.

<b>NDS</b>	1:45 PM 3/29/2018	•
GENERAL	Recording Recording & Image Capture	Video
RECORDING	Video Format Video Quality Inage Format Inage Format 2 GB BMP -	Worklist
NETWORKING	Remote Control     4 GB       Image Capture Trigger (ACC 1)     Start/Stop Recording Trigger (ACC 2)       On leading edge     On leading edge	Procedure
	DISCARD SAVE	Archive
	Networking	Endo Camera •
	Network Adapter LAN 1 Network Configuration IP Address Subnet Mask Gateway Primary DNS	0
	Manual • 10.0.0.149 255.255.0 10.0.0.1 10.0.0.1 Secondary DNS	
	General Constant of Z X C V B N M · · · · ? ↔	
	VIMA 123 📮	
	Institution Name	

#### **Image Format**

The image format will determine the format in which the still images are captured and saved. The file type options are BMP and JPEG.

NDS	1:45 рм 3/29/2018	۵
GENERAL	Recording Becording & Image Capture	Video
VIDEO MANAGEMENT RECORDING	Video Format     Video Quality     Video Chapter Length     Image Format       1920x1080p60     •     Medium     •     2 GB     •	Worklist
NETWORKING	Remote Control         JPEG           Image Capture Trigger (ACC 1)         Start/Stop Recording Trigger (ACC 2)           On leading edge         •	Procedure
	DISCARD SAVE	Archive
	Networking	Endo Camera •
	Network Adapter LAN 1           Network Configuration         IP Address         Subnet Mask         Gateway         Primary DNS           Manual         10.0.0.149         255.255.05         10.0.0.1         10.0.0.1         Secondary DNS	
	DISCARD SAVE	
	DICOM A S D F G H J K L ←	
	Local AE Title Z X C V B N M , ?	
	Institution Name	

#### **Configuring the Remote Control**

Using the menus, select the action controls for each accessory port (ACC 1 and ACC 2).

Remote control inputs are mapped to a particular action as ACC 1 for image capture, and ACC 2 for start/stop recording. This configures when particular action is triggered. As the accessory behaves as a button, it can be distinguished between on press and on release triggers. **On leading edge** means the action is triggered as button is pressed. **On trailing edge** means the action is postponed until the button is released (eg: one can precisely take the still image as he/she is already prepared).

<b>NDS</b>	1:45 PM 3/29/2018	•
GENERAL VIDEO MANAGEMENT RECORDING NETWORKING DICOM	Recording         Recording & Image Capture         Video Format       Video Quality         1920x1080p60       Medium       2 GB         Remote Control         Image Capture Ticker (ACC 1)       On leading edge         On trailing edge       On trailing edge	<ul> <li>Video</li> <li>Worklist</li> <li>Procedure</li> <li>Archive</li> </ul>
	Networking           Network Adapter LAN 1           Network Configuration         IP Address         Subnet Mask:         Gateway         Primary DNS           Manual         +         10.0.0.149         255.255.255.0         10.0.0.1         10.0.0.1         Secondary DNS	<ul> <li>Endo Camera</li> <li></li></ul>
	DICOM       A       S       D       F       G       H       J       K       L       C         Local AE Tile       VIMA       I       C       V       B       N       M       ,       ,       ?	

### **Network Settings**

Networking settings are used to configure the Network Adapter settings. The options include Manual and DHCP. **Note:** This settings should be configured by an IT administrator.

<b>NDS</b>	2:03 PM 3/29/2018								•
GENERAL	Networking								Video
VIDEO MANAGEMENT RECORDING	Network Configuration Manual	IP Address 10.0.0.149	Subnet Mask 255.255.255.0	Gateway 10.0.0.1	Primary DNS 10.0.0.1	Secondary DI	NS	=	Worklist
NETWORKING	DHCP					DISCARD	SAVE		Procedure
	DICOM							•	Archive
	General Local AE Title VIMA	Character Set UTF-8 -						Ŷ_	Endo Camera 🔹
	4/16 Institution Name							0	
	Worklist						25/64		
	Server Name/IP Address 10.0.0.116 Q 1	W <sup>2</sup> E <sup>3</sup> R	<sup>4</sup> T <sup>5</sup> Y <sup>6</sup>	U 7 1 8	0 <sup>9</sup> P <sup>0</sup>		TEST		
	Query A Server Name/IP Address 10.0.0.116	S D	FGH	н J К	L ←		TEST		
	Storage	z x c	V B	N M	, . ≏	11		Co.	
	Server Name/IP Address 120 10.0.0.116	· ·					TEST		,

#### **DICOM Settings**

The DICOM settings include General, Worklist, Query, and Storage.

The General settings include the Local AE title, and character set selection. The name of the institution should also be entered.

