asyril Experts in Flexible Feeding Systems

SmartSight

Programming Guide

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1. Introduction

1.1. General information

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In this manual, the safety information that must be respected is split into three types: "Danger", "Important" and "Note". These messages are identified as follows:

DANGER!

Failure to respect this instruction may result in serious physical injury.

DANGER!

This instruction identifies an electrical hazard. Failure to respect this instruction may result in electrocution or serious physical injury due to an electric shock.

IMPORTANT!

Failure to respect this instruction may result in severe damage to equipment.

NOTE:

The reader's attention is drawn to this point to ensure that the product is used correctly. However, failure to respect this instruction does not pose a danger.

Reference …

For more information on a specific topic, the reader is invited to refer to another manual or another page of the current manual.

IMPORTANT!

Asyril cannot be held responsible for damage to property or persons caused by the failure to respect the instructions contained in the manual for your machine.

NOTE:

All dimensions and values in this manual are expressed in millimetres (mm)

2. General introduction

SmartSight describes Asyril's intelligent visual part detection system, ensuring straightforward integration of any Asycube flexible feeder with any industrial robot brand.

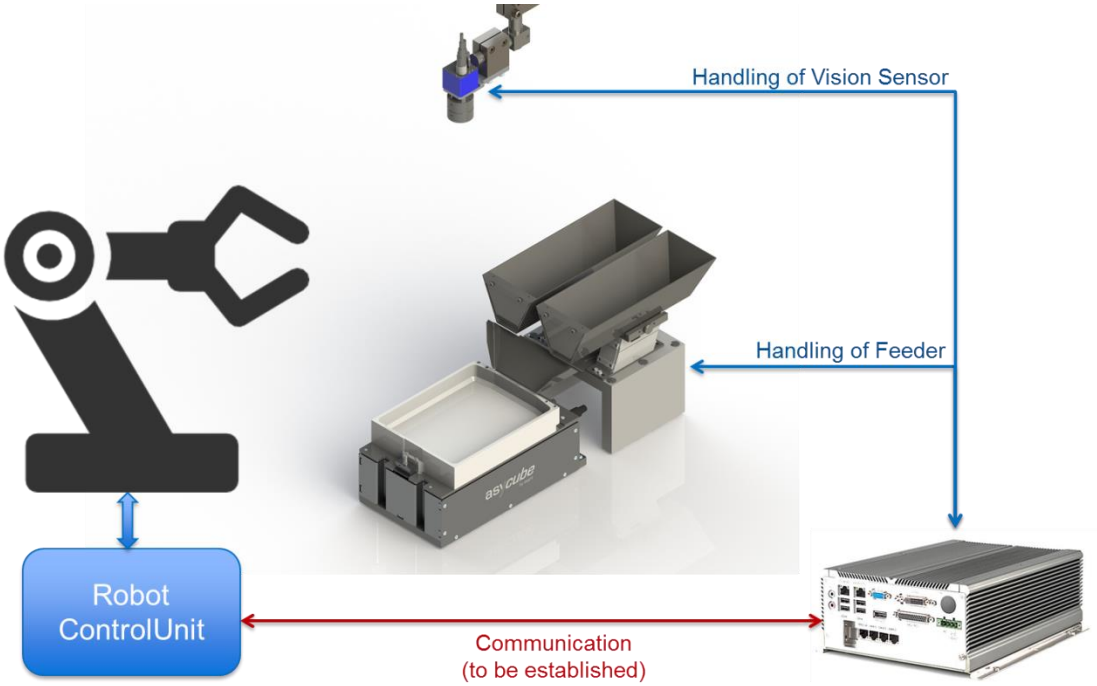


Figure 2-1: SmartSight for the automated and efficient handling of feeding and vision system.

SmartSight comprises Asyril's powerful visual part detection and feeder management software (Asyview), an industrial PC (Control Unit) as well as an optimally configured Asycube and vision kit including camera, objective and all necessary cabling. It makes the implementation of high performance flexible feeding system as simple as setting up conventional feeders.

Capable of controlling up to 7 cameras and feeders, SmartSight is able to control the part movements, ensuring their optimal separation and distribution on the platform. The location of the parts to be picked is then provided to the robot or industrial controller. The feeding recipes can be easily programmed thanks to Asyril's intuitive user interface (HMI).

Alternative configurations for functionalities such as control part presence, position in gripper, placing position are available on demand.

This document describes the function and operation of the SmartSight and its software interfaces and the various functions involved in its use and integration.

For information about the hardware configuration and setup, please refer to SmartSight Operating Manual.

The SmartSight software is called Asyview. It has an interface dedicated to the integrator tasks as well as some log functionalities available for the end-user. The configuration of any recipes and calibration tasks is operated through the Asyril HMI. Asyview, Asyview Interface and HMI are installed on the SmartSight control unit.

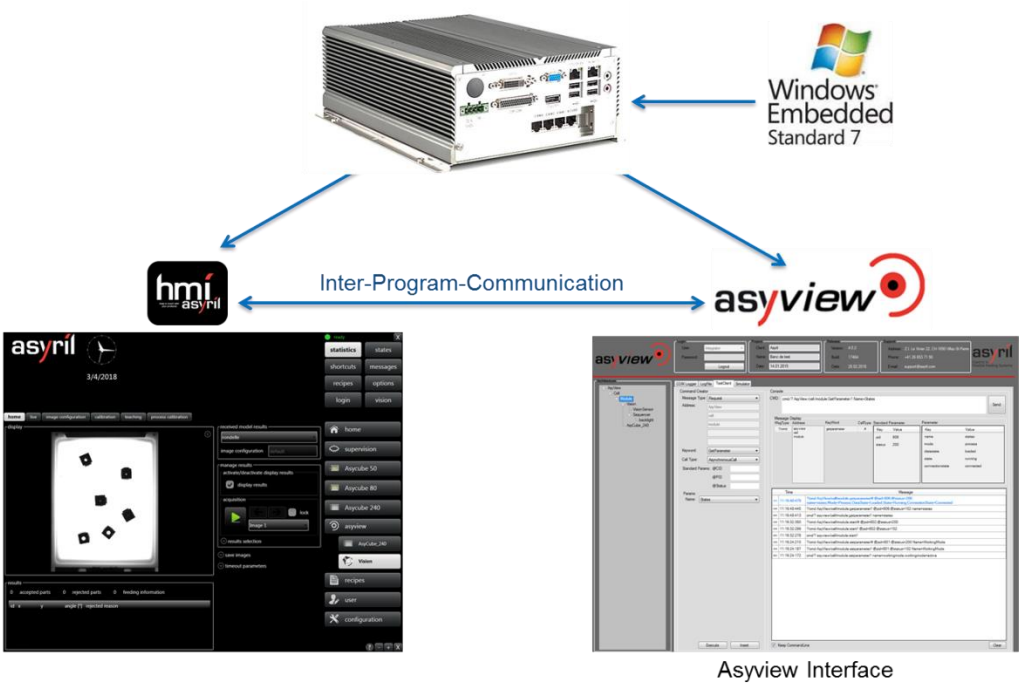


Figure 2-2: SmartSight Control Unit

	Role	More information in:
Asyview core	Visual part detection and feeder management	Ch. 5 Asyview Communication protocol Ch. 6 Asyview Methods Ch. 7 Asyview Instructions
Asyview interface	Monitoring and support to the integration	Ch. 4 Asyview interface
HMI	Interface for monitoring, configuring and teaching new recipes and as well as defining image configuration and calibration	See SmartSight User Guide
Control Unit	Starting procedure License information Backup and protection	Ch. 3 Control Unit

Table 2-1: role of Asyview and interfaces

3. Control Unit

The control unit is factory configured and ready to use out of the box.

IMPORTANT!

This control unit is configured exclusively for the use of Asyril's Asyview and HMI software; **NOT** anything else. Failure to comply with this directive will void your warranty.

NOTE:

The control unit uses industrial-grade PC that were validated, tested and certified by Asyril as suitable for the use of our software. As no guaranties can be given as to the suitability of any other hardware, it is not possible to get the software as a standalone and install them on the customer's own system.

3.1. Operating system

The SmartSight control unit runs on Windows 7 Embedded Edition with the Enhanced Write Filter enabled (EWF).

The idea behind this feature is to create an image of the C partition and lock it. Then, at each start up, this image is run instead, and every changes made to it will be temporarily written in system RAM, leaving the original C partition unchanged This implies that any change made while the filter is enabled will be lost when power is lost (PC restart, power outage…)

The pros are as follows:

- Faster operation (not bottlenecked by the SSD's read and write speeds).
- Virus protection (since a restart of the PC lets you start from a healthy image), so no need to use any anti-virus software (usually resource-intensive programs).

The only con is:

- Having to unlock the partition to be able to perform any kind of permanent modification on it (in the case of the C partition, this includes any OS configuration changes, port changes….) .

NOTE:

To keep the system running within the optimal operating conditions such as defined by Asyril, the customer may freely change the configuration of the Process and Remote ports, but NOT change the OS default language (doing so may prevent the Asyview from functioning properly if the number separator of the new language happens not to be a dot but a coma instead).

3.1.1. Locking the C partition

To enable the EWF and lock the C partition and allow the use of the SmartSight system, a batch file is included while the system is being configured at the factory. You can find this file under:

C:\ Program Files \ Asyril\ EWF\ Lock.bat

Make sure all your other programs are closed and double click on this file to run it. After a few seconds, the computer will restart and the C partition will be locked.

3.1.2. Unlocking the C partition

To disable the EWF and unlock the C partition and allow the configuration SmartSight system (within the limits allowed by Asyril), a batch file is included while the system is being configured at the factory. You can find this file under:

C:\ Program Files \ Asyril\ EWF\ Unlock.bat

Make sure all your other programs are closed and double click on this file to run it. After a few seconds, the computer will restart and the C partition will be unlocked.

NOTE:

While the C partition is unlocked, the Asyview will not be able to be started and an error message will appear on its starting window, stating that the EWF check has failed. When the C partition is locked again, the Asyview will be able to be started.

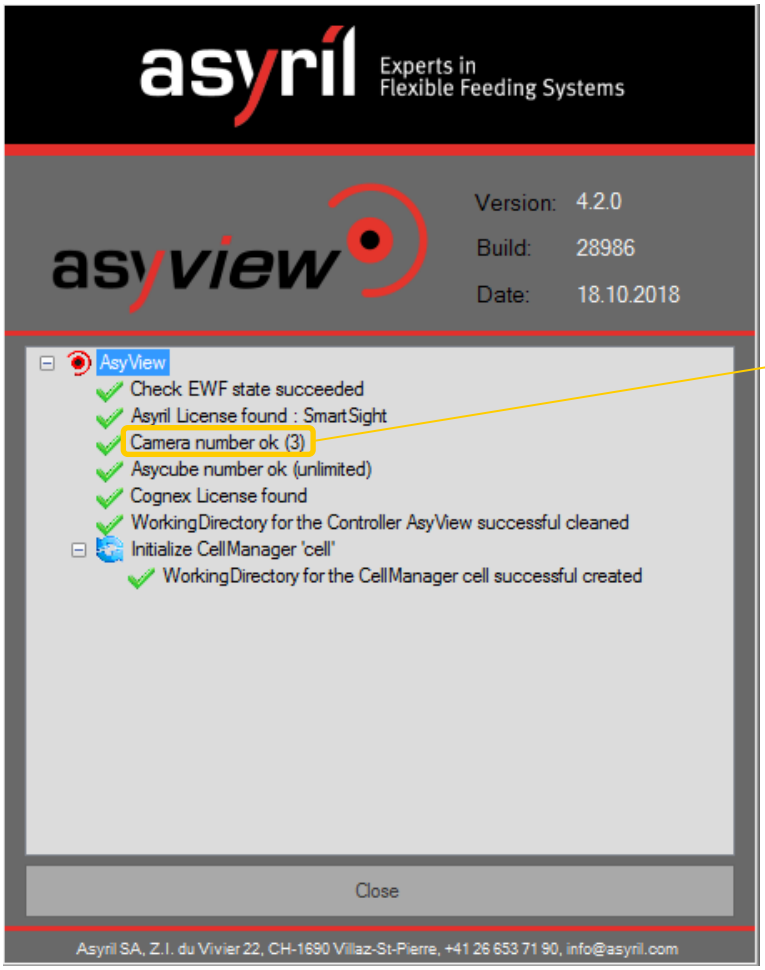
3.2. Asyril licence

3.2.1. General Information

The Asyview software implements a licencing system that allows you to pay only for what the customer really need i.e. the number of cameras you will be using with your control unit. In practice, you will receive with your control unit a licence dongle that allows you to use the number of cameras you have selected in your order. That licence can be upgraded if you need it, just get in touch with our sales department.

