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DNNF012
DNNF020

Software uniVision

Interface Protocol

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1. Introduction

The interfaces of the relevant products are explained in this section

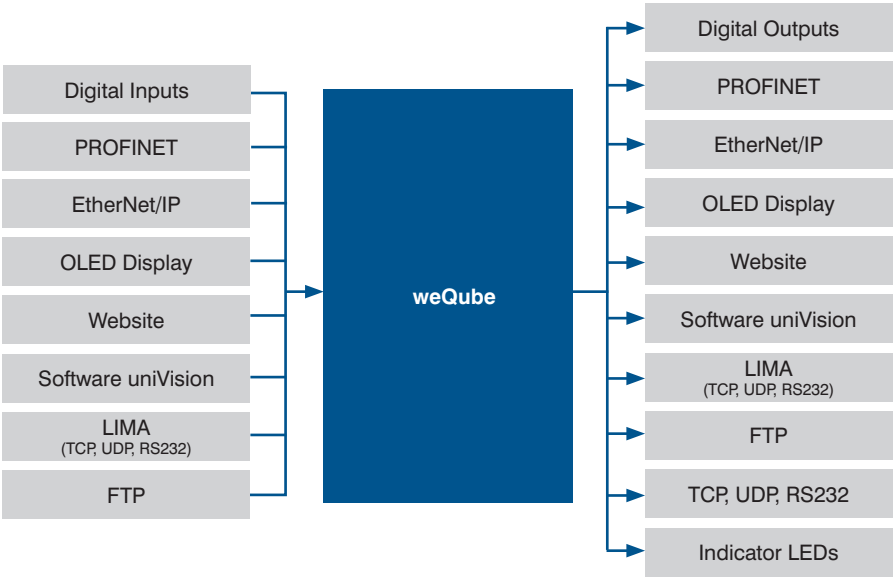
1.1 Interface Overview

The interface overview shows the inputs and outputs for all products.

NOTE!
The LIMA interface is described in this document. All other interfaces (e.g. process data via TCP/IP, UDP, FTP, RS-232, PROFINET or EtherNet/IP) are explained in detail in the uniVision manual or other instructions.

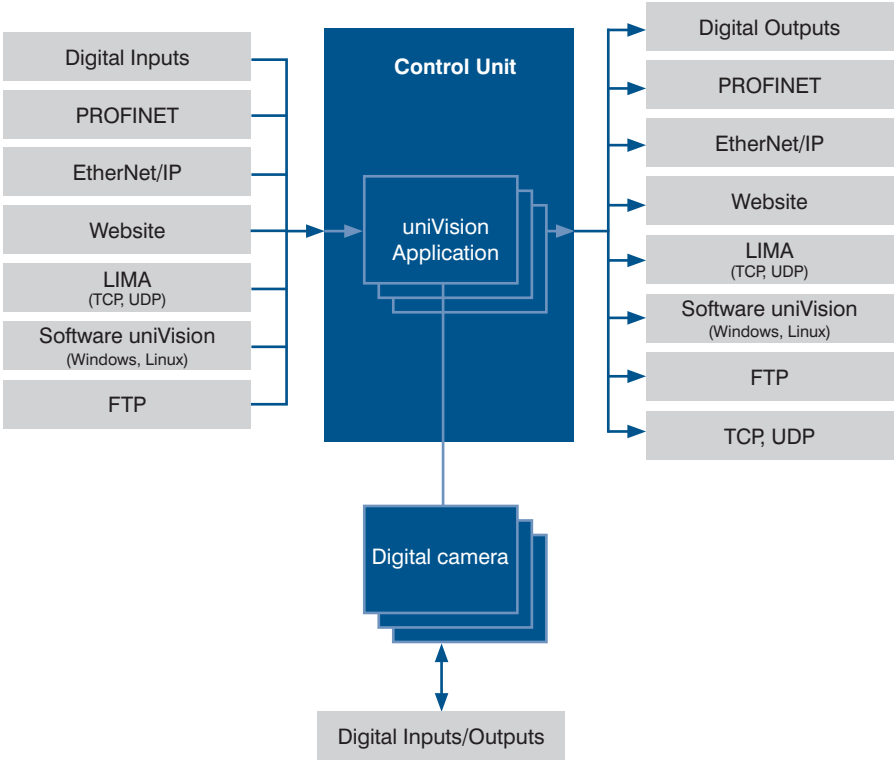
1.1.1 weQube Smart Camera

The weQube Smart Camera includes the following inputs and outputs.



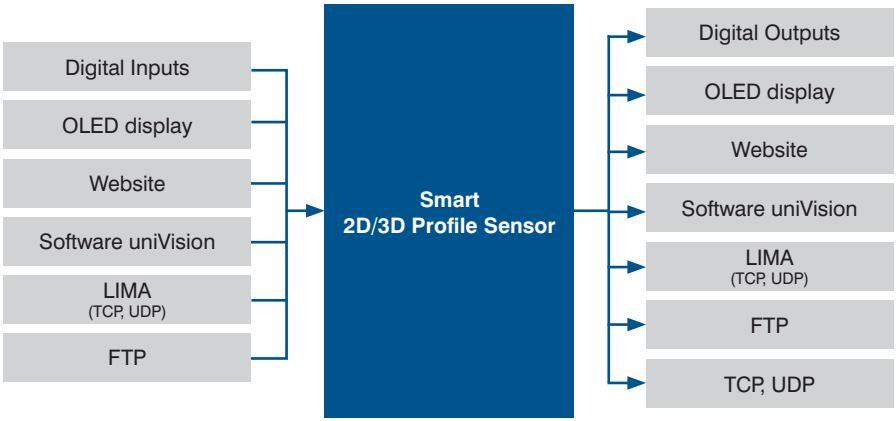
1.1.2 Vision System

The vision system consists of a control unit and one or more digital cameras. Independent of each other, several uniVision applications can evaluate images from different digital cameras on the control unit. The inputs and outputs of digital cameras and uniVision applications are shown in the following overview.