GENERAL DCOM   VIDEO MANAGEMENT General   RECORDIN Gal At This   NETWORNING To Basson   DOOM TES   DOOM DOS Sorgical Integing, LC   Vorisi   Station Name Songe   DOOM Songe At This   Doom Songe At This <th><b>NDS</b></th> <th>2:25 PM 3/29/2018</th> <th></th> <th></th> <th></th> <th>*</th>	<b>NDS</b>	2:25 PM 3/29/2018				*
VIDEO MANAGEMENT CORDING CONTINUES CORDING CONTINUES CORDING CONTINUES CORDING CONTINUES CORDING CONTINUES	GENERAL	DICOM				Video
RECORDING UMA   NETWORKING 4/10   DICOM NDS Surgical Imaging, LLC   Vorkis   Sorver NamelP Address Server Port   Sorver NamelP Address Server At Title   Sorver NamelP Address <td< td=""><td>VIDEO MANAGEMENT</td><td>General</td><td></td><td></td><td></td><td></td></td<>	VIDEO MANAGEMENT	General				
NETWORKING VIA 476 UTE-5   NETWORKING MDS Surgical Imaging, LLC Cost   Vorkist Server NamelP Address Server Port   Server NamelP Address Server AE Tife 016   10.00.116 11112 MVL   Storage 216     Storage 216     Storage Commitment   Enabled 1   2 3   4 5   6 7   8 9   9 6   9 6     1 2   4 5   6 7   9 0     1 2   4 5   6 7   9 0     1 2   4 5   6 7   9 0     1 2   4 5   6 7   9 0     1 2   4 5   6 7   9 0   1 2   4 5   6 7   9 0     1 2   4 5   6 7   9 0     1 2   4 5   6 7   9 0     1 1   1 1   1 1   1 1   1 <td< td=""><td>RECORDING</td><td>Local AE Title</td><td>Character Set</td><td></td><td></td><td>Worklist</td></td<>	RECORDING	Local AE Title	Character Set			Worklist
NETWORKING AND MATTER AND	RECORDING	VIMA	ISO 8859-1			
DICOM Network  Norkist  Vorkist  Vorkist  Sever Port Sever AE Tife  10.0.018  Sever Name@PAddress Sever Port Sever AE Tife  10.0.018  Sever Aeme@PAddress Sever Port Sever AE Tife 10.0.018  Sever Aeme@PAddress Sever Port Sever AE Tife 10.0.018  Sever Aeme@PAddress Sever Port Sever AE Tife 10.0.018  Sever Aeme@PAddress Sever Port Sever AE Tife 10.0.018  Sever Aeme@PAddress Sever Port Sever AE Tife 10.0.018  Sever Aeme@PAddress Sever Port Sever AE Tife 10.0.018  Sever Aeme@PAddress Sever Port Sever AE Tife 10.0.018  Sever Aeme@PAddress Sever Port Sever AE Tife 10.0.018  Sever Aeme@PAddress Sever Port Sever AE Tife 10.0.018  Sever Aeme@PAddress Sever Port Sever AE Tife 10.0.018  Sever Aeme@PAddress Sever Port Sever AE Tife 10.0.018  Sever Aeme@PAddress Sever Port Sever AE Tife Sever Aeme@PAddress Sever Port Sever AE Tife Sever Aeme@PAddress Sever Port Sever Aeme@PAddress Sever Aeme@PAddress Sever Port Sever Aeme@PAddress Sev	NETWORKING	4/16	UTF-8			
Uncome       Note of specific mininging LCC       2564         Worklist       Server All Title       TEST         Server NameliP Address       Server All Title       TEST         10.0.0.116       11112       MWL       TEST         Server NameliP Address       Server All Title       TEST         10.0.0.116       11113       QR       2/16         Storage       2/16       TEST         Storage Commitment       1       2       3       4       6       7       8       0       C       Estret NameliP Address       Estret NameliP Address       Server All Title       TEST       TEST       TEST       C       Image: Commitment       Enabled       1       2       3       4       5       6       7       8       0       C       Image: Commitment       Enabled       Image: Commitment       Enabled       Image: Commitment	DICOM	Institution Name				Procedure
Workist   Server Name/IP Address   10.0.0116   11112   MWL   3/16     Cuery   Server Name/IP Address   10.0.0116   11113   QR   2/16     Server Name/IP Address   10.0.0116   11113   QR   2/16     Server Name/IP Address   S	DIGOW				25/64	
Server NamellP Address Server AE Title   10.0.116 11112   MWL 3/16     Ouery   Server NamellP Address   10.0.116   11113   OR   2/16     Storage   Server NamellP Address   Server NamellP Address   Server NamellP Address   Server NamellP Address   Server AE Title   10.0.116   11114   PACK   12   34   5   6   7   8   0   1   2   4   5   6   7   8   9   12   34   5   6   7   8   9   12   34   5   6   7   8   9   12   34   5   6   7   8   9   13   14   16   17   17   18   19   19   10   10   11113   11114   11114   12   13   14   15   16   17   18   19   19   10   10   10		Worklist				Arabiya
10.0.0.116       11112       MWL       TEST         Ouery       3/16       3/16       TEST         Server Name/IP Address       Server Port       Server AE Title       TEST         10.0.0.116       11113       QR       TEST         Storage       2/16       TEST       Image: Committee I         10.0.0.116       11114       PACS       TEST         1111       2       3       5       6       7       8       9       Image: Committee I         Storage       1       2       3       4       5       6       7       8       9       Image: Committee I       TEST         Storage Commitment       1       2       3       4       5       6       7       8       9       Image: Commitmee I       Image:		Server Name/IP Address	Server Port	Server AE Title		Archive
Oury       Main Server Port       Server AE Tille       TEST         10.0.0.116       11113       QR       TEST         Storage       2/16       TEST         Storage       1       2       3       4       5       6       7       8       9       Q       ■       0         Storage       1       2       3       4       5       6       7       8       9       Q       ■       0       0         Storage       1       2       3       4       5       6       7       8       9       0       Q       ■       0		10.0.0.116	11112	MWL	TEST	
Server NamelP Address Server AE Title   10.0.116 11113   Comment Pack   Server AE Title   Server AE Title   10.0.116   11114   Pack   1   2   3   4   5   6   7   8   9   1   2   3   4   5   6   7   8   9   1   2   3   4   5   7   8   9   1   2   3   4   5   7   8   9   1   2   3   4   5   6   7   8   9   0   20:8  2		Query		3/16		Endo Camera •
10.0.116       11113       QR       TEST         Storage       2/16         Server Namel/P Address       Server AE Title         10.0.116       11114       PACR         Storage Commitment       1       2         Enabled       4       5       6       7       8       9       0       TEST         Storage Commitment       Enabled       +       ;       /       -       :       !       ?       *         ABC       #       @       &       I       .       _       _       >       >       Storage       .       _       .       _       .       _       .       .       _       .		Server Name/IP Address	Server Port	Server AE Title		
Storage         Server NamellP Address         Server Port         Server AE Title         10.0.116         11114         PACS         TEST         Storage Commitment         Enabled         + * ; / ; ! ?         ABC		10.0.0.116	11113	QR	TEST	
Server NamelP Address       Server AE Title       TEST         10.0.116       11114       PACS       TEST         Storage Commitment       1       2       3       4       5       6       7       8       9       0       TEST         Storage Commitment       +       •       /       -       -       !       ?       ·       <		Storage		2/16		
10.0.0.116       11114       PACK       TEST         Storage Commitment       1       2       3       4       5       6       7       8       9       0       Image: Commitment in the storage commitme		Server Name/IP Address	Server Port	Server AE Title		
Storage Commitment       1       2       3       4       5       6       7       8       9       0       Image: Commitment in the standard i		10.0.0.116	11114	PACS	TEST	
Enabled       +       +       ;       /       _       -       ;       !       ?       ←         Export Videos       △       %       \$       #       @       &       =       I       .       △         ABC       □       -       -       -       -       .       △       >       DISCARD       SAVE		Storage Commitment	2 3 4	5 6 7 8 9 0 🐼		
Export Videos Enabled % \$ # @ & = I , . ABC ABC		Enabled +	* 1	/ : ! ? ↔		
		Export Videos				
		Enabled	% \$ #	@ & =   , △		
DISCARD CAVE		ABC	ŵ	< > DISCAF	RD SAVE	CS4 VIMA

The Storage settings include Storage Commitment and Export Videos. Select to Enable or Disable these functions as required.

GENERAL     Server Name#IP Address     Server Port 11112     Server AE Title MWL     TEST     TEST       VIDEO MANAGEMENT     Ouery     3/16     3/16     Image: Comparison of the c	
VIDEO MANAGEMENT Query RECORDING Server Namel/P Address Server Port 10.0 0 116 11113 OR TEST	
RECORDING Server Namel/P Address Server Port Server AE Title Worklist	
10 0 0 116 11113 OR TEST	
NETWORKING 2//6	
DICOM Storage Procedure	
Server Name/IP Address Server Port Server AE Title	
4/16 Archive	
Strane Commitment Local Port	
Disabled 11115 Endo Camera	•
Export Videos	
Enabled •	
DISCARD SAVE	
+ * ; / <u> </u>	
	Δ1
ABC 📮	17-1

The Test buttons are used to test the connections after configuring the IP addresses, server ports, and server AE titles for the worklist, query, storage. A message will indicate if the connection was successful or if it failed.