3.2.2. Control of the number of cameras

Whenever you start the Asyview, a licence check will be performed to make sure the licence you are using is authorizing at least as many cameras as you have configured for the Asyview.



Shows whether the provided licence has the correct parameters for the number of cameras in the configuration file (here a maximum of 3 cameras can be used)

3.2.3. Updating the licence

It may happen that you want to add more cameras to your control unit in the future. In this case, you may ask for an update to our sales department.

The control unit comes with a little program to help you in this regard. Once you have gotten in touch with our customer support department so they can make you an offer for the upgrade, you can find the program by typing "**LicenceUpdaterTool**" in the Windows search bar or by following this link:

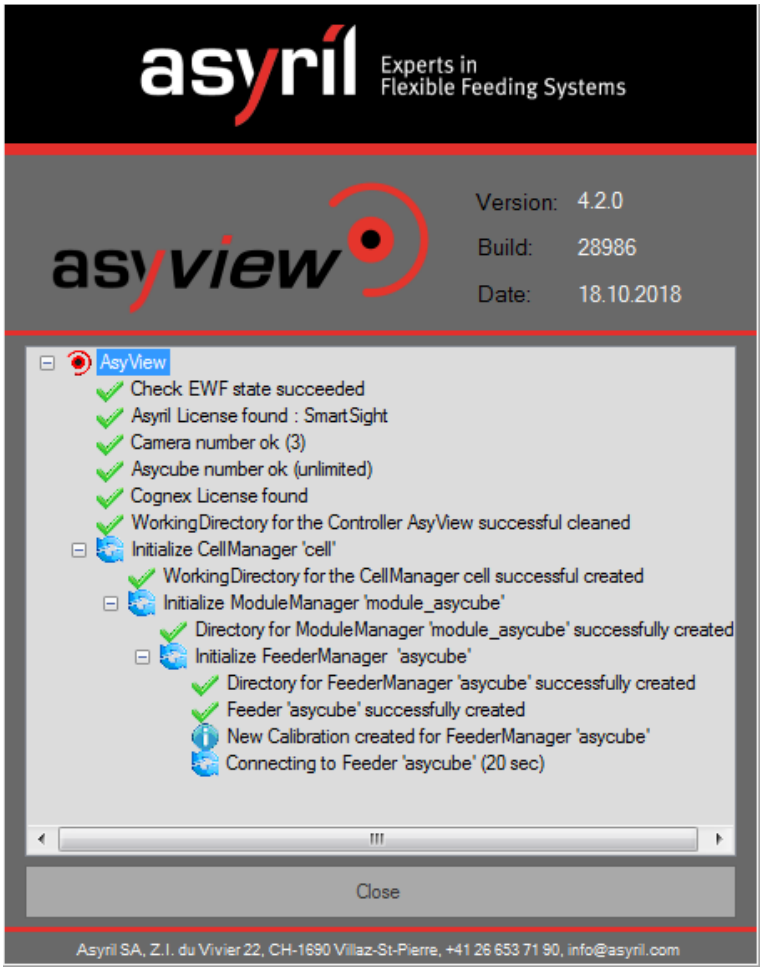
C:\Program Files\Asyril\AsyView\LicenceUpdaterTool.exe

Once it's started, you may click on "**Create Update Request File**". This will generate a file on your desktop that you may then send to Asyril. We then will send back an updated file that you will need to copy to your desktop and restart the "**LicenceUpdaterTool**". Finally, click on "**Import Update to Protection Dongle**". A confirmation message will inform you that the procedure has been successfully completed.

3.3. Starting the Asyview

3.3.1. General Information

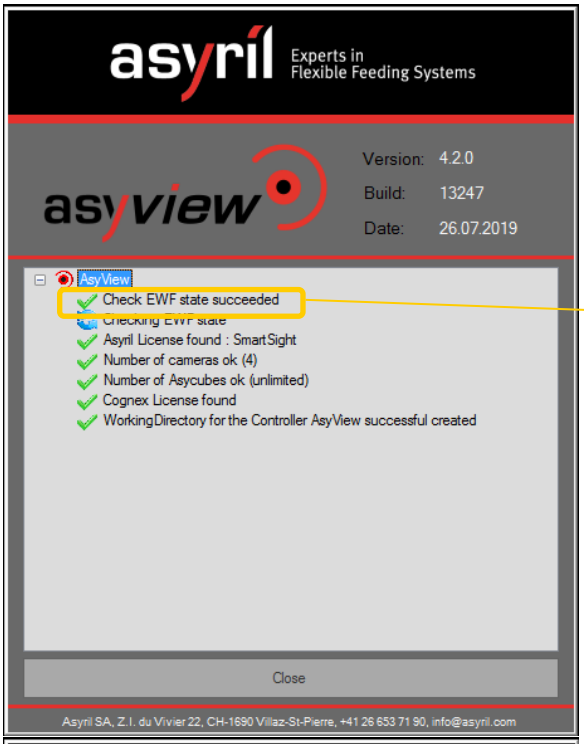
When the control unit is powered on, the Asyview will auto start with Windows, run a few checks (EWF, licences…) and initialise the various components that are in the Asyview.arc configuration file. When everything has been run successfully (or if a non-critical error occurred such as a camera that was not found), it will trigger the HMI to start.



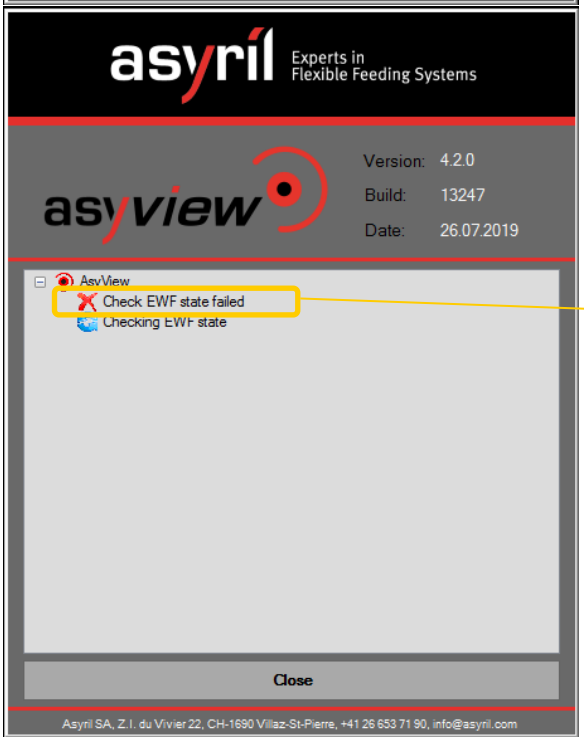
On this screen, you can get information on the progress of the various steps the Asyview is taking when starting up such as checking the licences, loading the calibration files and connecting to the various components. If a red cross appears, it means something went wrong at a particular step. In this case, the starting up may be interrupted and the user has no other choice but to close the window using the dedicated button (in that case, please check the Log file at D:\Asyril\Logs\AsyView.log), or as stated before if the error is non-critical, the starting up will proceed and the error will be displayed in the Log tab on the Asyview user interface.(further information about logs is available at a later point in the manual)

3.3.2. Checking C partition lock status

At start-up, the Asyview performs a check to see whether the C partition is indeed locked. If it is, start-up can proceed, otherwise it will be aborted.



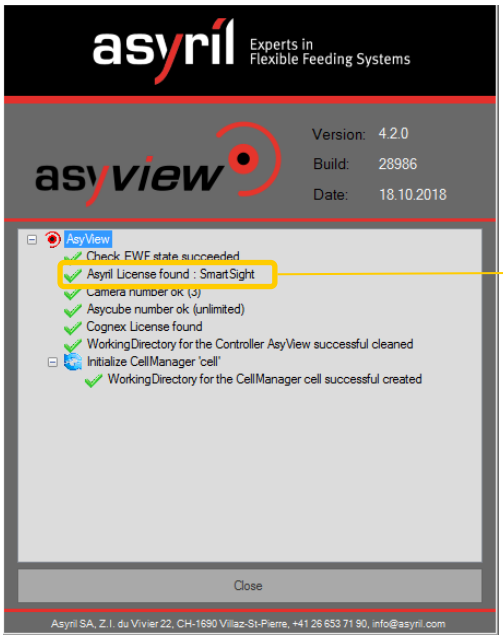
Shows that the EWF is enabled and start-up can proceed



Shows that the EWF is disabled and start-up will be aborted

3.3.3. Checking Asyril licence

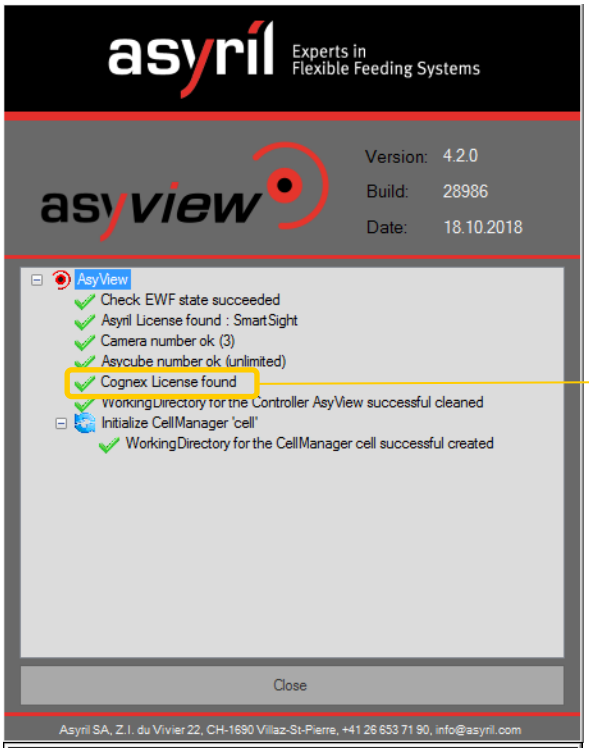
The next check being performed is for the Asyril licence. If one is found, you will see 3 more lines appear in the start-up window. The first confirms that the licence dongle has been found. The next shows you whether the licence you have allows you to have as many cameras as you have defined in the configuration file. The last checks the number of Asycubes connected. In the current version of the Asyview, this number is not restricted, and it will always be “Unlimited”.



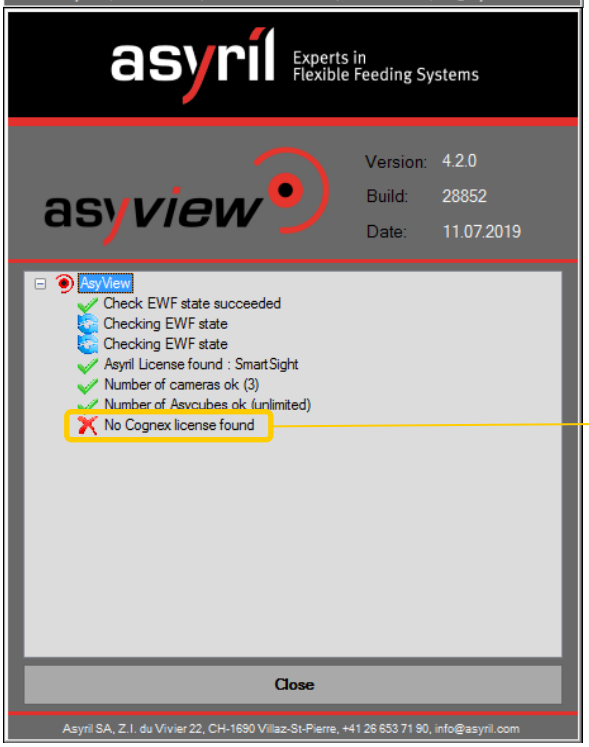
Confirms the licence dongle for the SmartSight system has been found.