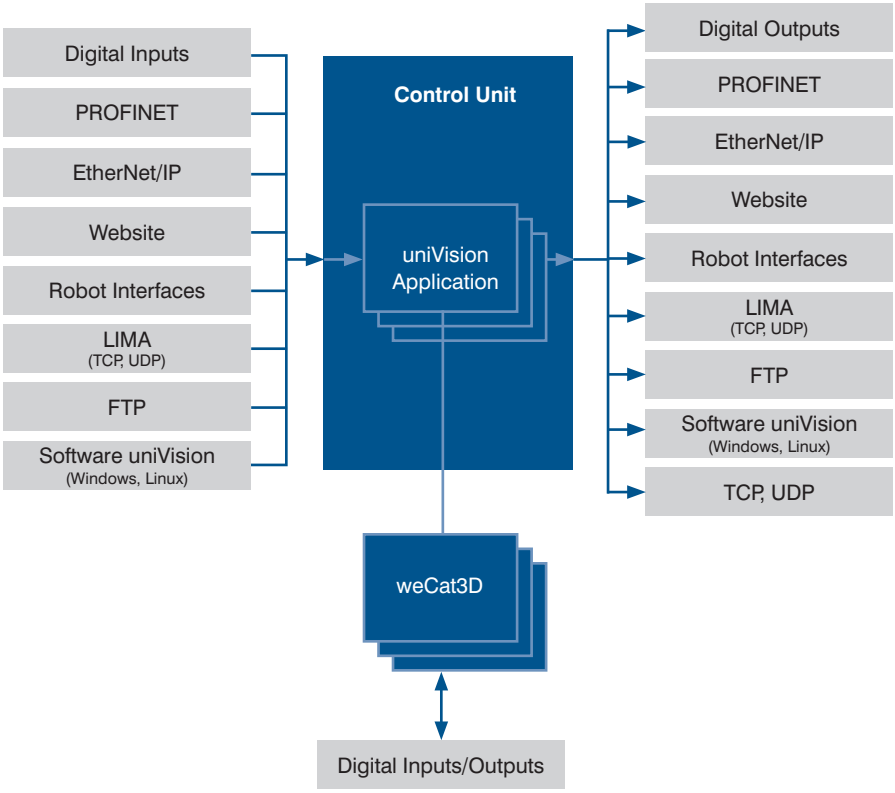
1.1.3 Smart 2D/3D Profile Sensor

With the smart 2D/3D profile sensor, profile recording and evaluation is performed directly in the compact sensor housing. The inputs and outputs of the smart 2D/3D profile sensors are shown in the following overview.



1.1.4 Control Unit with 2D/3D Profile Sensors

The control unit with 2D/3D profile sensors consists of a control unit and one or more 2D/3D profile sensors. Independent of each other, several uniVision applications can evaluate profiles from different 2D/3D profile sensors on the control unit. The inputs and outputs of 2D/3D profile sensors and uniVision applications are shown in the following overview.

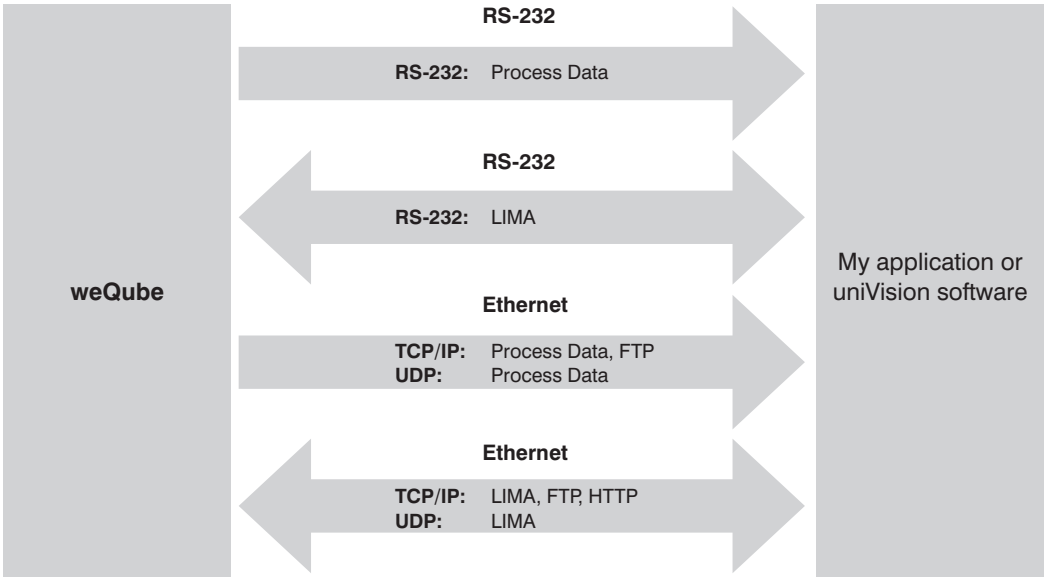


1.2 The System's Network Protocols

The network interfaces are described in detail below.

1.2.1 weQube Smart Camera

Various options for communication with the weQube Smart Camera via TCP/IP socket, UDP and RS-232 are depicted in the following graphic.



Basic RS-232 settings:

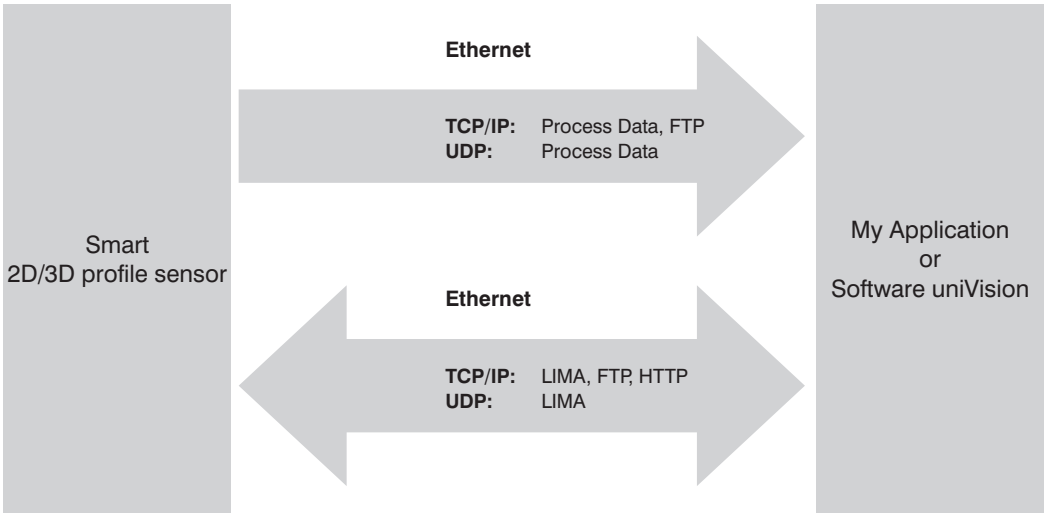
- Baud rate: 115,200 bps
- 8 data bits
- No parity
- 1 stop bit

Protocol	Port	Description
TCP/IP	32001	Fixed port for communication via the LIMA protocol. Write and read commands can be transmitted via this port. Only one connection is permissible via this port. **NOTE!** uniVision software communicates with the Smart Camera via this port.
TCP/IP	32002	Standard port for transmitting process data. The port can be configured via the Device TCP.

Protocol	Port	Description
UDP	32002	Port for transmitting the device status of the weQube Smart Camera. Fixed port for transmitting process data via the UDP device module. **NOTE!** It is possible to define how often the device status is sent via UDP in the device settings.
UDP	32003	Fixed port for transmitting LIMA commands. **NOTE!** Up to 65,535 bytes can be transmitted via UDP. Longer commands can be transmitted via TCP/IP.
UDP	32004	Fixed port for receiving LIMA responses. A LIMA response is received for LIMA commands sent via port 32003. **NOTE!** uniVision software blocks port 32004 and must therefore be closed in order to receive LIMA responses.

1.2.2 Smart 2D/3D Profile Sensor

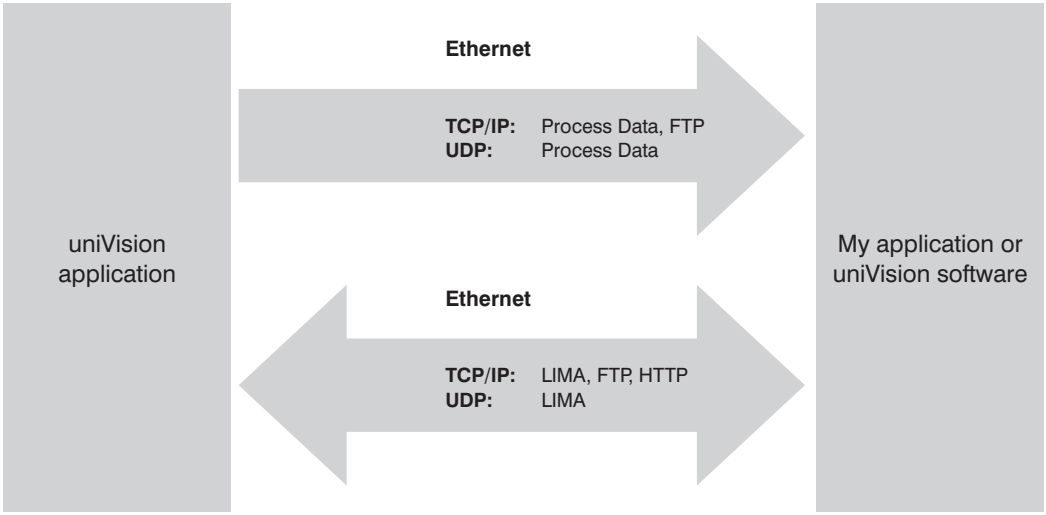
Various options for communicating with the smart 2D/3D profile sensors via TCP/IP socket and UDP are described in the following graphic.



Protocol	Port	Description
TCP/IP	32001	Fixed port for communication via the LIMA protocol. Write and read commands can be transmitted via this port. Only one connection is permissible via this port.  **NOTE!** uniVision software communicates via this port in the processing mode.
TCP/IP	32002	Standard port for transmitting process data. The port can be configured via the TCP device module.
TCP/IP	32005	Fixed port for communication via the LIMA protocol. Only read commands can be transmitted via this port. Up to five simultaneous connections are possible via the port.  **NOTE!** The uniVision application communicates via this port in the live mode.
UDP	32002	Port for sending the device status from the smart 2D/3D profile sensor. Fixed port for sending process data via the UDP device module.  **NOTE!** It is possible to define how often the device status is sent via UDP in the device settings.
UDP	32003	Fixed port for transmitting LIMA commands.  **NOTE!** Up to 65,535 bytes can be transmitted via UDP. Longer commands can be transmitted via TCP/IP.
UDP	32004	Fixed port for receiving LIMA responses. A LIMA response is received for LIMA commands sent via port 32003.  **NOTE!** uniVision software blocks port 32004 and must therefore be closed in order to receive LIMA responses.

1.2.3 Control Unit with uniVision Application

One or more uniVision applications evaluations can be executed on a single control unit. Various options for communication with the uniVision applications via TCP/IP socket and UDP are depicted in the following graphic.



Protocol	Port	Description
TCP/IP	32001	Fixed port for communication via the LIMA protocol. Write and read commands can be transmitted via this port. Only one connection is permissible via this port. **NOTE!** The uniVision application's IP address is displayed in the device list. **NOTE!** uniVision software communicates via this port in the processing mode.
TCP/IP	32002	Standard port for transmitting process data. The port can be configured via the Device TCP. **NOTE!** The uniVision application's IP address is displayed in the device list.