<b>NDS</b>	4:54 PM 3/29/2018		۵
GENERAL	DICOM		Video
VIDEO MANAGEMEN I RECORDING	Local AE Title VIMA	Character Set UTF-8 •	Worklist
NETWORKING	4/16 Institution Name NDS Surgical Imaging, LLC	DICOM Worklist Test	Procedure
	Worklist Server Name/IP Address	Echo test in progress 2584 CLOSE	Archive
	10.0.0.116 Query	11112 MWL TEST 3/16	
	Server Name/IP Address 10.0.0.116	Server Port Server AE Title 11113 QR TEST	
	Storage Server Name/IP Address	2110 Server Port Server AE Title	
	10.0.0.116 Q 1	11114     PACS     TEST       W     E     R     T     Y     0     I     0     P     I	
	Enabled	S D F G H J K L ↔	
	Export Videos Enabled	Z X C V B N M , .?	
	123	DISCARD SAVE	

**Note:** The Administrator can enable use of storage commitment when needed.

**Note:** The Administrator can disable exporting videos to DICOM.

# Virtual Keyboard

The virtual keyboard is available when using a touchscreen display. A standard keyboard and mouse can be connected to VIMA using a USB connection. The virtual keyboard will still be displayed when a standard keyboard is connected.

### Standard Virtual Keyboard

<b>NDS</b>		Now Precedure: Patient Infor	motion		\$
Local Worklist		New Procedure. Patient mor	mation		
Q Oscar Jones 39 y		Patient: First Name Pa	tient: Last Name *	•	Video
Image: 1/2/2017 10:44 AM         Atherectomy           A# 3336426-4794440         Atherectomy	Patient	0/64	0/6-	4	Worklist
Q Oliver White 43 y 998533/2711	Patient Name Oscar Jones	Patient ID *	0/6-	4	
Image: 13/2017 4:18 PM         Catarac removal           A# 8120526-0471014         Catarac removal		Date of Birth (e.g. 6/27/2017)	Sex Unknown	•	Procedure
Q Mia Robinson 49 y 082691/6712	Patient ID 199569/5213			0/10240	Archive
Image: 1/4/2017 11:28 PM         Fractured bone           A# 7604142-8136324         reconstruction		Patient Comments			
Coliver White 89 y	Date of Birth				
Image: 10 style="text-align: center;">1 style="text-align: center;"/>1 style="text-align: center;">1 style="text-align: center;"/>1 style="text-al	9/6/1978				
C Alfie Robinson 58 y	Patient Comment	* Required field	CANCEL	NEXT	
© 1/5/2017 7:22 PM A# 0754723-5468618 Atherectomy			Atherectomy		
Q James Taylor 59 y 682624/7515	c	$Q^{1} W^{2} E^{3} R^{4} T^{5}$	Y <sup>6</sup> U <sup>7</sup> I <sup>8</sup> O <sup>9</sup>	P 0	
③         1/6/2017 6:58 AM         Fractured bone           A# 9909447-1993329         reconstruction		A S D F G	H J K L	<b>↔</b>	
3 William Green 24 y 721812/9060 24 y	2	z x c v	BNM,	. ?	
© 1/6/2017 7:03 AM A# 7087189-4001755 Hip joint replacement	12	23 👜		< >	Kä≱ VIMA
O Mia White 70 v					
Switch betweer and numeric ke	n alpha yboard	Hides the keyboa editable field is ac	rd until Tivated	Moves the cursor in text of active field	

### Virtual Keyboard with Extended Keys

The keyboards are multi-lingual. Press and hold any key to display the alternative character set for the selected character.

<b>NDS</b>	2:45 PM 3/29/2018		\$
Local Worklist		New Procedure: Patient Information	
		Patient: First Name Patient: Last Name *	Video
Q Oscar Jones 39 y		Adrian Mole	
© 1/2/2017 10:44 AM Atherectomy	Patient	6/54 4/52	Worklist
A# 3330420 - 1 34440		Patient: Name Prefix Albert Patient: Name Suffix	
Q Oliver White 998533/2711 43 y	Patient Name	0/48 6/54 0/48	
Image: 1/3/2017 4:18 PM         Catarac removal           A# 8120526-0471014         Catarac removal	Oscar Jones	Patient ID * Q	Procedure
Mia Robinson		0/64	_
Q 082691/6712 49 y	199569/5213	Date of Birth Sex	Archive
© 1/4/2017 11:28 PM Fractured bone A# 7604142-8136324 reconstruction		4/2/1967 Male •	
Cliver White 89 y	Date of Birth	Patient Comments 0/10240	
I/5/2017 8:52 AM         Coronary Artery Bypass           A# 2322120-7313059         Graft	9/6/1978		
2 Alfie Robinson 58 y	Patient Comment	* Required field CANCEL NEXT	
I/5/2017 7:22 PM         Atherectomy           # 0754723-5468618         Atherectomy	6	É 3 É È È È È	
Q James Taylor 59 y	C	1 W 2 E R T Y 6 U I 8 O P 0	
1/6/2017 6:58 AM         Fractured bone           A# 9909447-1993329         reconstruction		A S D F G H J K L +	
William Green 721812/9060         24 y	4	:ZXCVBNM,.?	
Image: 1/6/2017 7:03 AM         Hip joint replacement           # 7087189-4001755         Hip joint replacement	11		
O Mia White 70 v			

### Virtual Keyboard with Numeric and Symbol Keys

The numeric layout is activated on fields that expects numeric entry as date and time fields

	2:44 РМ				â
***ND5	3/29/2018	New Procedure: F	Patient Information		
Local Worklist 👻					
- Oscar Jones		Patient: First Name	Patient: Last Name	*	Video
Q 199569/5213 39 y		Adnan	elea Mole	4/60	
© 1/2/2017 10:44 AM Atherectomy	Patient		0/54	4/52	Worklist
A# 3304204794440		Patient: Name Prefix	Albert	Patient: Name Suffix	Workiist
Q Oliver White 43 y 998533/2711	Patient Name	0/	/48 6/5	4 0/48	
I/3/2017 4:18 PM         Catarac removal           A# 8120526-0471014         Catarac removal		Patient ID *		Q	Procedure
				0/64	
Q Mia Robinson 49 y	Patient ID	Date of Birth	Sex		Archive
I/4/2017 11:28 PM         Fractured bone           A# 7604142-8136324         reconstruction	199569/5213	4/2/1967	Male	· ·	_
ال المراجع المراجع المراجع المراجع Oliver White المراجع الم المراجع المراجع ال المراجع المراجع الم المراجع المراجع الم	Date of Birth	Patient Comments		0/10240	
Image: 1/5/2017 8:52 AM         Coronary Artery Bypass           A# 2322120-7313059         Graft	9/6/1978				
Alfie Robinson 58 y	Patient Comment	* Required field		CANCEL NEXT	
Image: 1/5/2017 7:22 PM         Atherectomy           A# 0754723-5468618         Atherectomy			A	herectomy	
Q James Taylor 59 y 682624/7515		2 3 4	5 6 7	8 9 0 🐼	
Image: 1/6/2017 6:58 AM         Fractured bone reconstruction           A# 9909447-1993329         reconstruction		+ + ;	1	: ! ? ↔	
William Green 721812/9060         24 y	4	: % \$ #	: @ & =		
Image: 1/6/2017 7:03 AM         Hip joint replacement           # 7087189-4001755         Hip joint replacement	AF				
Mia White 70 y		-			

# **About Screen**

The About screen displays information about VIMA including the Serial Number, Disk Space utilization, and VIMA Software version.