3.3.4. Checking Cognex licence

The last check performed at start-up is the presence of the Cognex licence dongle. Again, should it not be found, start-up will be aborted.



Shows that a Cognex licence dongle has been found



Shows that no Cognex licence dongle was found

3.4. Asyril data backup from D partition

The SmartSight control unit also comes bundled with a tool allowing you to back up the “Asyril” and “AsyrilData” folders found on D:\.
This tool can be accessed either by typing “SmartSight_Backup_Tool” in Windows search, or at the following link:

C:\Program Files\Asyril\AsyView

When you start the program, it will scan the D: partition for both the “Asyril” and “AsyrilData” folders. If either one is not found, backing up will not be possible (they both must be located at the root of the D: partition). After the folders have been successfully located, you will be asked to confirm the folder through a dialog window; pressing the Ok button is all you need to do as the tool is only capable of backing up the aforementioned folders. Once the operation is complete, the tool will save the backup file as a zip file at the root of the D: partition.

NOTE:

This procedure is not automated, and it is the responsibility of the integrator and the client to perform it if they desire.

4. Asyview interface

NOTE:

Asyview interface can be launched by right clicking on the  *logo on the icon bar*

At starting the Asyview interface is automatically logged with the end-user access level (Figure 4-1). It allows showing the last entries of the Log File and informs also about the installed release and configured architecture.

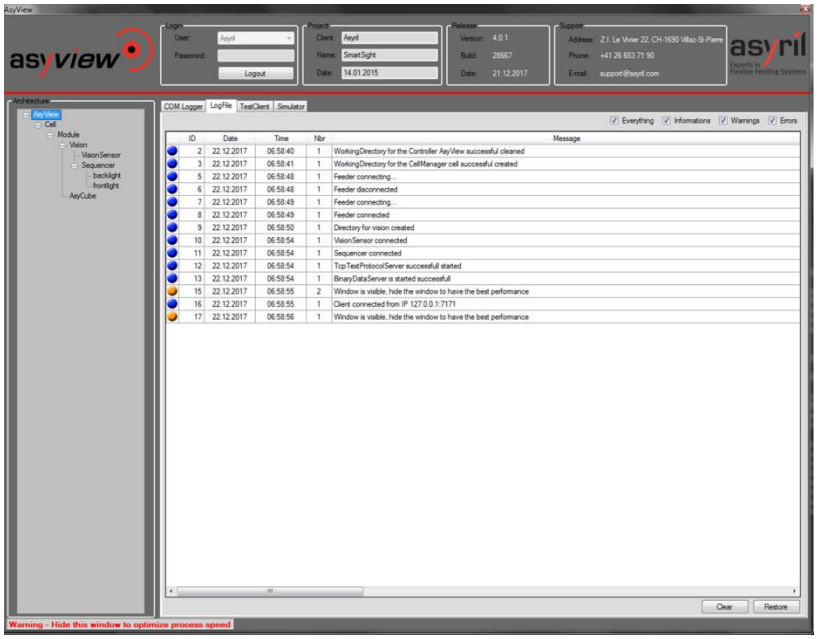


Figure 4-1: Asyview interface

NOTE:

*To optimize the process speed, make sure to **hide** the Asyview interface window. A factor of 10x could be gained by closing this window.*

Once logged on, you will have access to different tags function as shown in Figure 4-2 and Table 4-1.

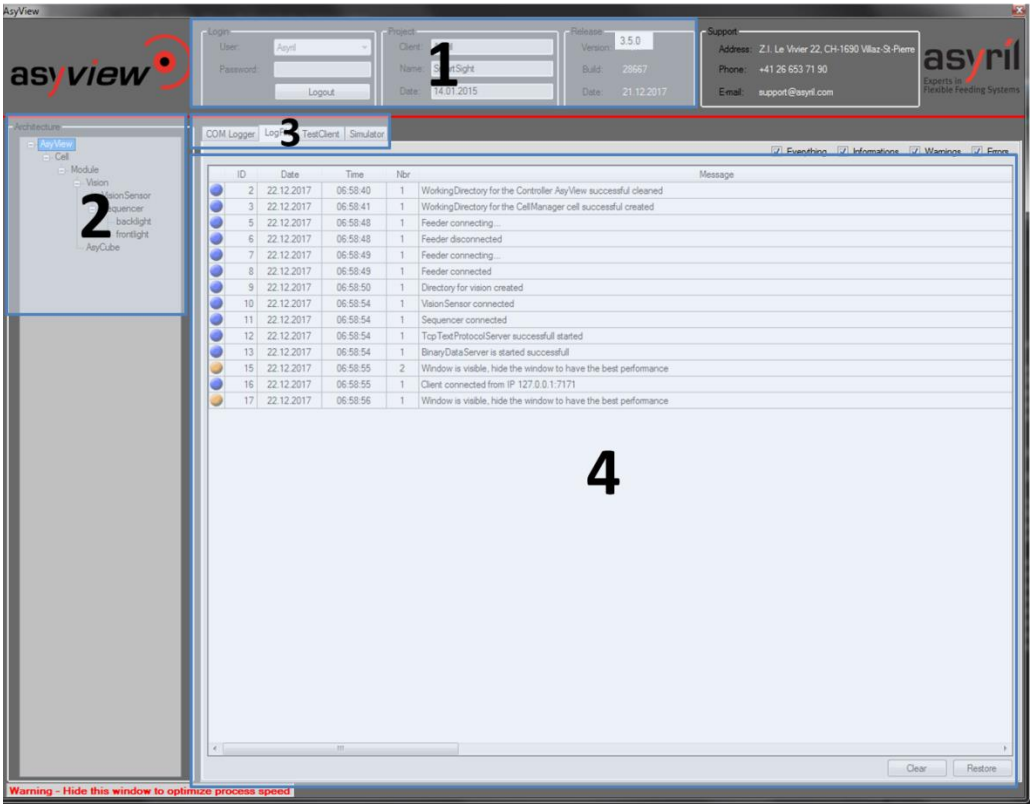


Figure 4-2: structure of the Asyview interface

	Asyview interface	Contents
1	Login & SW information (§4.1)	Login, project description and software release information
2	Architecture (§4.2)	Architecture of the SmartSight Allow accessing to each of the different levels
3	Tabs	
	COM Logger (§4.3)	when checked, show all sent/received commands
	LogFile (§4.3)	monitor and save all messages
	TestClient (§4.4)	description and structure of all commands
	Simulator (§4.5)	simulates the whole process with vision detection, feeding management and pick&place
4	Tabs content	Content will depends on the selected tabs with export/clear/execute action buttons

Table 4-1: Asyview interface content

4.1. User access level

There are 4 access levels for the Asyview software. By default, after a startup you will not be logged in at all and have only access to the log file.

You then have 3 user-accessible levels to choose from: “**Standard**”, “**Advanced**” and “**Expert**”. The first two have no password to log in whereas “**Expert**” does.

Each level has its own set of instructions allowed to be run, with “Standard” being the most restrictive

The last one is reserved for Asyril as it offers no restrictions to what you can do with the software.

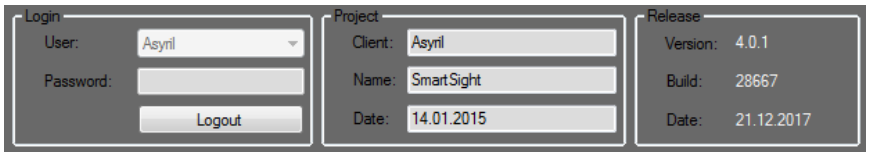


Figure 4-3: Connection and project information on Asyview interface

4.2. Architecture

By selecting a level in the architecture section (Figure 4-4), the information showed in the tab content will be filtered to show only the corresponding message or commands.

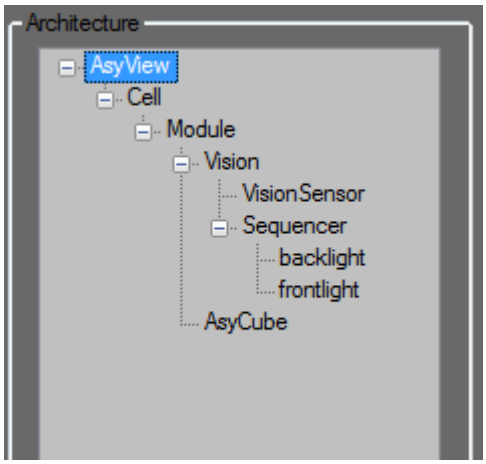


Figure 4-4: Architecture of the SmartSight with access to the different levels

NOTE:

Asyril is responsible for the SmartSight architecture configuration, which serves as a specific encryption based on the customer's requirements.

4.3. Logs (COM Logger and LogFile)

The Asyview has two different logging options: LogFile and COMLogger.

The former is a log of everything related to the state of the system (connection to sub-components, user log-ins…etc). This is where you will see if something went wrong during start up, or if another error would happen at execution time. Everything that appears on the interface is being read from the files located at D:\Asyril\Logs.

The latter log file is a copy of all the TCP-IP requests that are being sent to and from the Asyview. That way, you can make sure that your connection to the Asyview is working properly and that your PLC is sending the proper instructions to the Asyview, and/or that you get a proper answer. Everything that appears on the interface is being read from the files located at D:\Asyril\Logs

Should you need support from Asyril about a technical issue that may have occurred, it would be best if you linked the latest version of both these files to your request.

NOTE:

The COM Logger tab gives you the option of always enabling logging. This option is meant to be used for a short sequence/ amount of time and only for testing purposes, as it may incur slowdowns.

4.4. TestClient

Depending on the selected architecture level, the **TestClient** tab will list all corresponding and available commands (Chapter 7 “Asyview Instructions”). It can help then to build a command by selecting and informing the keywords and parameters. By clicking on

- the Insert button: the complete command will be written on the console
- the Execute button: the complete command is written on the console and sent to the system
- a message line: the command is displayed in a more intuitive and readable format to extract all parameters.

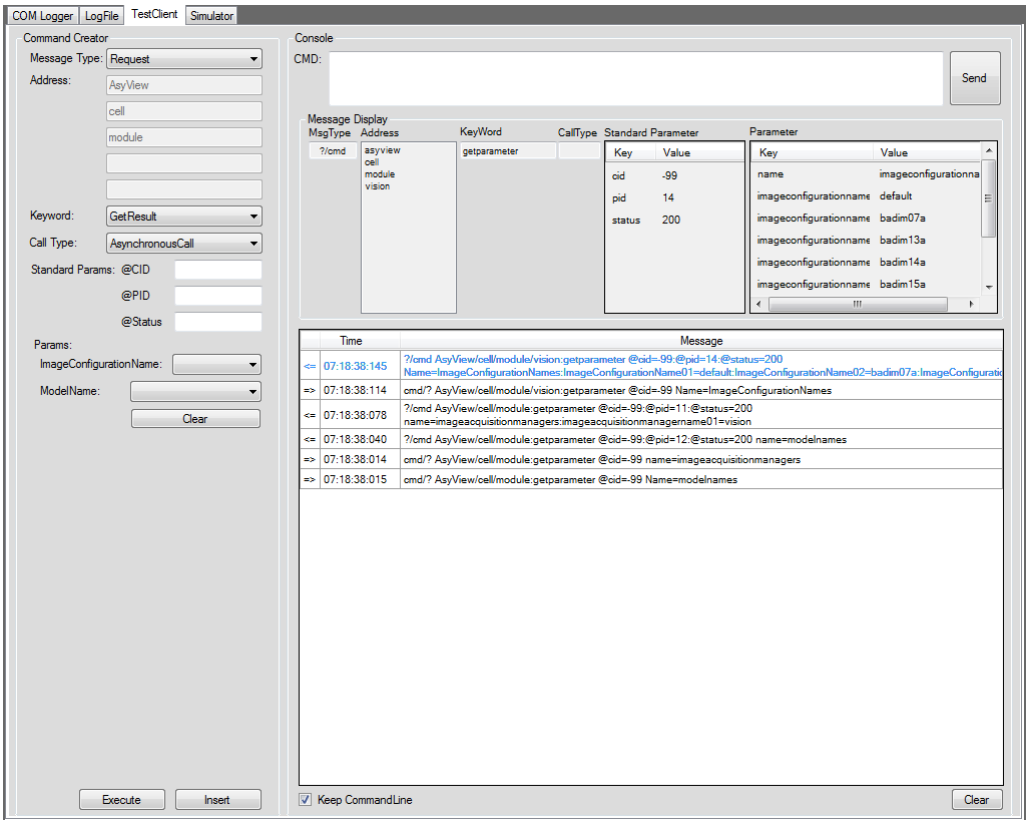


Figure 4-5: TestClient tab

4.5. Simulator

In the **Simulator** tab one can launch a cycle with the simulated pick requested. It allows testing and seeing how to implement the process and the synchronization between the (robot) controller and the SmartSight controller. The different parameters allow to set some timer and to follow the results. Please note that a vision configuration must be done before starting the simulation.