Protocol	Port	Description
TCP/IP	32005	Fixed port for communication via the LIMA protocol. Only read commands can be transmitted via this port. Up to five simultaneous connections are possible via the port.  **NOTE!** The uniVision application's IP address is displayed in the device list.  **NOTE!** The uniVision application communicates via this port in the live mode.
UDP	32002	Port for transmitting the device statuses of the: • Control unit • uniVision application Fixed port for transmitting process data via the Device UDP.  **NOTE!** It is possible to define how often the device status is sent via UDP in the device settings.
UDP	32003	Fixed port for transmitting LIMA commands.  **NOTE!** Up to 65,535 bytes can be transmitted via UDP. Longer commands can be transmitted via TCP/IP.
UDP	32004	Fixed port for receiving LIMA responses. A LIMA response is received for LIMA commands sent via port 32003.  **NOTE!** uniVision software blocks port 32004 and must therefore be closed in order to receive LIMA responses.

2. LIMA Protocol

First of all set up and save the device settings and the project via uniVision software. Afterwards, the LIMA protocol can be used to query certain values from the device or to change them at the device (e.g. project change).

NOTE!
uniVision software also uses LIMA commands for communication with the device. Consequently, the connection from uniVision software to the device must be interrupted before connection is established via another interface.

NOTE!
The LIMA protocol can not be used offline.

2.1 Establishing Connection via TCP/IP

2.1.1 weQube Smart Camera

Establish a TCP/IP connection to the weQube Smart Camera.
- IP address of the Smart Camera
- Port: 32001 (fix)

Example based on the default settings of the weQube Smart Camera:
- IP address: 192.168.100.1
- Port: 32001

2.1.2 Smart 2D/3D Profile Sensor

Establish a TCP/IP connection to the smart 2D/3D profile sensor.
- IP address of the smart 2D/3D profile sensor
- Port: 32001 (fix)

Example with the default settings of the smart 2D/3D profile sensor:
- IP address: 192.168.100.1
- Port 32001

2.1.3 Control Unit with uniVision Application

Establishing a TCP/IP connection to the uniVision application which is running at the control unit:
uniVision application's IP address
Port: 32001 (fixed)

NOTE!
The uniVision application's IP address is displayed in the device list.

Example with standard settings for application-1:
IP address: 192.168.100.251
Port: 32001

2.2 General Information on LIMA Communication

The following general points must be observed for LIMA communication:

- Evaluation of responses to LIMA commands is recommended. Depending on the command, it may take several seconds to receive a response.
- LIMA commands may only be transmitted sequentially to the weQube, the smart 2D/3D profile sensor, or the uniVision application. The next command may not be transmitted until a response to the previous command has been received.
- Data consistency must be assured during communication. Evaluation of the run counter is recommended to this end, for example in order to determine whether or not any new events have occurred.
- LIMA communication is based on the principle of query and associated response. However, if a project is changed on the uniVision device via another interface (e.g., visualization) or if the recording device (e.g., digital camera) is disconnected from the control unit, the corresponding message is sent via ports 32001 and 32005 by TCP/IP without a query. This information is required by the uniVision software.
- When copying and pasting commands from the interface protocol, pay special attention to any spaces.

Error diagnosis for responses to LIMA commands:

Response to LIMA Command	Cause	Possible Solution
Device Busy	The LIMA command cannot be processed because the device is currently processing another LIMA command.	• Resend the LIMA command at a later point in time.
Lima Error on File Read	The project could not be loaded because the respective project is not available in the project folder.	• Make sure that a project with the corresponding name is available in the project folder. • Check the name of the project in the LIMA command.
Invalid Path	The LIMA command contains a path specification which is not available in the uniVision project.	• Enter the correct path specification to the LIMA command (see section “3. LIMA Command Example”, page 27)

NOTE!
Compatibility is not assured in the event of a major release or a feature release (i.e. if the first or second digit is changed, e.g. from uniVision 2.0.1 to uniVision 2.1.0). LIMA commands and path specifications may change as a result. Details concerning compatibility are included in the operating instructions for uniVision software.

2.3 Project Commands

With the commands in this group you can modify the actual project tree. Further you can load and save projects. Commands transmitted via the TCP/IP connection are identified with the letter T, commands sent via the UDP connection are identified with U, and those transmitted via the RS-232 interface are identified with the letter R.

NOTE!
The RS-232 interface is only available with the weQube Smart Camera. The smart 2D/3D profile sensor and uniVision applications of the control unit do not have a serial interface.

NOTE!
The listed commands function for all uniVision products. If a command is only available for a certain device type, this information is included in the corresponding section.

2.3.1 Loading a Project (T, U, R)

Purpose	Loading of a project.
Attributes	FILE: Filename of the project (*.u_p) SOURCE (optional): FTP or local folder
Request	`<LIMA DIR="Request" CMD="Project_Load" FILE="TestProject.u_p"/>`
Reply	`<LIMA DIR="ReplyOk" CMD="Project_Load">`
Description	The current running project is stopped and deleted. The project described with FILE is opened started. If the attribute SOURCE is not available the local folder is used. If the SOURCE segment is set to FTP, the FTP server is used. 1. Set up the FTP server with username, password and folders (e.g. FileZilla Server). 2. Open the uniVision product settings in the uniVision software device list. 3. Enter the IP address of the device on which the FTP server is running and the user name and password for the FTP server to the settings. Details can be found in the uniVision operating instructions. 4. Projects stored on the FTP server can now be loaded to the device using the LIMA command. Example: `<LIMA DIR="Request" CMD="Project_Load" SOURCE="FTP" FILE="Folder1/Folder2/TestProject.u_p"/>`

2.3.2 Saving a Project (T, U, R)

Purpose	Saving of the current running project.
Attributes	FILE: Filename of the project (*.u_p) DESTINATION (optional): FTP or local folder
Request	`<LIMA DIR="Request" CMD="Project_Save" FILE="TestProject.u_p"/>`
Reply	`<LIMA DIR="ReplyOk" CMD="Project_Save">`
Description	The current running project is saved with the given filename described by FILE. The Filename is written to the Filename child of IDataModApplication before saving. If DESTINATION is not included in the command, the local project folder is used. If DESTINATION is set to FTP, the FTP server is used. 1. Set up the FTP server with username, password and folders (e.g. FileZilla Server). 2. Open the uniVision product settings in the uniVision software device list. 3. Enter the IP address of the device on which the FTP server is running as well as the username and password for the FTP server in the settings. Details can be found in the uniVision operating instructions. 4. Projects can now be saved on an FTP server via LIMA command. Example: `<LIMA DIR="Request" CMD="Project_Load" SOURCE="FTP" FILE="Folder1/Folder2/TestProject.u_p"/>`