NDS	2:26 AM 1/11/2018			
	VIMA Video Manager with Recorder			
	Serial Number: 123456789			
	Disk Space Storage utilization	is currently 25 %.		
	Versions			
	AVIM Control FW	AVIM VIN_HDBASET1 FW	AVIM VIN_HDBASET2 FW	AVIM VIN_HDBASET3 FW 1.31.36-1 RX
	AVIM VIN_HDBASET4 FW	AVIM VOUT_HDBASET1 FW 1.31.36-1 TX	AVIM VOUT_HDBASET2 FW 1.31.36-1 TX	AVIM VOUT_HDBASET3 FW 1.31.36-1 TX
	AVIM VOUT_HDBASET4 FW 1.31.36-1 TX	RECO01 FPGA	RECO01 Firmware	VIMA BIOS 75.A
	VIMA OS 04	VIMA Software		

# **Storage Space Utilization Warnings**

#### Storage Utilization 75%

When storage utilization reaches 75% or more, a yellow warning indicator is displayed at the top of the VIMA screen. Archived procedures should be immediately exported to DICOM or to a USB device and then removed to lower storage utilization. Refer to "Exporting Data" on page 38.

<b>NDS</b>	3:03 PM 3/29/2018	<b>A</b>
	VIMA Video Manager with Recorder	Video
	Serial Number: 17-2854019	Worklist
	Disk Space Storage utilization level is high (75 %), please consider removing some media files from Archive. Video recording and Image capture will blocked when storage utilization reaches	Procedure
	maximum.	Archive
	Versions	
	AVIM Control FW         AVIM HDBASET1 FW         AVIM HDBASET2 FW         AVIM HDBASET3 FW           2.0.2         1.31.36-1 RX         1.31.36-1 RX         1.31.36-1 RX	
	AVIM HDBASET4 FW         AVIM HDBASET1 FW         AVIM HDBASET2 FW         AVIM HDBASET3 FW           1.31.36-1 RX         1.31.36-1 TX         1.31.36-1 TX         1.31.36-1 TX	
	AVIM HDBASET4 FW         REC001 FPGA         REC001 Firmware         VIMA BIOS           1.31.36-1 TX         4         2.0.3         75.A	
	VIMA OS VIMA Software 2.3.0	

#### **Storage Utilization Critical**

When storage utilization reaches 95% or more, a red critical indicator is displayed at the top of the VIMA screen. Video recording and image capture is blocked until storage utilization is lowered.

Archived procedures must be immediately exported to a DICOM server or to a USB device. Refer to "Exporting Data" on page 38.

INDS 3:05 рм 3/29/2018			
VIMA Video Manag	er with Recorder		
Serial Number: 17-2854	1019		
Disk Space Storage utilizatio	n has reached it's maximur . Video recording and Ima	m, please decrease utiliza ge capture is blocked unti	tion by removing media storage utilization is
lowered.			
Versions			
AVIM Control FW 2.0.2	AVIM HDBASET1 FW 1.31.36-1 RX	AVIM HDBASET2 FW 1.31.36-1 RX	AVIM HDBASET3 FW 1.31.36-1 RX
AVIM HDBASET4 FW 1.31.36-1 RX	AVIM HDBASET1 FW 1.31.36-1 TX	AVIM HDBASET2 FW 1.31.36-1 TX	AVIM HDBASET3 FW 1.31.36-1 TX
AVIM HDBASET4 FW 1.31.36-1 TX	RECO01 FPGA	REC001 Firmware	VIMA BIOS 75.A
VIMA OS 12	VIMA Software		

**Note:** This product remains in the operating room and is not subject of normal maintenance cycle.

# **General Instructions**

Only use chemicals that are tested and approved. It is necessary to strictly follow the manufacturer instructions for use in matters of temperature, concentration and exposure time. Otherwise, you may encounter the following problems:

- Damage like rust, cracks, breaks, premature aging or swelling.
- Do not use any chemicals that elicit a plastic crevice corrosion or embrittlement.

# **Manual Cleaning and Disinfection**

Note: Risk of electric shock and fire!

- Prior to cleaning and surface disinfection, the unit should be turned OFF and disconnected from its power source.
- Do not allow liquids to enter the interior of the unit.

Note: Risk of damage or destruction of the product during mechanical cleaning / disinfection!

- Clean / disinfect only by wiping the surface by hand.
- Do not spray into open outlets (e. g. USB socket, input and output video signals, electrical outlet).
- Never put into liquids nor rinse.
- Never sterilize the product.

**Note:** Risk of damage to the product when inappropriate cleaning/disinfecting agents are used!

- For cleaning use only approved detergents and disinfectants, follow manufacturer's instructions.
- Observe the information concerning concentration, temperature and exposure time.
- Remove any visible remnants by disinfectant wipe.
- Observe the contact time (1 min minimum).
- Allow airing of the product after disinfection (at least 1 min).

## **Maintenance Requirements**

This unit does not require any maintenance other than periodic cleaning of the enclosure.

## **Cleaning Instructions**

Prior to cleaning and surface disinfection, the unit should be turned OFF and disconnected from its power source.

#### Cleaning

Thoroughly wipe all exterior surfaces with a lint-free cloth that has been dampened with an acceptable cleaning agent. Acceptable cleaning materials are listed below. Remove residual detergent by wiping all exterior surfaces with a lint-free cloth dampened with distilled water.

### Disinfecting

Disinfect the unit by wiping all exterior surfaces with a lint-free cloth dampened with 80% Ethyl Alcohol. Allow the unit to air dry.



**Warning:** Do not allow liquids to enter the interior of the unit, as severe damage to the unit can result. Do not use solvents, abrasive detergents, or chemical cleaning cloths.

### **Acceptable Cleaning Materials**

Vinegar (distilled white vinegar, 5% acidity)

Ammonia-based glass cleaner

#### **Acceptable Disinfecting Material**

Ethanol 80% by volume

**Note:** The acceptable cleaning and disinfecting materials listed above have been tested on NDS products and, when used as directed, do not harm the product's finish and or its plastic components.