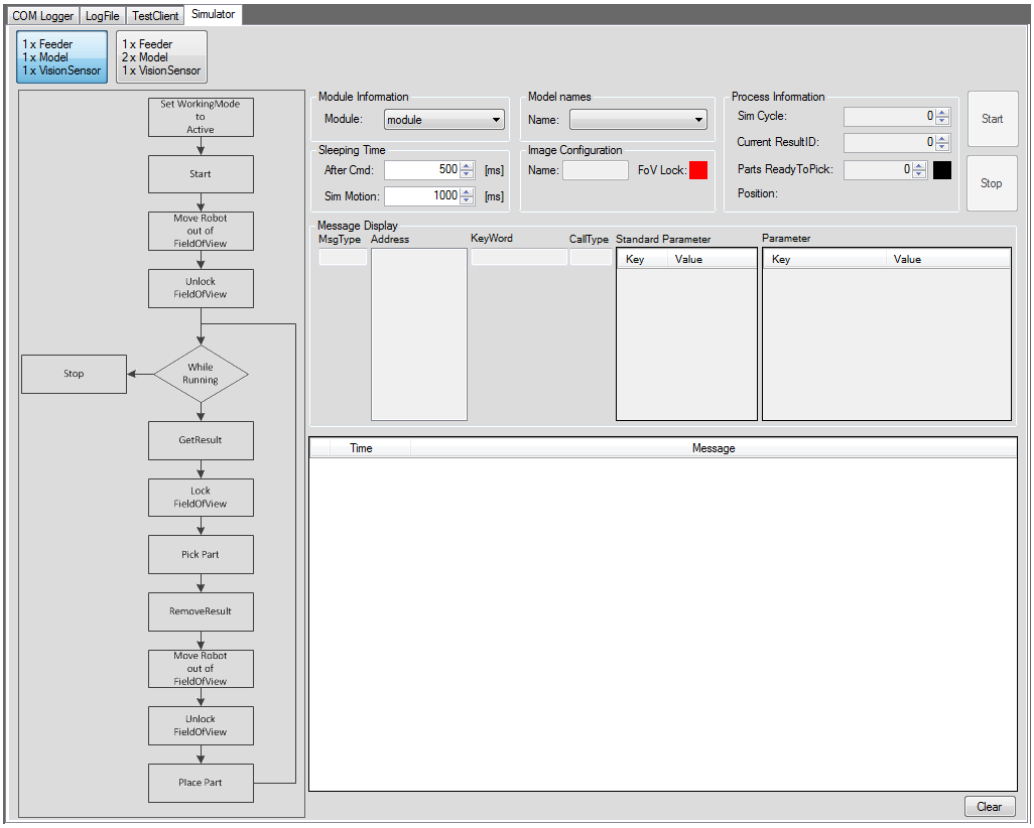


Figure 4-6 : Simulator tab

5. Asyview Communication protocol

5.1. TCP/IP parameters

The Asyview is implemented as a TCP/IP server operating as a slave to the machine. You will therefore need to implement a TCP Client to connect to the Asyview.

The default configuration for the Asyview server port (PROCESS) is as follows:

IP address	Subnet Mask	Port
192.168.0.70	255.255.255.0	7171

Table 5-1: Asyview PROCESS TCP/IP parameters

5.2. Protocol

The protocol is based on textual command. Here below is the general description of its syntax, followed by the different response modes available.

A message contains up to 5 blocks separated by a “white space” character.

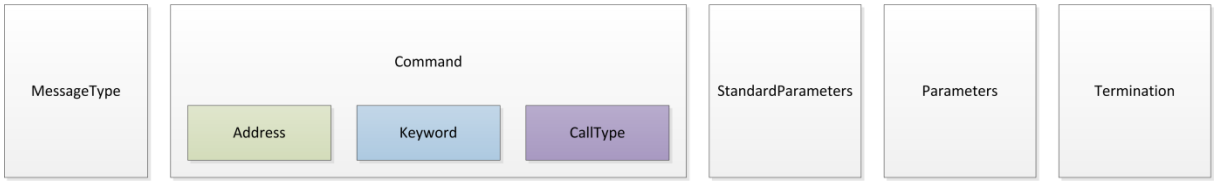
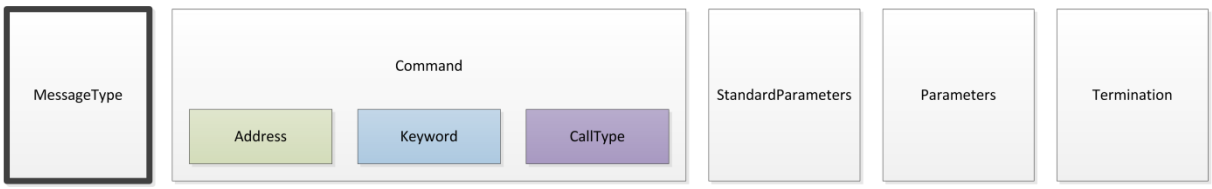


Figure 5-1: Protocol description

The syntax of the 5 different blocks is described here below.

5.2.1. MessageType

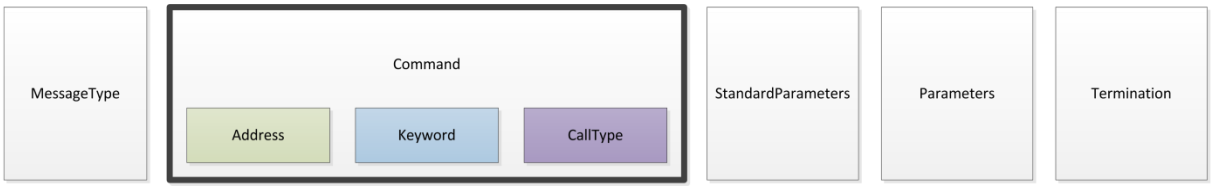


The MessageType helps to filter and trace request / answer in case of troubles (for example with the help of WireShark or with the COMLog file).

It indicated a new request / answer as following:

- Request begins with cmd/?
- Answer begins with ?/cmd

5.2.2. Command

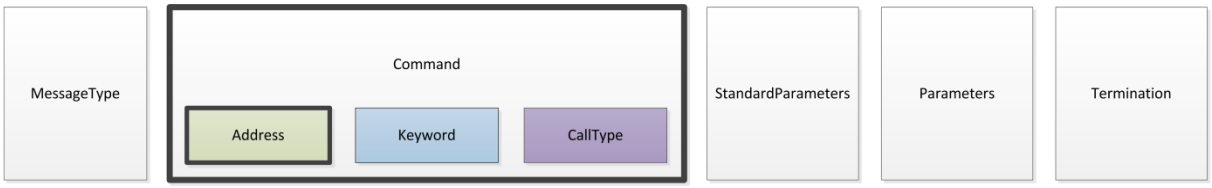


The command is subdivided in three blocks:

- The Address indicates to which device the instruction is addressed
- The Keyword indicates the action which should be executed on the addressed device
- The CallType indicates how the system should answer to the request

The separator between the Address and the Keyword is the character ":"

5.2.2.1. Command / Address



The Address indicates to which element the message is addressed. The separation between two elements are done by a "/"

Two diverse ways to write the Address are possible:

1. Full : the *name* of each element is used (AsyView/Cell/Module/Vision)
2. Short: the *index* of each element is used (a[0[/c[0]/m[0]/f[0])
    - a[0] => Asyview
    - c[0] => Cell (cell with the index 0)
    - m[0] => Module (module with the index 0)
    - i[0] => ImageAcquisition (ImageAcquisition with the index 0)
    - f[0] => Feeder (feeder with the index 0)

The Asyview is structured in a way allowing the building of different configurations of feeders and cameras that could work independently. Figure 5-2 shows the generic architecture of the Asyview.

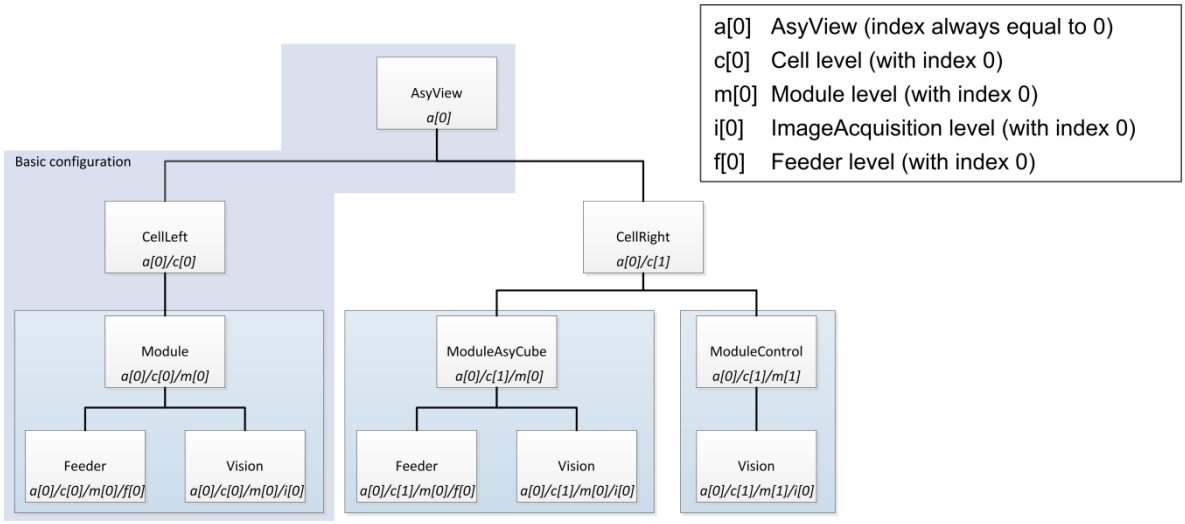
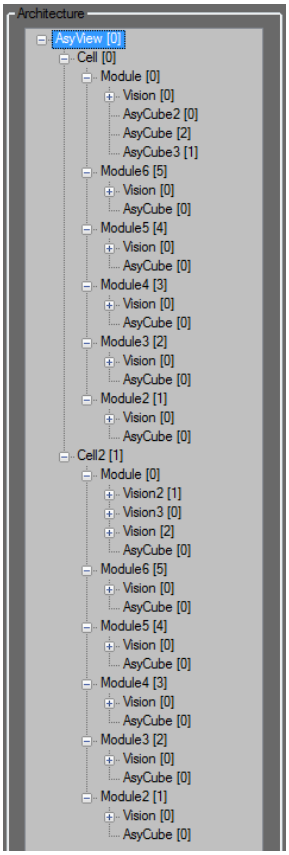
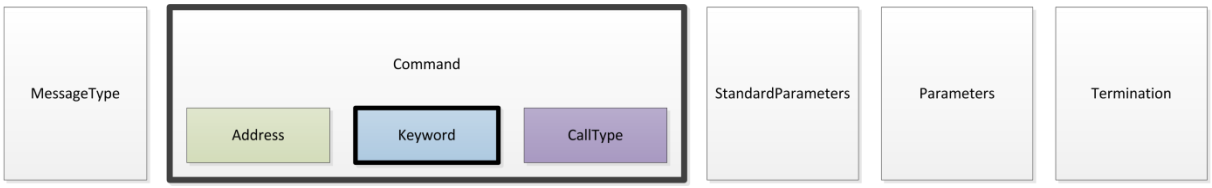


Figure 5-2: Architecture level of the Asyview

Also, you can find the indexes assigned to the elements in your system by looking at the tree structure of the Asyview in its interface:



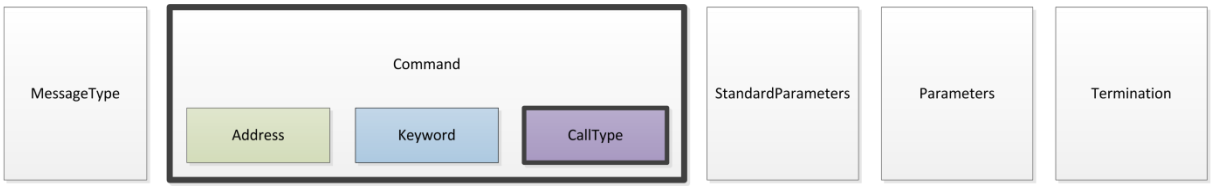
5.2.2.2. Command / Keyword



The Keyword indicates which action should be executed by the addressed element:

- Keyword for the standard process are for example
  - Start
  - Stop
  - SetParameter (WorkingMode / FieldOfView)
  - GetResult
  - RemoveResult
- All the Keywords are listed in Chapter 7. Asyview Instructions as well as in the TestClient.