2.3.3 Writing a Value to the Project (T, U, R)

Purpose	Write a value in a project or write thresholds for a value.
Attributes	PATH: Path name for the node which needs to be changed VALUE (optional): Specification of the value, differentiation according to type (string, bool …) MIN (optional): Specification of the minimum value MAX (optional): Specification of the maximum value

Request	**Command for writing a value in a package:**
	`<LIMA CMD="Project_SetNode" DIR="Request" PATH="Module Application.Device Camera.Exposure Time [us]" VALUE="200"/>`
	
	Command for writing thresholds for a value:
	`<LIMA CMD="Project_SetNode" DIR="Request" PATH="Module Application.Module Threshold.Pixel Count [unit]" MIN="1000" MAX="2000"/>`

Reply	`<LIMA DIR="ReplyOK" CMD="Project_SetNode"/>`
Description	Any desired value in the project can be changed with this command. Fundamentally, linked values cannot be changed. The thresholds for a value can also be changed with this command. **NOTE!** Incorrect use of the command may render the device unusable.

2.3.4 Reading Out a Value from the Project (T, U, R)

Purpose	Read out a value from the project. This makes it possible to retrieve results such as distances, diameters or the coordinates of detected points.
Attributes	PATH: Path to the node you want to interrogate.
Request	`<LIMA CMD="Project_GetNode" DIR="Request" PATH="Module Application.Device Camera.Light Current [%]"/>`
Reply	`<LIMA DIR="ReplyOk" CMD="Project_GetNode" PATH="Module Application.Device Camera.Light Current [%]" VALUE="20"/>`
Description	This command can be used to read out a any desired value from the project.

2.3.5 Write Value in a Cell in the Spreadsheet Module (T)

Purpose	Write a value in a cell in the spreadsheet module.
Attributes	CELLS: Cell information starting at 0 for the first line/column in the format line@column (e.g. 0@1 for the cell in the first line and the second column) PATH: Path name for the node which needs to be changed VALUE: Value to be written in the cell
Request	`<LIMA DIR="Request" CMD="Project_SetSpreadSheetCells" CELLS="0@1" PATH="Module Application.Module Spreadsheet" VALUE="Test"/>`
Reply	`<LIMA DIR="ReplyOk" CMD="Project_SetSpreadSheetCells"/>`
Description	A cell in the spreadsheet module can be changed by the command.

2.3.6 Reading Out an Image Channel (T, for Smart Camera and Vision System Only)

Purpose	Read out an image channel.  **NOTE!** The respective image channel must be enabled to allow reading!
Attributes	PATH: The path of the image channel that needs to be read out. TYPE: Type of output (BMP or RAW)

Request	**For Smart Camera with monochrome image chip:**
	`<LIMA DIR="Request" CMD="Project_GetImage" TYPE="RAW" PATH="Module Application.Device Camera.Image Sensor.Raw 8 Bit"/>`
	
	For Smart Camera with color image chip (For BMP and RAW, the RAW image channel must be activated in Device Camera):
	`<LIMA DIR="Request" CMD="Project_GetImage" TYPE="RAW" PATH="Module Application.Device Camera.Image Sensor.Raw 8 Bit Bayer"/>`
	
	The other image channels (HSV, RGB, BGRA) can also be read out for the color image chip. Enter the required path to the command to this end. The selected image channel must be activated in the camera. For example:
	`<LIMA DIR="Request" CMD="Project_GetImage" TYPE="BMP" PATH="Module Application.Device Camera.Image HSV.Value"/>`
	
	For vision system with monochrome digital cameras:
	`<LIMA DIR="Request" CMD="Project_GetImage" TYPE="RAW" PATH="Module Application.digital-camera-1.Image Monochrome.Grey"/>`
	
	For vision system with color digital cameras (For BMP and RAW, the BGRA image channel must be activated in Device Digital Camera):
	`<LIMA DIR="Request" CMD="Project_GetImage" TYPE="RAW" PATH="Module Application.digital-camera-1.Image BGRA.BGRA"/>`
	
	Further image channels can also be selected for the color image chip. Enter the required path to the command to this end. The selected image channel must be active. For example:
	`<LIMA DIR="Request" CMD="Project_GetImage" TYPE="RAW" PATH="Module Application.digital-camera-1.Image HSV.Value"/>`
	
	Output images from other modules can also be queried with this command, for example:
	`<LIMA DIR="Request" CMD="Project_GetImage" TYPE="BMP" PATH="Module Application.Module Threshold HSV.Output Image.Binary"/>`

Reply	`<LIMA DIR="ReplyOk" CMD="Project_GetImage" DATALEN="353280" [Image channel attachment including x byte]`
Description	TYPE=BMP: The image will be transmitted as a bitmap including BMP header. TYPE=RAW: Only the raw data will be transmitted without header.

2.4 General Commands

This section contains commands that don't fit any other section.

2.4.1 Searching the Network for Devices (T, U, R)

Purpose	Scan network for wenglor devices
Attributes	IP: Ip address of the client that perform the scan.
Request	`<LIMA DIR="Request" CMD="SCAN_WENGLOR" IP="172.17.47.70"/>`

Reply	**Control unit:**
	`<LIMA DIR="ReplyOk" CMD="SCAN_WENGLOR" ARTICLENUMBER="BB1C001" DEVICENAME="control-unit" DHCP="0" ETHADDR="00:01:29:00:00:00" GATEWAYIP="0.0.0.0" IPADDR="192.168.100.252" NET-MASK="255.255.255.0" TCPPORT="32001"/>`
	
	uniVision application:
	`<LIMA DIR="ReplyOk" CMD="SCAN_WENGLOR" ARTICLENUMBER="BB1C001" DEVICENAME="application" DHCP="0" ETHADDR="55:44:33:22:11:00" GATEWAYIP="0.0.0.0" IPADDR="192.168.100.251" NET-MASK="255.255.255.0" TCPPORT="32001"/>`
	
	weQube Smart Camera:
	`<LIMA DIR="ReplyOk" CMD="SCAN_WENGLOR" ARTICLENUMBER="B50S001" DEVICENAME="weQube" ETHADDR="54:4a:05:00:08:4b" IPADDR="192.168.100.1" TCPPORT="32001"/>`

Description	This command is implemented for the access by udp. This command has to be sent as a broadcast. The detected device sends back a broadcast message with some identification variables.