# Disposal

Follow local governing ordinances and recycling plans regarding the recycling or disposal of this equipment.

Recycling Passport is available at the supplier / manufacturer. (This passport contains recycling instructions for disassembly the unit with information on proper disposal of harmful components for the environment).

# **Specifications**

Specifications are subject to change without notice. Contact your regional NDS headquarters for current specifications using contact information on the back cover.

# VIMA Video Manager and Recorder Specifications

Model Name				
VIMA Video Manager and Recorder				
Temperature Ranges				
Operating	32° – 104°F (0° – 40°C)			
Storage/Transport	-4° – 122°F (-20° – 50°C)			
Humidity Ranges (Non-condensing)				
Operating	20% – 90%			
Storage/Transport	10% – 90%			
Altitude (Maximum)				
Operating	6,600 ft. (2,000 m)			
Storage/Transport	33,000 ft. (10,000 m)			
Device Dimensions				
Length	350 millimeters			
Width	330 millimeters			
Height	89 millimeters (2U)			
Weight	9.26lbs (4.2kg)			

Port Type	Number of Ports	Port Type	Number of Ports
Accessory Ports		Audio	
ACC	2	Line Out	1
USB (Front panel)	1	Mic In	1
Video Output Ports	-	Other Ports	
HDBaseT Out	4	DP ++	1
HDMI Out	4	HDMI 1 Touch	1
Video Input Ports	-	LAN	2
HDBaseT In	4	USB	4
3G-SDI In	2	DC output	1
HDMI In	4		

# VIMA Video Recorder Specifications

Model Name				
VIMA Video Recorder				
Temperature Ranges				
Operating	32° – 104°F (0° – 40°C)			
Storage/Transport	-4° – 122°F (-20° – 50°C)			
Humidity Ranges (Non-condensing)				
Operating	20% - 90%			
Storage/Transport	10% – 90%			
Altitude (Maximum)				
Operating	6,600 ft. (2,000 m)			
Storage/Transport	33,000 ft. (10,000 m)			
Device Dimensions				
Length	350 millimeters			
Width	330 millimeters			
Height	89 millimeters (2U)			
Weight	7.5lbs (3.4kg)			

Port Type	Number of Ports				
Accessory Ports					
ACC	2				
USB (Front panel)	1				
Video Input Ports					
HDBaseT In	1				
3G-SDI In	1				
DVI-D	1				
Audio					
Line Out	1				
Mic In	1				
Management and Control Ports					
Display Port ++	1				
HDMI 1 Touch	1				
LAN	2				
USB	4				
Other Ports					
DC output	1				

# VIMA Video Manager Specifications

Model Name	
VIMA Video Manager	
Temperature Ranges	
Operating	32° – 104°F (0° – 40°C)
Storage/Transport	-4° – 122°F (-20° – 50°C)
Humidity Ranges (Non-condensing)	
Operating	20% – 90%
Storage/Transport	10% – 90%
Altitude (Maximum)	
Operating	6,600 ft. (2,000 m)
Storage/Transport	33,000 ft. (10,000 m)
Device Dimensions	
Length	350 millimeters
Width	330 millimeters
Height	89 millimeters (2U)
Weight	8.60lbs (3.9 Kg)

Port Type	Number of Ports		
Accessory Ports			
USB (Front panel)	1		
Video Output Port	ts		
HDBaseT Out	4		
HDMI Out	4		
Video Input Ports			
HDBaseT In	4		
3G-SDI In	2		
HDMI In	4		
Management and	Control Ports		
DP ++	1		
HDMI 1 Touch	1		
LAN	2		
USB	4		
Other Ports			
DC output	1		

# **Power Consumption**

Maximal Power Consumption

VIMA Video Manager and Recorder	265W
VIMA Video Manager	260W
VIMA Video Recorder	90W

#### Power over Ethernet (PoE) Power Consumption VIMA Video Manager and Recorder

PoE Ports	PoE Standard	Max Power per Port
HDBaseT IN 1-4	802.3at Type 2 Class 4	30W
HDBaseT OUT 1-2	802.3at Type 2 Class 3	15W

#### Power over Ethernet (PoE) Power Consumption VIMA Video Recorder

PoE Ports PoE Standard		Max Power per Port	
HDBaseT IN	802.3at Type 2 Class 4	30W	

Note: Interfaces ACC1 and ACC2 are not functional for the VIMA Video Manager only product variant.

Note: Specifications are subject to change without notice. Contact factory for recent specifications.

### Data Storage Capacity

The following data storage is provided for the VIMA Video Manager and Recorder and the VIMA Video Recorder. **Note:** The VIMA Video Manager does not provide data storage.

VIMA Video Manager and Recorder Resolution	1920x1080	1280x720
Hours of low quality recording	160	230
Hours of medium quality recording	80	120
Hours of high quality recording	55	80
Number of JPEG images	500,000	900,000
Number of BMP images	75,000	170,000
VIMA Video Recorder Resolution	1920x1080	1280x720
Hours of low quality recording	160	230
Hours of medium quality recording	80	120
Hours of high quality recording	55	80
Number of JPEG images	500,000	900,000
Number of BMP images	75,000	170,000
VIMA Video Manager	No data storage.	

#### Data Storage Capacity

# **Supported Video Recording Resolutions**

The following list of supported resolutions apply to recorded video files. For more information about selecting a video recording resolution, refer to "Configuring Recording & Image Capture" on page 42.

There are four options of two resolutions and two frame rates:

- 1280x720p50
- 1280x720p60
- 1920x1080p50
- 1920x1080p60

# **Supported Video Resolutions**

### HDBaseT

Product Variants: Video Manager; Video Manager with Recorder

HDBaseT interfaces supports RGB in 8bit color depth.

Mode Name	Mode Details	Switching	Recording/Recording Preview	Input Preview		
HD Video Modes						
720p50	1280x720@50.000	Y	Y	Y		
720p59	1280x720@59.940	Y	Y	Y		
720p60	1280x720@60.000	Y	Y	Y		
1080i25	1920x1080i@50.000	Y	Y	Y		
1080i29	1920x1080i@59.940	Y	Y	Y		
1080i30	1920x1080i@60.000	Y	Y	Y		
1080p25	1920x1080@25.000	Y	Y	Y		
1080p29	1920x1080@29.970	Y	Y	Y		
1080p30	1920x1080@30.000	Y	Y	Y		
1080p50	1920x1080@50.000	Y	Y	Y		
1080p59	1920x1080@59.940	Y	Y	Y		
1080p60	1920x1080@60.000	Y	Y	Y		
Storz Image 1 50 Hz	1920x1080@50.000	Y	Y	N		
Storz Image 1 60 Hz	1920x1080@59.940	Y	Y	N		
SD Video Mode	S	•				
480i29	720x480i@59.94	Y	Y	Y		
480i30	720x480i@60.00	Y	Y	Y		
480p59	720x480@59.94	Y	Y	Y		
480p60	720x480@60.00	Y	Y	Y		
576i25	720x576i@50.00	Y	Y	Y		
576p50	720x576@50.00	Y	Y	Y		
Graphic Modes						
DMT0660	640x480@60.000	Y	Y	Y		
DMT0672	640x480@72.809	Y	Y	Y		
DMT0675	640x480@75.000	Y	Y	Y		
DMT0685	640x480@85.008	Y	Y	Y		
DMT0785H	720x400@85.039	Y	Y	N		
DMT0856	800x600@56.250	Y	Y	Y		