5.2.2.3. Command / CallType



The CallType indicates how the system will answer to the caller.

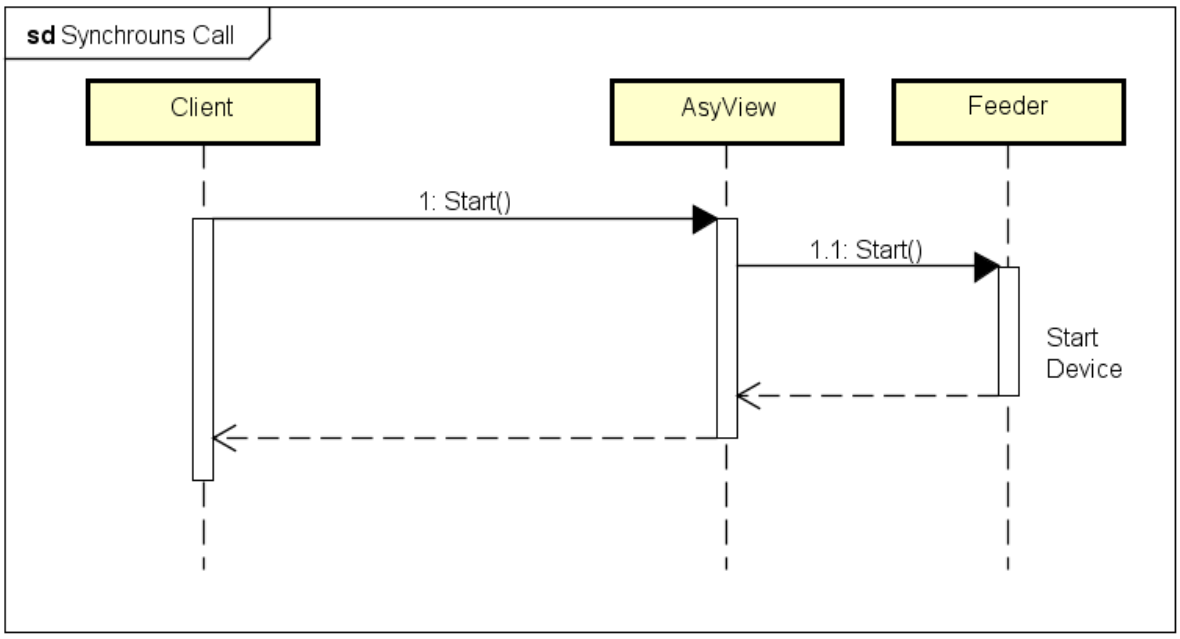
The system can answer in two different ways:

- Synchronous:
  - 1 x Request => 1 x Answer (at the end of the execution)
- Asynchronous:
  - 1 x Request => 1 x Answer (after validation) & 1 x Answer (end of execution)
  - 1 x Request => 1 x Answer (if validation fails)

IMPORTANT!

The system is never blocked. You can always send commands. There is no blocking call. Sometimes the action cannot be executed because the system is not in the correct state but the AsyView always accepts any request and answer.

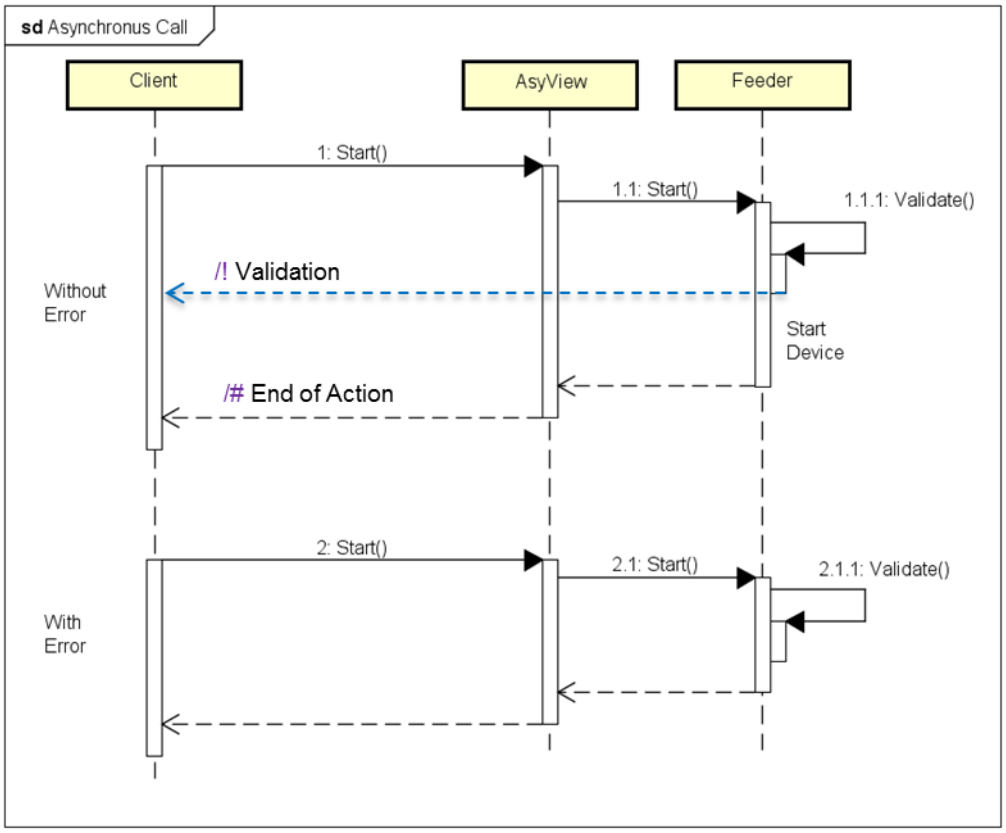
5.2.2.3.1. Command / CallType / Synchronous



With the Synchronous CallType the asyview will respond to each request with one single answer once the action is finished or if an error occurred. The request does not block other requests.

To use this CallType no sign or special character are between the Keyword and the StandardParameters.

5.2.2.3.2. Command / CallType / Asynchronous Call



With the Asynchronous CallType the asyview will respond to each request at least with one answer. The first answer will be sent directly after the reception of the command to confirm the validation of its parameters and the execution state.

- If the validation fails, only one answer will be sent (after the validation)
- If the validation succeeds, a first answer will be sent directly and a second one will be sent once the action is done.

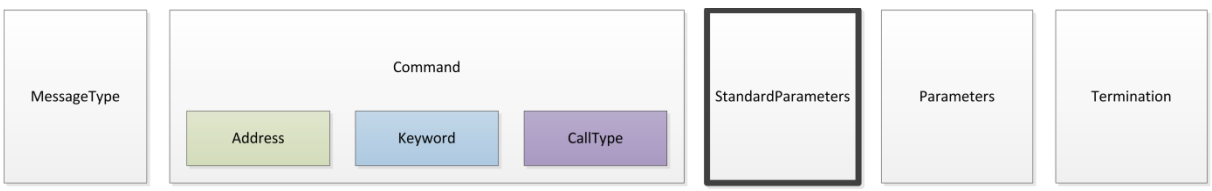
A request does not block other requests.

To use this CallType the following two characters have to be added after the Keyword: "/!"

The answer will have the CallType character

- "/!" for the validation
- "/#" for the end of action

5.2.3. Standard Parameters



Standard Parameters can be used in every message.

In a request:

- CID: Caller Identifier can be freely defined by the caller or used to differentiate the caller (integer).

In an answer:

- CID: Repeat the CID (if added in the request).
- PID: ProcessIdentifier => Unique internal identifier given by the Asyview
- Status: Indicates the success/state of the message
  - 102 => Processing (used in AsynchronousCall – CallType)
  - 200 => Success
  - 4xx => Error

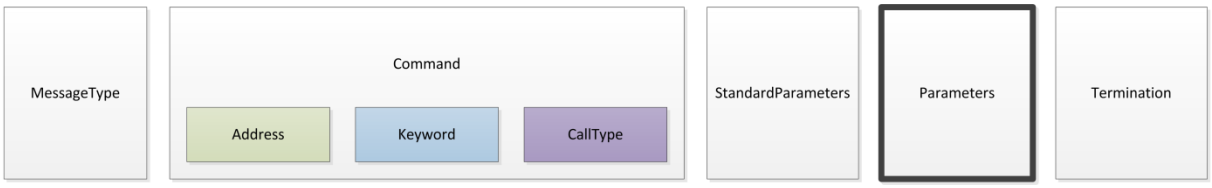
The syntax is the following:

- begins with the character «@»,
- use the character «=» to assign a value
- add «:» between two StandardParameters

NOTE:

If the status is equal to 4xx, the reply contains parameter ErrorMsg indicating additional information about the error. Also see log file for details.

5.2.4. Parameters



Parameters are specific to each Keywords (the description of all the instructions and their parameters is available in chapter 7. Asyview Instructions as well as in the TestClient) Note that some messages do not have any Parameters.

The syntax is the following:

- «=» to assign values;
- «:» between two Parameters.

5.2.5. Termination

To signal the end of a message, ASCII characters Carriage Return (CR : ASCII #13) and Line Feed (LF : ASCII #10) have to be added.

IMPORTANT!

If this termination signs are missing, the Asyview will not send any answer.

6. Asyview Methods

6.1. Modes

The Asyview controller has two modes: *Configuration* and *Process*. Their functions are as follows:

- *Configuration*:
  - Default mode
  - Allows recipes to be created and modified
    - ⇨ Adjusting image and lighting acquisition sequences
    - ⇨ Teaching vision models
    - ⇨ Adjusting Asycube parameters
    - ⇨ Selecting the operating mode
  - Loading and saving recipes
  - Calibration (calculation)
- *Process*:
  - Active mode: once this state is reached, the system launches the cycle to obtain the first available component (feeding by Asycube, then acquiring an image as soon as the field of view is unlocked)
  - Passive mode: the system is ready to receive image and then position requests.

The **Start** and **Stop** commands are used to switch from one mode to another.

Each *module* can be switched independently from one state to another. This means that one camera can be in *configuration* mode while a *process* is under way on another *module*.

Below are descriptions of the different usage methods concerning the Active and Passive *Process*, as well as the various calibration procedures for calibrating the fields of view.

All the instructions are listed in chapter 7.

6.2. Working Mode

There are two types of operation. The main difference between them is whether the feeder has to be automatically managed or not.