2.4.2 Triggering the Device (T, U, R)

Purpose	Trigger command
Attributes	NAME (optional): Device name

Request	`<LIMA DIR="Request" CMD="Device_Trigger"/>`
	
	Command including NAME attribute (e.g. for VisionSystem2D with digital camera name “digital-camera-1”):
	`<LIMA DIR="Request" CMD="Device_Trigger" NAME="digital-camera-1"/>`
	
	Abbreviated command for all products:
	`<T/>`

Reply	`<LIMA DIR="ReplyOk" CMD="Device_Trigger"/>`
	
	Response including NAME attribute (e.g. for VisionSystem2D with digital camera name “digital-camera-1”):
	`<LIMA DIR="ReplyOk" CMD="Device_Trigger" NAME="digital-camera-1"/>`
	
	Response to abbreviated command for all products:
	`<TOk/>`

Description	**Control unit with 2D/3D sensor:** This command can be used to initiate a line start trigger for a weCat3D sensor in a uniVision application. **Smart 2D/3D profile sensor:** A line start trigger for the smart weCat3D can be triggered with this command. **Vision system:** This command can be used to trigger an image recording with the vision system. **Smart Camera:** The trigger command can be used to start an image recording with the Smart Camera. An abbreviated command is available for the purpose of simplification.

2.4.3 Starting a Recording (T, U, only for smart 2D/3D Profile Sensor, Control Unit with 2D/3D Profile Sensor and Vision System)

Purpose	Transmit the start signal for Profile or image recording.
Attributes	NAME (optional): Device name

Request	`<LIMA DIR="Request" CMD="Device_Acquisition" STATE="on"/>`
	
	Command including NAME attribute (e.g. for VisionSystem2D with digital camera name “digital-camera-1”):
	`<LIMA DIR="Request" CMD="Device_Acquisition" NAME= "digital-camera-1" STATE="on"/>`

Reply	`<LIMA DIR="ReplyOk" CMD="Device_Acquisition" NAME="" STATE="on"/>`
	
	Response including NAME attribute (e.g. for VisionSystem2D with digital camera name “digital-camera-1”):
	`<LIMA DIR="ReplyOk" CMD="Device_Acquisition" NAME="digital-cam- era-1" STATE="on"/>`

Description	After receiving the start signal, the smart 2D/3D profile sensor, vision system, or control unit with 2D/3D profile sensors is ready to record images or profiles.

2.4.4 Stopping a Recording (T, U, only for smart 2D/3D Profile Sensor, Control Unit with 2D/3D Profile Sensor and Vision System)

Purpose	Transmit the stop signal for Profile or image recording.
Attributes	NAME (optional): Gerätename

Request	`<LIMA DIR="Request" CMD="Device_Acquisition" STATE="off"/>`
	
	Command including NAME attribute (e.g. for VisionSystem2D with digital camera name “digital-camera-1”):
	`<LIMA DIR="Request" CMD="Device_Acquisition" NAME= "digital-camera-1" STATE="off"/>`

Reply	`<LIMA DIR="ReplyOk" CMD="Device_Acquisition" NAME="" STATE="off"/>`
	
	Response including NAME attribute (e.g. for VisionSystem2D with digital camera name “digital-camera-1”):
	`<LIMA DIR="ReplyOk" CMD="Device_Acquisition" NAME="digital-cam- era-1" STATE="off"/>`

Description	After receiving the stop command, the smart 2D/3D profile sensor, vision system, or control unit with 2D/3D profile sensor stops recording profiles or images.

2.4.5 Reading Out the Firmware Version (T, U, R)

Purpose	Read out firmware revision level.
Attributes	
Request	`<LIMA DIR="Request" CMD="Device_GetFirmwareVersion"/>`
Reply	`<LIMA DIR="ReplyOk" CMD="Device_GetFirmwareVersion" PRODUCT_DATE="28.01.2018" PRODUCT_VERSION="1.1.3"/>`
Description	The device's firmware version is read out with this command.

2.4.6 Restarting the Device (T, U, R)

Purpose	Restart the device.
Attributes	`ETHADDR` (optional for T, R and necessary for U): MAC Address

Request	For T, R:
	`<LIMA DIR="Request" CMD="Device_Reboot"/>`
	
	For U:
	`<LIMA DIR="Request" CMD="Device_Reboot" ETHADDR="54:4a:05:0b:64:fb"/>`

Reply	`<LIMA DIR="ReplyOk" CMD="Device_Reboot"/>`
Description	This command is used to initiate restarting of the device. Depending on the device, rebooting takes several seconds.

2.4.7 Reading out the Network Status (T, U, R)

Purpose	Read out the connection status of the network interface.
Attributes	
Request	`<LIMA DIR="Request" CMD="Device_GetNetworkState"/>`
Reply	`<LIMA DIR="ReplyOk" CMD="Device_GetNetworkState" STATE_FTP="offline" STATE_RTE="offline" STATE_TCP/IP="offline"/>`
Description	The connection statuses of the individual network protocols including TCP/IP, FTP and Industrial Ethernet are read out with this command.

2.4.8 Reading Out the Device Status (T, U, R)

	Retrieve the current device status.
Attributes	
Request	`<LIMA DIR="Request" CMD="Device_GetState"/>`
Reply	`<LIMA DIR="ReplyOk" CMD="Device_GetState" STATE="0"/>`

Description	The device status is output as a decimal number and must be converted to a binary number for the error code to be decoded. On bit positions where 1 is output, the error described in the following tables has occurred. **NOTE!** Details on the respective positions of uniVision products can be found in the uniVision operating instructions in the section “Status Information”.