Mode Name	Mode Details	Switching	Recording/Recording Preview	Input Preview
DMT0860	800x600@60.317	Y	Y	Y
DMT0872	800x600@72.188	Y	Y	Y
DMT0875	800x600@75.000	Y	Y	Y
DMT0885	800x600@85.061	Y	Y	Y
DMT1060	1024x768@60.004	Y	Y	Y
DMT1070	1024x768@70.069	Y	Y	Y
DMT1075	1024x768@75.029	Y	Y	Y
DMT1260A	1280x960@60.000	Y	Y	N
DMT1260G	1280x1024@60.020	Y	Y	Y
DMT1275G	1280x1024@75.025	Y	Y	Y
DMT1660	1600x1200@60.000	Y	Y	N
CVR1960H	1920x1080@59.934	Y	Y	Y
CVR1960D	1920x1200@59.950	Y	Y	N
INT1440	1440x900@59.93	Y	Y	Y
1280x800	1280x800@60.00	Y	Y	Y
1360x768	1360x768@60.00	Y	Y	Y
1440X900	1440X900@60.00	Y	Y	Y
1680X1050	1680X1050@60.00	Y	Y	Y
UHD Video Modes				
2160p25	3840x2160@25.000	Y	N	N
2160p29	3840x2160@29.970	Y	N	N
2160p30	3840x2160@30.000	Y	N	N

# HDBaseT

# Product Variants: Video Recorder

HDBaseT interface supports RGB in 8bit color depth.

Mode Name	Mode Details	Recording/Recording Preview
HD Video Mode	S	
720p50	1280x720@50.000	Y
720p59	1280x720@59.940	Y
720p60	1280x720@60.000	Y
1080i25	1920x1080i@50.000	Y
1080i29	1920x1080i@59.940	Y
1080i30	1920x1080i@60.000	Y
1080p25	1920x1080@25.000	Y
1080p29	1920x1080@29.970	Y
1080p30	1920x1080@30.000	Y
1080p50	1920x1080@50.000	Y
1080p59	1920x1080@59.940	Y
1080p60	1920x1080@60.000	Y

Mode Name	Mode Details	Recording/Recording Preview
Storz Image 1 50 Hz	1920x1080@50.000	Y
Storz Image 1 60 Hz	1920x1080@59.940	Y
SD Video Modes	5	
480i29	720x480i@59.94	Y
480i30	720x480i@60.00	Y
480p59	720x480@59.94	Y
480p60	720x480@60.00	Y
576i25	720x576i@50.00	Y
576p50	720x576@50.00	Y
Graphic Modes		
DMT0660	640x480@60.000	Y
DMT0672	640x480@72.809	Y
DMT0675	640x480@75.000	Y
DMT0685	640x480@85.008	Y
DMT0785H	720x400@85.039	Y
DMT0856	800x600@56.250	Y
DMT0860	800x600@60.317	Y
DMT0872	800x600@72.188	Y
DMT0875	800x600@75.000	Y
DMT0885	800x600@85.061	Y
DMT1060	1024x768@60.004	Y
DMT1070	1024x768@70.069	Y
DMT1075	1024x768@75.029	Y
DMT1260A	1280x960@60.000	Y
DMT1260G	1280x1024@60.020	Y
DMT1275G	1280x1024@75.025	Y
DMT1660	1600x1200@60.000	Y
CVR1960H	1920x1080@59.934	Y
CVR1960D	1920x1200@59.950	Y
INT1440	1440x900@59.93	Y
1280x800	1280x800@60.00	Y
1360x768	1360x768@60.00	Y
1440X900	1440X900@60.00	Y
1680X1050	1680X1050@60.00	Y

## HDMI

Product Variants: Video Manager; Video Manager with Recorder

HDMI interfaces supports RGB in 8bit color depth.

Mode Name	Mode Details	Switching	Recording/Recording Preview	Input Preview		
HD Video Modes						
720p50	1280x720@50.000	Y	Y	Y		
720p59	1280x720@59.940	Y	Y	Y		
720p60	1280x720@60.000	Y	Y	Y		
1080i25	1920x1080i@50.000	Y	Y	Y		
1080i29	1920x1080i@59.940	Y	Y	Y		
1080i30	1920x1080i@60.000	Y	Y	Y		
1080p25	1920x1080@25.000	Y	Y	Y		
1080p29	1920x1080@29.970	Y	Y	Y		
1080p30	1920x1080@30.000	Y	Y	Y		
1080p50	1920x1080@50.000	Y	Y	Y		
1080p59	1920x1080@59.940	Y	Y	Y		
1080p60	1920x1080@60.000	Y	Y	Y		
Storz Image 1 50 Hz	1920x1080@50.000	Y	Y	Ν		
Storz Image 1 60 Hz	1920x1080@59.940	Y	Y	Ν		
SD Video Modes	5					
480i29	720x480i@59.94	Y	Y	Y		
480i30	720x480i@60.00	Y	Y	Y		
480p59	720x480@59.94	Y	Y	Y		
480p60	720x480@60.00	Y	Y	Y		
576i25	720x576i@50.00	Y	Y	Y		
576p50	720x576@50.00	Y	Y	Y		
Graphic Modes						
DMT0660	640x480@60.000	Y	Y	Y		
DMT0672	640x480@72.809	Y	Y	Y		
DMT0675	640x480@75.000	Y	Y	Y		
DMT0685	640x480@85.008	Y	Y	Y		
DMT0785H	720x400@85.039	Y	Y	N		
DMT0856	800x600@56.250	Y	Y	Y		
DMT0860	800x600@60.317	Y	Y	Y		
DMT0872	800x600@72.188	Y	Y	Y		
DMT0875	800x600@75.000	Y	Y	Y		
DMT0885	800x600@85.061	Y	Y	Y		
DMT1060	1024x768@60.004	Y	Y	Y		
DMT1070	1024x768@70.069	Y	Y	Y		
DMT1075	1024x768@75.029	Y	Y	Y		
DMT1260A	1280x960@60.000	Y	Y	Ν		
DMT1260G	1280x1024@60.020	Y	Y	Y		

Mode Name	Mode Details	Switching	Recording/Recording Preview	Input Preview
DMT1275G	1280x1024@75.025	Y	Y	Y
DMT1660	1600x1200@60.000	Y	Y	N
CVR1960H	1920x1080@59.934	Y	Y	Y
CVR1960D	1920x1200@59.950	Y	Y	N
INT1440	1440x900@59.93	Y	Y	Y
1280x800	1280x800@60.00	Y	Y	Y
1360x768	1360x768@60.00	Y	Y	Y
1440X900	1440X900@60.00	Y	Y	Y
1680X1050	1680X1050@60.00	Y	Y	Y
UHD Video Modes				
2160p25	3840x2160@25.000	Y	N	N
2160p29	3840x2160@29.970	Y	N	N
2160p30	3840x2160@30.000	Y	N	N

# **DVI Interface**

Product Variants: Video Recorder

DVI interface supports RGB in 8bit color depth.