A distinction can therefore be made between the uses of

- a camera placed above an Asycube to prepare a list of available parts in order to send their position once the request is made,
- a control camera whose image acquisition is subject to a request (e.g. by moving the manipulator into the control field of view).

Their main characteristics are as follows:

- Active mode:
  - automatic management of the Asycube and image acquisition using information concerning synchronization with the pick & place process
  - automatic “feeding cycle – image acquisition – data processing” sequence until a result is obtained
  - during a position request: sending of the position of the first available part, even if the image analysis is not complete
  - camera/lighting synchronization
- Passive mode:
  - image acquisition on request
  - camera/lighting synchronization
  - no Asycube management

6.2.1. Active Working Mode

Figure 6-1 shows the standard interaction between a SmartSight module and the machine to synchronize the two cycles and transfer the position information.

Reminder: in the Active type, the Asyview manages the Asycube feeding system automatically. This means that, when an image is being processed, an initial step is executed to deliver the positions of the available parts as quickly as possible based on the configured criteria. These positions can be read even if the image processing is not complete, to enable the Pick&Place operations to be started as soon as possible. In the second step, once all the possible positions have been detected, the system evaluates also the distribution of the components on the surface of the Asycube to generate the appropriate vibration sequence. It is then ready to launch the feeding sequence as soon as all the positions have been deleted.

The simulator (Asyview interface) details the same method and describes the instructions used and the responses obtained.

There is a possibility to force the system to take a new picture before every pick. To do that, send a command to clear all the results after placing the part (see Figure 6-1). This can be useful when the position of the parts that are still on the platform may change between two picks because of an external perturbation (for example: parts move while picking another one, vibration of the overall system is inducing movement of parts on the platform).

In the following diagrams, the red boxes are action with communication with Asyview.

6.2.1.1. With only one model

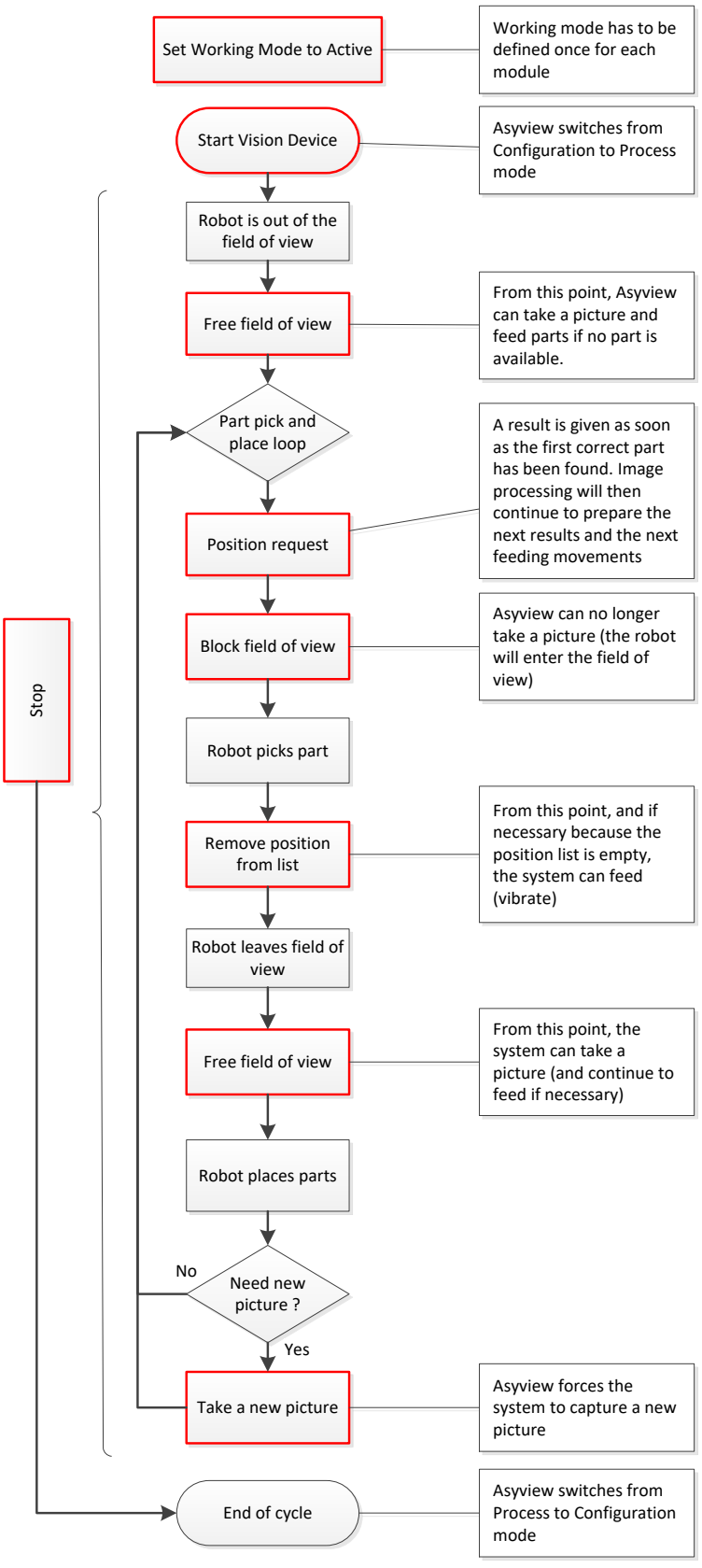


Figure 6-1: Schematic of the Active mode with one model

6.2.1.2. With Multi-models, without choosing the part to take

This mode of production is for example when you have 2 parts on the same surface and you want to take all the parts independently of the order.

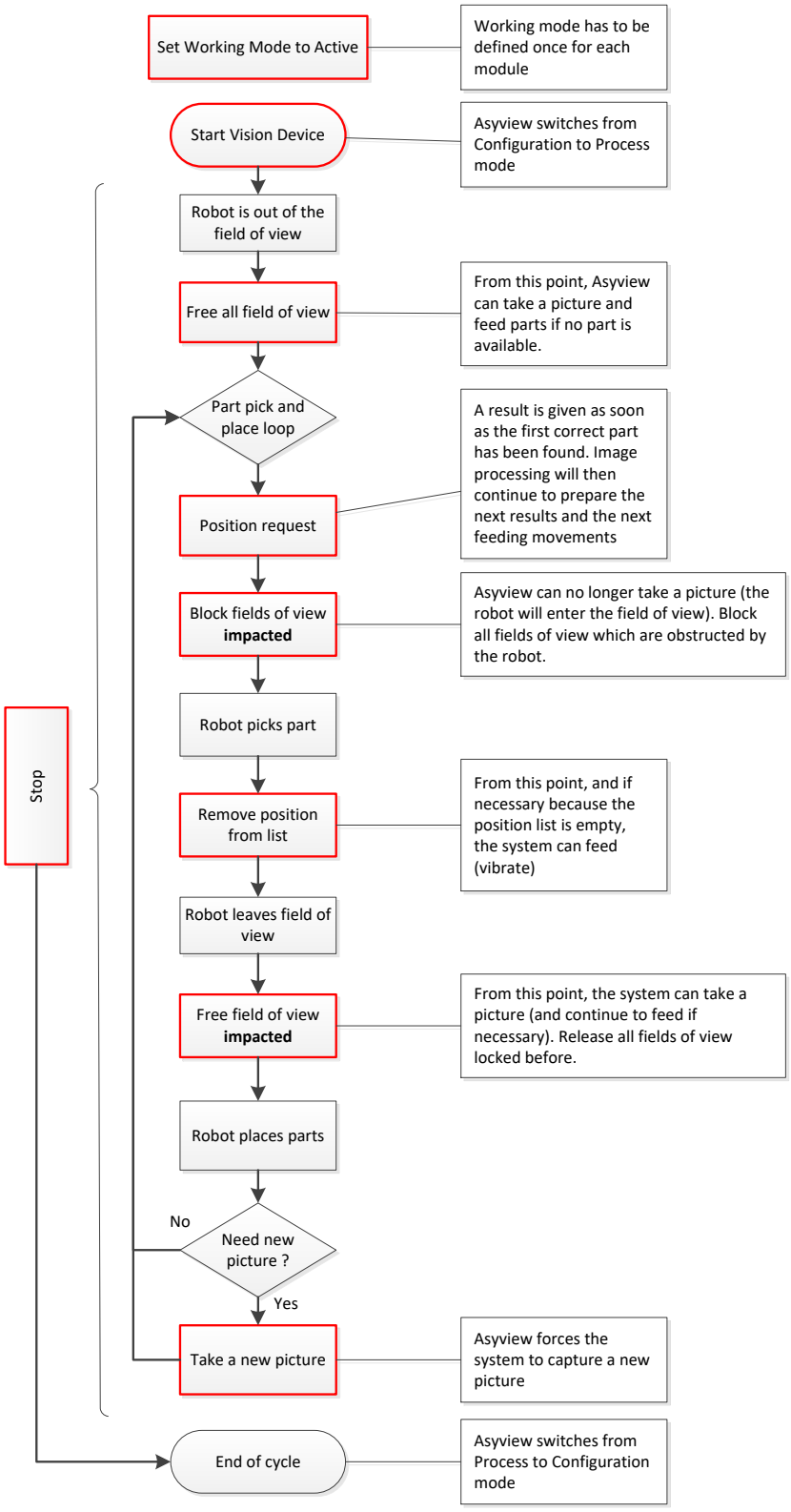


Figure 6-2: Schematic of the Active mode with multi-models, pick all parts

6.2.1.3. With Multi-models, with choosing the part to take

This mode of production is for example when you have 2 parts on the same surface and you want to take the parts in a specified order.

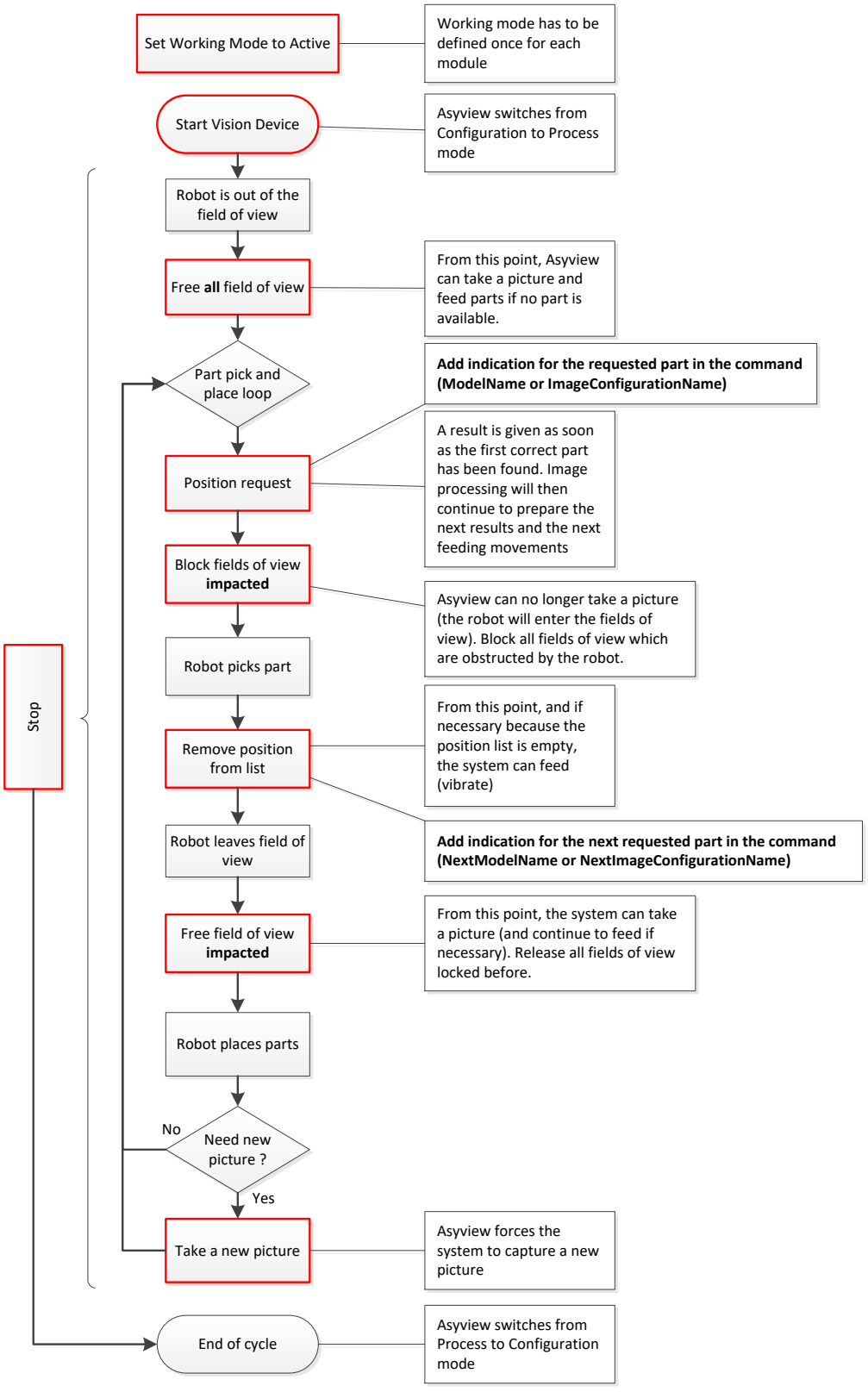


Figure 6-3: Schematic of the Active mode with multi-models, pick specified part

IMPORTANT!