2.4.9 Reset Device Status (T, U, R)

Purpose	Reset the device status.
Attributes	
Request	`<LIMA DIR="Request" CMD="Device_ClearState"/>`
Reply	`<LIMA DIR="ReplyOk" CMD="Device_ClearState"/>`
Description	If the device status is not equal to 0, this command can be used to reset it to 0. There is a separate LIMA command for reading out the device status.

2.5 Teach+ Commands

2.5.1 Starting Teach+ (T, U, R)

Purpose	Start a Teach+ recording.
Attributes	IMAGECOUNT: Number of recordings to save (mandatory parameter)
Request	`<LIMA DIR="Request" CMD="TeachPlus_Start" IMAGECOUNT="10"/>`
Reply	`<LIMA DIR="ReplyOk" CMD="TeachPlus_Start"/>`
Description	The Teach+ recording is started with this command.

2.5.2 Aborting Teach+ (T, U, R)

Purpose	Cancel a Teach+ recording.
Attributes	
Request	`<LIMA DIR="Request" CMD="TeachPlus_Cancel"/>`
Reply	`<LIMA DIR="ReplyOk" CMD="TeachPlus_Cancel"/>`
Description	A running Teach+ recording can be aborted with this command. **NOTE!** If the recording is canceled, the Teach+ file is saved with the recordings saved until that point.

2.5.3 Querying the Status of the Teach+ Recording (T, U, R)

Purpose	Query the current status of the Teach+ recording.
Attributes	
Request	`<LIMA DIR="Request" CMD="TeachPlus_GetState"/>`
Reply	`<LIMA DIR="ReplyOk" CMD="TeachPlus_GetState" STATE="off"/>`
Description	STATE="recording images" PENDING="75" /> The status of a Teach+ recording can be queried with this command. The STATE attribute can have one of the following values: • Off • Recording images • Writing archive The PENDING attribute indicates how many recordings still have to be saved.

2.6 Reading out Identification Data (T, U, R)

Purpose	Read out identification data.
Attributes	NAME: Name of the identification variables
Request	`<LIMA DIR="Request" CMD="Identification_Get" NAME="SerialNumber"/>`
Reply	`<LIMA DIR="ReplyOK" CMD="Identification_Get" NAME="SerialNumber" VALUE="0123483"/>`
Description	Individual identification data can be read out with this command. These are permanently assigned to the device and cannot be changed.

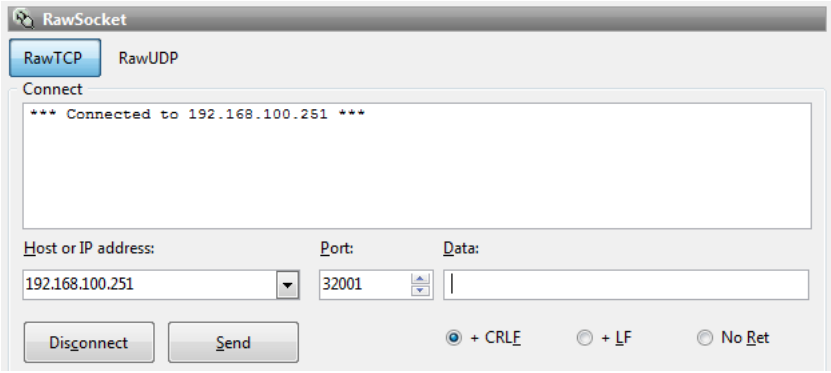
Name	Description
ArticleNumber	Article number
Description	Description
SerialNumber	Serial number
ProductVersion	Product Version
IndustrialEthernet	Industrial Ethernet type
ethaddr	MAC address

3. LIMA Command Example

The following example shows how certain values can be retrieved from the uniVision project using a LIMA command. The path from the uniVision project is required to this end.

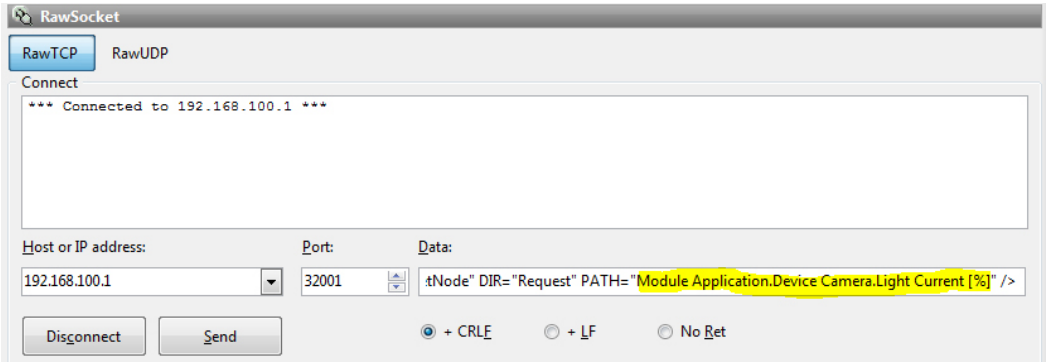
1. Open a TCP/IP connection to the weQube (e.g. with Free IP Tools):

   IP-Address of the weQube: 192.168.100.1 (default)
   TCP-IP Port of the weQube: 32001