Mode Name	Mode Details	Recording/Recording Preview			
UHD Video Modes					
720p50	1280x720@50.000	Y			
720p59	1280x720@59.940	Y			
720p60	1280x720@60.000	Y			
1080i25	1920x1080i@50.000	Y			
1080i29	1920x1080i@59.940	Y			
1080i30	1920x1080i@60.000	Y			
1080p25	1920x1080@25.000	Y			
1080p29	1920x1080@29.970	Y			
1080p30	1920x1080@30.000	Y			
1080p50	1920x1080@50.000	Y			
1080p59	1920x1080@59.940	Y			
1080p60	1920x1080@60.000	Y			
Storz Image 1 50 Hz	1920x1080@50.000	Y			
Storz Image 1 60 Hz	1920x1080@59.940	Y			
SD Video Mode	5				
480i29	720x480i@59.94	Y			
480i30	720x480i@60.00	Y			
480p59	720x480@59.94	Y			
480p60	720x480@60.00	Y			
576i25	720x576i@50.00	Y			
576p50	720x576@50.00 Y				

Mode Name	Mode Details	Recording/Recording Preview			
Graphic Modes					
DMT0660	640x480@60.000	Y			
DMT0672	640x480@72.809	Y			
DMT0675	640x480@75.000	Y			
DMT0685	640x480@85.008	Y			
DMT0785H	720x400@85.039	Y			
DMT0856	800x600@56.250	Y			
DMT0860	800x600@60.317	Y			
DMT0872	800x600@72.188	Y			
DMT0875	800x600@75.000	Y			
DMT0885	800x600@85.061	Y			
DMT1060	1024x768@60.004	Y			
DMT1070	1024x768@70.069	Y			
DMT1075	1024x768@75.029	Y			
DMT1260A	1280x960@60.000	Y			
DMT1260G	1280x1024@60.020	Y			
DMT1275G	1280x1024@75.025	Y			
DMT1660	1600x1200@60.000	Y			
CVR1960H	1920x1080@59.934	Y			
CVR1960D	1920x1200@59.950	Y			
INT1440	1440x900@59.93	Y			
1280x800	1280x800@60.00	Y			
1360x768	1360x768@60.00	Y			
1440X900	1440X900@60.00	Y			
1680X1050	1680X1050@60.00	Y			

# **3G-SDI Input**

Product Variants: Video Manager; Video Manager with Recorder

SDI interfaces supports YCbCr 4:2:2.

Mode Name	Mode Details	Switching	Recording/Recording Preview	Input Preview
HD Video Mod	les			
720p50	1280x720@50.000	Y	Y	Y
720p59	1280x720@59.940	Y	Y	Y
720p60	1280x720@60.000	Y	Y	Y
1080i25	1920x1080i@50.000	Y	Y	Y
1080i29	1920x1080i@59.940	Y	Y	Y
1080i30	1920x1080i@60.000	Y	Y	Y
1080p25	1920x1080@25.000	Y	Y	Y
1080p29	1920x1080@29.970	Y	Y	Y
1080p30	1920x1080@30.000	Y	Y	Y
1080p50	1920x1080@50.000	Y	Y	Y
1080p59	1920x1080@59.940	Y	Y	Y
1080p60	1920x1080@60.000	Y	Y	Y
SD Video Mod	es			
480i29	720x480i@59.94	Y	Y	N
576i25	720x576i@50.00	Y	Y	N

# **3G-SDI Input**

Product Variants: Video Recorder

SDI interfaces supports YCbCr 4:2:2.

Mode Name	Mode Details	Recording/Recording Preview		
HD Video Modes				
720p50	1280x720@50.000	Y		
720p59	1280x720@59.940	Y		
720p60	1280x720@60.000	Y		
1080i25	1920x1080i@50.000	Y		
1080i29	1920x1080i@59.940	Y		
1080i30	1920x1080i@60.000	Y		
1080p25	1920x1080@25.000	Y		
1080p29	1920x1080@29.970	Y		
1080p30	1920x1080@30.000	Y		
1080p50	1920x1080@50.000	Y		
1080p59	1920x1080@59.940	Y		
1080p60	1920x1080@60.000	Y		
SD Video Mode	5			
480i29	720x480i@59.94	Y		
576i25	720x576i@50.00	Y		

# **Front Panel LED Indicators**

The VIMA Video Manager and Recorder and the VIMA Video Recorder each have two front panel LED indicators. The VIMA Video Recorder has one front panel LED indicator.

VIMA Video Manager and Recorder State	Indicator
Booting phase	blinking green
Ready state	solid color green
Internal storage indicator (> 75% full)	solid color yellow
Internal storage indicator (> 95% full)	blinking color yellow
Recording active	solid blue
Export to DICOM and USB blinking blue	
VIMA Video Recorder State	
Booting phase	blinking green
Ready state	solid color green
Internal storage indicator (> 75% full)	solid color yellow
Internal storage indicator (> 95% full)	blinking color yellow
Recording active	solid blue
Export/Import from/to DICOM	blinking blue
VIMA Video Manager State	
Booting phase	blinking green
Ready state	solid color green

#### **Front Panel LED Indicators**

# **Connector Types and Specifications**

# HDBaseT

HDBaseT utilizes a RJ-45 connector.

99999999	

Pin	Description
1	HDBT_P0
2	HDBT_N0
3	HDBT_P1
4	HDBT_P2
5	HDBT_N2
6	HDBT_N1
7	HDBT_P3
8	HDBT_N3

# DVI-I (Dual Link)

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Pin	Description
1	TMDS_D2_N
2	TMDS_D2_P
3	GND
4	NC
5	NC
6	DDC_CLK
7	DDC_DAT
8	NC
9	TMDS_D1_N
10	TMDS_D1_P
11	GND
12	NC

Pin	Description
13	NC
14	+5V Power
15	GND
16	TMDS_HPD
17	TMDS_D0_N
18	TMDS_D0_P
19	GND
20	NC
21	NC
22	GND
23	TMDS_CLK_P
24	TMDS_CLK_N

Pin	Description	
1	ML_Lane 0 (p)	
2	GND	
3	ML_Lane 0 (n)	
4	ML_Lane 1 (p)	
5	GND	
6	ML_Lane 1 (n)	
7	ML_Lane 2 (p)	
8	GND	
9	ML_Lane 2 (n)	
10	ML_Lane 3 (p)	