When the Asyview has multi-models using various image configurations, be careful to block all the fields of views that are impacted by the arrival of the robot. Otherwise, the new acquisition can take place when the robot is in the field of view and the parts will not be detected.

When all the fields of view used are in the same geometric region (for example on the same Asycube and using all the resolution), it is possible to block (or release) all the fields of view in the same time. Just do not specify the name of the image configuration in the command.

6.2.2. Passive Working Mode

With the passive process, the vision system simply responds to requests and does not manage the Asycube at all. Its operating diagram is described in Figure 6-4.

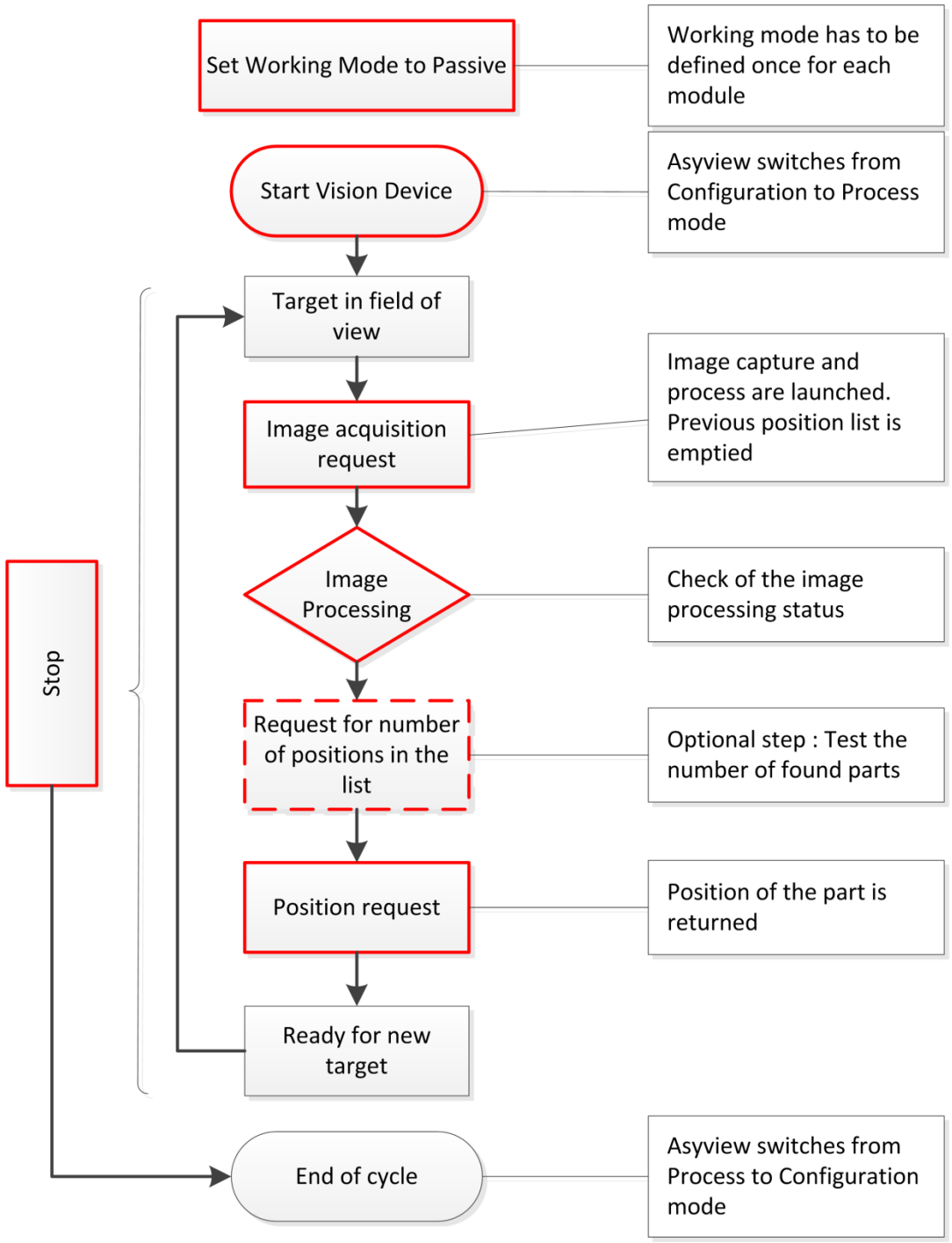


Figure 6-4: Schematic of the Passive mode (in red: Asyview/machine interactions)

6.3. Recipe

Different recipes can be created, saved and loaded corresponding to the different level in the architecture and with the extension as following:

Level	Extension	Content
Machine	*.vrec	The complete machine recipe
Cell	*.cavaf	With complete modules
Module	*.mavaf	Vision and feeder parameters
ImageAcquisition	*.iamod	Vision parameters
Feeder	*.fconf	Vibration parameters for all batch
	*.fproc	Process description

Table 6-1: recipes level

All the recipe are in the form of an xml file.

All these recipes can be saved and loaded through the HMI.

7. Asyview Instructions

Here below are listed all instructions implemented in the Asyview. The TestClient tab in the Asyview interface can be used to create the instructions and test them. The instructions are categorized by domain.

All the instructions are detailed in a table like the one below.

Instruction name	
Black banner → Standard Login in Test Client	
Grey banner → Advanced Login in Test Client	
Syntax:	Lists the different parameters that this command can have. Parameters in italic are optional. Command [Parameter1=<parameterType1 ParameterValue1>]:*[Parameter2=<parameterType2 ParameterValue2>]*
Architecture level:	Indicates which element(s) the command can be sent to Possible elements are: AsyView, Cell, Module, Feeder, ImageAcquisition.
Function:	Explains the purpose of the command.
Parameters:	*Lists the name of the parameters that the user must send and their description.*
Feedback parameters:	*Lists the name of the parameters from the reply and their description*
Example:	*Gives an example of how to use the command and the typical reply from the Asyview* → `Example command` ← `Example reply`
See also:	Refers to other instructions that are linked to this one

Table 2 – Description of the instruction table

7.1. Table of Instructions

7.2. Recipes

ClearTeaching		
Syntax:	ClearTeaching [ModelName=<string ModelName>]	
Architecture level:	Module	
Function:	Deletes the teaching for the specified model name.	
Parameters:	*ModelName*	*Name of the model that will be cleared.*
Feedback parameters:	*ImageAcquisitionManagerName*	*Name of the ImageAcquisitionManager linked to the model.*
	ModelName	*Name of the model, same as request.*
Example:	→ `cmd/? asyview/cell/module:clearteaching modelname=model1` ← `?/cmd asyview/cell/module:clearteaching @pid=727:@status=200 imageacquisitionmanagername=vision:modelname=model1`	
See also:	GetParameter [ModelNames]	

LoadFile (AsyView / Cell / Module)		
Syntax:	LoadFile [FilePath=<string FilePath>]	
Architecture level:	AsyView, Cell, Module	
Function:	Loads a recipe at the element level. The extension of the recipe depends on the level, see 6.3 Recipe.	
Parameters:	*FilePath*	*Full path to the recipe. The recipe must be located on the AsyView controller or a remote server accessible from the AsyView controller.* *The : in D:\Folder must be replaced by &#58 (see example)*
Feedback parameters:		
Example:	→ `cmd/? asyview:loadfile filepath=d&#58\asyrildata\recipes\recipe.vrec` ← `?/cmd asyview:loadfile @pid=170:@status=200`	
See also:	SaveFile (AsyView / Cell / Module)	

LoadFile (Feeder)		
Syntax:	LoadFile [ConfigurationFilePath=<string FilePath>] **OR** [ProcessFilePath=<string FilePath>]	
Architecture level:	Feeder	
Function:	Loads the specified recipe type (configuration or process) in the feeder. The extension of the recipe depends on the type, see 6.3 Recipe.	
Parameters:	*ConfigurationFilePath*	*Not in the same command as ProcessFilePath* *Full path to the feeder configuration (.fconf). The recipe must be located on the AsyView controller*

		or a remote server accessible from the AsyView controller. *The : in D:\Folder must be replaced by &#58 (see example)*
	ProcessFilePath	*Not in the same command as ConfigurationFilePath* *Full path to the process configuration (.fproc). The recipe must be located on the AsyView controller or a remote server accessible from the AsyView controller.* *The : in D:\Folder must be replaced by &#58 (see example)*
Feedback parameters:	*ConfigurationFilePath*	*Path to the file, same as sent.*
	ProcessFilePath	*Path to the file, same as sent.*
Example:	→ `cmd/? asyview/cell/module/asycube:loadfile @pid=123:@status=200 configurationfilepath=d&#58\asyrildata\recipes\feeder1.fconf` ← `?/cmd asyview/cell/module/asycube:loadfile @pid=123:@status=200 configurationfilepath=d&#58\asyrildata\recipes\feeder1.fconf`	
See also:	SaveFile (Feeder)	

LoadModelFile		
Syntax:	LoadModelFile [FilePath=<string FilePath>]:*[NewModelName=<string NewModelName>]*:[NewImageConfigurationName=<string NewImageConfigurationName>]	
Architecture level:	Module	
Function:	Loads a model recipe (.iamod) into the selected module with the specified name. As the maximum number of models is two, adding a third model will generate an error (function_not_possible). A model must be deleted before adding this model (see ClearTeaching)	
Parameters:	*FilePath*	*Full path to the recipe. The recipe must be located on the AsyView controller or a remote server accessible from the AsyView controller.* *The : in D:\Folder must be replaced by &#58 (see example)*
	NewModelName	*Optional parameter. If not specified, the name stored in the recipe file will be use.* *Name of the model* *If the name is already used in this module, an error will be returned.*
	NewImageConfigurationName	*Name of Image Configuration that will be linked to the loaded model*
Feedback parameters:		

Example:	→ *cmd/? asyview/cell/module:loadmodelfile filepath=d&#58\asyril\recipes\model1.iamod:newmodelname=model1:newimageconfigurationname=default* ← *?/cmd asyview/cell/module:loadmodelfile @pid=697:@status=200*
See also:	ClearTeaching **/** GetParameter [ModelNames] **/** SaveModelFile

SaveFile (AsyView / Cell / Module)		
Syntax:	SaveFile [FilePath=<string FilePath>]	
Architecture level:	AsyView, Cell, Module	
Function:	Saves a recipe at the element level (see 6.3 Recipe) in the specified folder.	
Parameters:	*FilePath*	*Full path to the recipe. The recipe will be located on the AsyView controller or a remote server accessible from the AsyView controller.* *The : in D:\Folder must be replaced by &#58 (see example).*
Feedback parameters:		
Example:	→ *cmd/? asyview:savefile filepath=d&#58\asyrildata\recipes\recipe.vrec* ← *?/cmd asyview:savefile @pid=206:@status=200*	
See also:	LoadFile (AsyView / Cell / Module)	