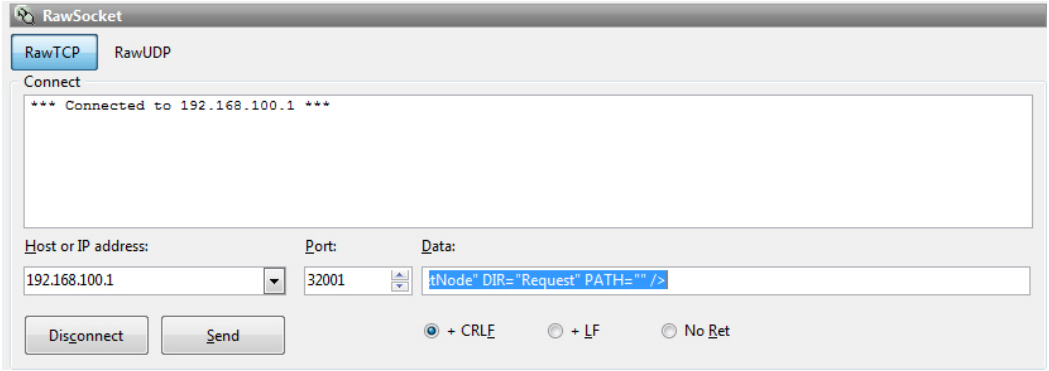


2. Copy the LIMA command “Project_GetNode” of the interface protocol and insert into the data field.

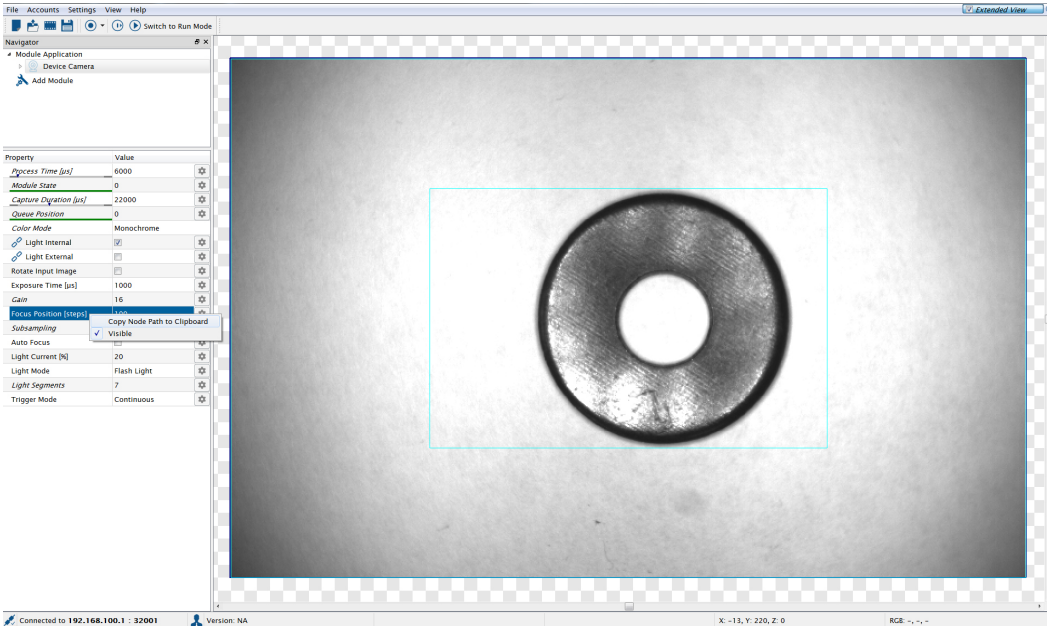
NOTE!
When copying and pasting LIMA commands, pay special attention to any spaces.



3. Delete the path from the LIMA command.

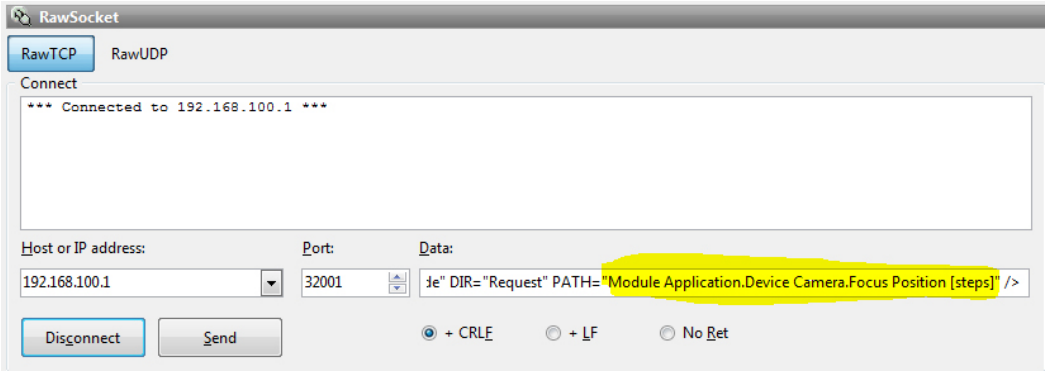


4. Close the TCP/IP connection to the weQube.
5. Open the uniVision software.
6. The extended view should be activated.
7. By right click on the relevant parameter and “Copy Node Path to Clipboard” copy Node to the clipboard.



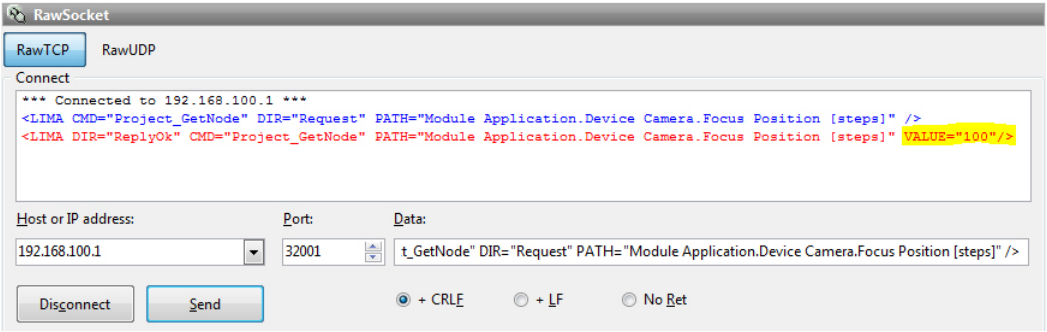
8. Close the uniVision software.
9. Reconnect via a TCP/P connection (e.g. with Free IP Tools) to the weQube
10. Insert the Node Path into the command.

NOTE!
When copying and pasting the project path, please pay special attention to blanks.



11. Send the LIMA command.

12. The requested value is included in the LIMA answer.



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