Pin	Description
11	GND
12	ML_Lane 3 (n)
13	CONFIG1
14	CONFIG2
15	AUX CH (p)
16	GND
17	AUX CH (n)
18	Hot Plug
19	Return
20	DP_PWR

# HDMI



Pin	Description
1	TMDS_D2_P
2	GND
3	TMDS_D2_N
4	TMDS_D1_P
5	GND
6	TMDS_D1_N
7	TMDS_D0_P
8	GND
9	TMDS_D0_N
10	TMDS_CLK_P

Pin	Description
11	GND
12	TMDS_CLK_N
13	NC
14	GND
15	NC
16	NC
17	GND
18	+5V Power
19	HDMI_HPD

### 3G-SDI

Pin 1 (center)	(center pin) SDI signal	
Shield	GND	



Pin	Name
1	GND
2	LOUT-L
3	LOUT-R

### Mic In



Pin	Name
1	GND
2	MIC-L
3	MIC-R

# **Control Connectors and Pinouts**

**RJ-45 Ethernet Connector** 



Pin	Name	Description
1	TX+	Transmit
2	TX-	Transmit
3	RX+	Receive
4		No Connection
5		No Connection
6	RX-	Receive
7		No Connection
8		No Connection



Pin	Name
1	GND
2	12 V
3	GND

# ACC1 and ACC2 Connectors



Pin	Name
1	GND
2	Remote control contact
3	GND

# **USB** Connector



Pin	Name
1	+5 VDC
2	DATA -
3	DATA +
4	GND

# **AC Power IN Connector**



Pin	Name
1	Neutral
2	Ground/Earth
3	Live

# 7 Electromagnetic Compatibility Tables

All medical electronic devices must conform to the requirements of IEC 60601-1-2. Precautions, adherences to the Electromagnetic Compatibility (EMC) guideline information provided in this manual and verification of all medical devices in simultaneous operation are required to ensure the electromagnetic compatibility and coexistence of all other medical devices prior to a surgical procedure.

The emissions characteristics of this equipment make it suitable for use in industrial areas and hospitals (CISPR 11 class A). If it is used in a residential environment (for which CISPR 11 class B is normally required) this equipment might not offer adequate protection to radio-frequency communication services. The user might need to take mitigation measures, such as relocating or re-orienting the equipment.

The following EMC tables are provided for your reference:

### 7.1 Guidance and Manufacturer's Declaration - Electromagnetic Emissions

The product is intended for use in an environment as described below. The user/operator of the product should make sure the device is operated within such an environment.

Emissions test	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1	The product uses RF energy solely for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class A	The product is suitable for use in all establish- ments, other than public establishments and those directly connected to the public mains net- work that supplies buildings used for public pur- poses.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

### 7.2 Guidance and Manufacturer's Declaration - Electromagnetic Interference Immunity

This product is intended for use in the electromagnetic environment specified below. The customer or the user of the product should assure that it is used in such an environment.

Immunity Test	Immunity Test
Electroctatic discharge (ESD) IEC 61000 4 2	$\pm$ 2, $\pm$ 4, $\pm$ 6, $\pm$ 8 kV contract discharge
ectrostatic discharge (ESD) IEC 61000-4-2 adiated RF field IEC 61000-4-3 roximity fields from wireless transmitters C 61000-4-3 ectrical fast transient / burst IEC 61000-4-4	$\pm$ 2, $\pm$ 4, $\pm$ 6, $\pm$ 8, $\pm$ 15 kV air discharge
	3 V/m
Radiated RF field IEC 61000-4-3	80 MHz - 2.7 GHz
	80 % AM 1 kHz
	80 MHz to 2.7 GHz. 3 V/m
Dravinity fields from wireless transmitters	Spot Tests: 385 MHz. at 27 V/m;
IEC 61000-4-3	(710, 745, 780, 5240, 5500, 5785) MHz at 9 V/m;
	(450, 810, 870,930, 1720, 1845, 1970, 2450) MHz at 28 V/m
	± 2 kV, AC mains
Electrical fast transient / burst IEC 61000-4-4	± 1 kV, I/O ports
	100 kHz PRR
Surge IEC 61000-4-5	+05 + 1 + 2 kV
AC mains, Line to Ground	$\pm 0.5, \pm 1, \pm 2.80$
AC mains, Line to Line	± 0.5, ± 1 kV
	3 V (0.15 MHz – 80 M Hz)
Conducted RF IEC 61000-4-6	6 V ISM Bands
	80 % AM 1 kHz
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30 A/m - 50 or 60 Hz
	100 % dip, 0.5 periods, 0°, 45°, 90°, 135°,
	180°, 225°, 270°, 315°
Voltage dips, short interruptions and voltage vari-	100 % dip, 1 period
	30 % dip, 25/30 periods (50/60 Hz)
	Interrupt 100 % drop, 5 s



### NOTE!

Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the product is used exceeds the applicable RF compliance level above, the product should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the product.



#### NOTE!

Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

### 7.3 Guidance and Manufacturer's Declaration - Recommended Separation Distances

# Recommended separation distances between portable and mobile RF communications equipment and the product

The product is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the product can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the product as recommended below, according to the maximum output power of the communications equipment.



#### WARNING!

Effects of the RF telecommunications devices (transmitters) on the performance characteristics

Portable HF communication devices can have an effect on the performance characteristics of the device. Therefore such devices must be kept a minimum distance of 30 cm (independent of any calculation) from the insufflator, its accessories and cables.

Rated maximum output power (W) of transmitter	Separation distance, in meters according to frequency of transmitter		
	150kHz to 80 MHz	80 MHz to 800 MHz	800 MHz to 2.7 GHz
0.01	0.12	0.12	0.23
0.10	0.38	0.38	0.73
1.00	1.20	1.20	2.30
10.00	3.80	3.80	7.30
100.00	12.00	12.00	23.00

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.



#### NOTE!

At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.



#### NOTE!

These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.
Symbols	
<b>C</b>	Follow instructions for use (white image on a blue background)
<b>i</b>	Consult instructions for use
21 Com/user-manue	
	General warning
4	Warning; Electricity
EC REP	Authorized Representat- ive in the European Community
MD	Medical Device
	Authorized for Sale or use by Physician only
Â	Caution
	Manufacturer
	Date of manufacture (YYYY-MM-DD)
REF	Catalogue number
SN	Serial number



	China Compulsory Certi- ficate (CCC) mark for In- formation Technology Equipment (ITE) products.
FC	United States Federal Communications Com- mission (FCC) symbol in- dicates EMC compliance per FCC standards.
	No hazardous sub- stances contained in the device
	Contains restricted sub- stances. The symbol number refers in years to the Environmental Protection Use Period (EPUP), during which the product can be safely used, and following which should be imme- diately recycled.
$\checkmark$	Equipotentiality
$\bigcirc$	Closed (On) Switch.
•	Open (Off) Switch.
	Protective earth; pro- tective ground
$\sim$	Alternating current
(((•))) ▲	Non-ionizing electro- magnetic radiation

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