SaveFile (Feeder)		
Syntax:	SaveFile [ConfigurationFilePath=<string FilePath>] **OR** [ProcessFilePath=<string FilePath>]	
Architecture level:	Feeder	
Function:	Saves the specified recipe type (configuration or process) in the specified folder. The extension of the recipe depends on the type, see 6.3 Recipe.	
Parameters:	*ConfigurationFilePath*	*Not in the same command as ProcessFilePath* *Full path to the feeder configuration (.fconf). The recipe will be located on the AsyView controller or a remote server accessible from the AsyView controller.* *The : in D:\Folder must be replaced by &#58 (see example)*
	ProcessFilePath	*Not in the same command as ConfigurationFilePath* *Full path to the process configuration (.fproc). The recipe will be located on the AsyView controller or a remote server accessible from the AsyView controller.* *The : in D:\Folder must be replaced by &#58 (see example)*

Feedback parameters:	*ConfigurationFilePath*	*Path to the file, same as sent.*
	ProcessFilePath	*Path to the file, same as sent.*
Example:	→ *cmd/? asyview/cell/module/asycube:savefile @pid=119:@status=200 configurationfilepath=d&#58\asyrildata\recipes\feeder1.fconf* ← *?/cmd asyview/cell/module/asycube:savefile @pid=119:@status=200 configurationfilepath=d&#58\asyrildata\recipes\feeder1.fconf*	
See also:	LoadFile (Feeder)	

SaveModelFile		
Syntax:	SaveModelFile [FilePath=<string FilePath>]:[ModelName=<string ModelName>]	
Architecture level:	Module	
Function:	Saves the vision recipe of the specified model at the specified location. The extension of the recipe is .iamod.	
Parameters:	*FilePath*	*Full path to the recipe. The recipe will be located on the AsyView controller or a remote server accessible from the AsyView controller.* *The : in D:\Folder must be replaced by &#58 (see example).*
	ModelName	*Name of the model that will be saved.*
Feedback parameters:		
Example:	→ *cmd/? asyview/cell/module:savemodelfile filepath=d&#58\asyril\recipes\model1.iamod:modelname=model1* ← *?/cmd asyview/cell/module:savemodelfile @pid=565:@status=200*	
See also:	GetParameter [ModelNames] **/** LoadModelFile	

7.3. Calibration

AddPointPair		
Syntax:	AddPointPair [PositionX=<float PositionX>]:[PositionY=<float PositionY>]:[VisionPositionX=<float VisionPositionX>]:[VisionPositionY=<float VisionPositionY>]:[ImageConfigurationName=<string ImageConfigurationName>]	
Architecture level:	Module, Feeder	
Function:	Associates a pair of vision point to a pair of other points.	
Parameters:	*PositionX*	*X coordinate of the position*
	PositionY	*Y coordinate of the position*
	VisionPositionX	*X coordinate of the detected vision position*
	VisionPositionY	*Y coordinate of the detected vision position*
	ImageConfigurationName	*Name of the ImageConfiguration* *The system always has a "default" ImageConfiguration that can be used if multiple configurations are not needed.*
Feedback parameters:	*ImageConfigurationName*	*Name of the ImageConfiguration, same as sent parameter.*
Example:	→ `cmd/? asyview/cell/module:addpointpair positionx=1:positiony=1:visionpositionx=1:visionpositiony=1:image configurationname=default` ← `?/cmd asyview/cell/module:addpointpair @pid=379:@status=200 imageconfigurationname=default`	
See also:	GetParameter [CalibrationPointPair] **/** GetParameter [CalibrationPointPairNumber]	

Calibrate		
Syntax:	Calibrate [ImageConfigurationName=<string ImageConfigurationName>]	
Architecture level:	Module, Feeder, ImageAcquisition	
Function:	Executes the calibration and applies it to the targeted element.	
Parameters:	*ImageConfigurationName*	*Name of the ImageConfiguration* *The system always has a "default" ImageConfiguration that can be used if multiple configurations are not needed.*
Feedback parameters:	*Calibrated*	*Boolean, indicates if the calibration was successful.* *If False, no other feedback parameters are sent.*
	RMSError	*Value indicates the quality of the calibration*
	ImageConfigurationName	*Name of the ImageConfiguration, same as sent parameter.*

Example:	→ *cmd/? asyview/cell/module:calibrate imageconfigurationname=default* ← *?/cmd asyview/cell/module:calibrate @pid=385:@status=200 calibrated=true:rmserror=0:imageconfigurationname=default*
See also:	Uncalibrate

GetParameter [Calibration] (Module / Feeder)		
Syntax:	GetParameter [Name=Calibration]:[ImageConfigurationName=<string ImageConfigurationName>]	
Architecture level:	Module, Feeder	
Function:	Returns the state of the current calibration and the calibration parameters	
Parameters:	*Name*	*Calibration*
	ImageConfigurationName	*Name of the ImageConfiguration* *The system always has a "default" ImageConfiguration that can be used if multiple configurations are not needed.*
Feedback parameters:	*Name*	*CalibrationPointPairNumber*
	ImageConfigurationName	*Name of the ImageConfiguration, same as sent parameter.*
	Calibrated	*Boolean, indicates if the element is currently calibrated.*
	RMSError	*Value indicates the quality of the calibration.*
	RotationConstant	*Internal use only.*
	RotationSpace	*Internal use only.*
Example:	→ *cmd/? asyview/cell/module:getparameter name=calibration:imageconfigurationname=default* ← *?/cmd asyview/cell/module:getparameter @pid=111:@status=200 name=calibration:imageconfigurationname=default:calibrated=true:rmserror=0:rotationconstant=0:rotationspace=calibrated*	
See also:	SetParameter [Calibration] (Module / Feeder)	

GetParameter [Calibration] (Vision)		
Syntax:	GetParameter [Name=Calibration]:[ImageConfigurationName=<string ImageConfigurationName>]	
Architecture level:	ImageAcquisition	
Function:	Returns the state of the current calibration and the calibration parameters.	
Parameters:	*Name*	*Calibration*
	ImageConfigurationName	*Name of the ImageConfiguration* *The system always has a "default" ImageConfiguration that can be used if multiple*

		configurations are not needed.
Feedback parameters:	*Name*	*CalibrationPointPairNumber*
	ImageConfigurationName	*Name of the ImageConfiguration, same as sent parameter.*
	Calibrated	*Boolean, indicates if the element is currently calibrated.*
	ComputationMode	*Mode to compute the calibration.* *Usual value: Linear*
	ExposureTime	*Exposure time for the calibration picture*
	FeatureFinder	*Type of feature to detect* *Usual value: CheckerboardExhaustive*
	FiducialMark	*Type of fiducial marks* *Usual value: StandardRectangles*
	Output01	*Boolean, indicates if the output is used or not to take the calibration picture.*
	Output02	
	Output03	
	Output04	
	TileSizeX	*Size of the tile in X direction.*
	TileSizeY	*Size of the tile in Y direction.*
	RMSError	*Value indicates the quality of the calibration.*
Example:	→ `cmd/? asyview/cell/module/vision:getparameter name=calibration:imageconfigurationname=default` ← `?/cmd asyview/cell/module/vision:getparameter @pid=110:@status=200 name=calibration:imageconfigurationname=default:calibrated=false:computationmode=linear:exposuretime=5:featurefinder=checkerboardexhaustive:fiducialmark=standardrectangles:output01=true:output02=false:output03=false:output04=false:tilesizex=2:tilesizey=2:rmserror=0`	
See also:	SetParameter [Calibration] (Vision)	

GetParameter [CalibrationPointPair]		
Syntax:	GetParameter [Name=CalibrationPointPair]:[ImageConfigurationName=<string ImageConfigurationName>]:[Index=<int Index>]	
Architecture level:	Module, Feeder	
Function:	Returns the values of the chosen calibration point pair.	
Parameters:	*Name*	*CalibrationPointPair*
	ImageConfigurationName	*Name of the ImageConfiguration* *The system always has a "default"*

		ImageConfiguration that can be used if multiple configurations are not needed.
	Index	*Index of the calibration point. Starts at 0. Usually between 0 and 3.*
Feedback parameters:	*Name*	*CalibrationPointPair*
	ImageConfigurationName	*Name of the ImageConfiguration, same as sent parameter.*
	Index	*Index of the calibration point, same as the sent parameter.* *If the index doesn't exist, the highest index will be return.*
	PositionX	*X coordinate of the position*
	PositionY	*Y coordinate of the position*
	VisionPositionX	*X coordinate of the detected vision position*
	VisionPositionY	*Y coordinate of the detected vision position*
Example:	`→ cmd/? asyview/cell/module:getparameter name=calibrationpointpair:imageconfigurationname=default:index=3` `←?/cmd asyview/cell/module:getparameter @pid=93:@status=200 name=calibrationpointpair:imageconfigurationname=default:index=3: positionx=1:positiony=0:visionpositionx=1:visionpositiony=0`	
See also:	GetParameter [CalibrationPointPairNumber]	

GetParameter [CalibrationPointPairNumber]		
Syntax:	GetParameter [Name=CalibrationPointPairNumber]:[ImageConfigurationName=<string ImageConfigurationName>]	
Architecture level:	Module, Feeder	
Function:	Indicates how many calibration points are already defined. A calibration must have 4 points to be valid, otherwise it will not be possible to apply the calibration.	
Parameters:	*Name*	*CalibrationPointPairNumber*
	ImageConfigurationName	*Name of the ImageConfiguration* *The system always has a "default" ImageConfiguration that can be used if multiple configurations are not needed.*
Feedback parameters:	*Name*	*CalibrationPointPairNumber*
	ImageConfigurationName	*Name of the ImageConfiguration, same as sent parameter.*
	Number	*Integer, number of calibration points already defined. Usually between 0 and 4.*

Example:	→ *cmd/? asyview/cell/module:getparameter name=calibrationpointpairnumber:imageconfigurationname=default* ← *?/cmd asyview/cell/module:getparameter @pid=351:@status=200 name=calibrationpointpairnumber:imageconfigurationname=default:number=0*
See also:	GetParameter [CalibrationPointPair]

LoadCalibration		
Syntax:	LoadCalibration *[ImageConfigurationName=<string ImageConfigurationName>]*:[FilePath=<string FilePath>]	
Architecture level:	Module, Feeder, ImageAcquisition	
Function:	Loads manually a saved calibration for a specific element.	
Parameters:	*ImageConfigurationName* *(Module Level only)*	*Name of the ImageConfiguration* *The system always has a "default" ImageConfiguration that can be used if multiple configurations are not needed.*
	FilePath	*Optional parameter, possibility to save a calibration somewhere else and load it manually later.* *Full path to the file. The file will be located on the AsyView controller or a remote server accessible from the AsyView controller.* *File Extensions:* *Module: *.pcalib* *Feeder: *.fcalib* ImageAcquisition*: *.vcalib* *The : in D:\Folder must be replaced by &#58 (see example).*
Feedback parameters:	*ImageConfigurationName* *(Module Level only)*	*Name of the ImageConfiguration, same as sent parameter.*
	FilePath	*File Path, same as sent parameter.*
Example:	→ *cmd/? asyview/cell/module:loadcalibration imageconfigurationname=default:filepath=d&#58\asyril\calibration\cell\module\vision_default.pcalib* ← *?/cmd asyview/cell/module:loadcalibration @pid=54:@status=200 imageconfigurationname=default:filepath=d&#58\asyril\calibration\cell\module\vision_default.pcalib*	
See also:	SaveCalibration	

SaveCalibration	
Syntax:	SaveCalibration [ImageConfigurationName=<string ImageConfigurationName>]
Architecture level:	Module, Feeder, ImageAcquisition
Function:	Saves the calibration into the default folder (or a specific folder) so the calibration can be

	loaded automatically (or manually) on next system boot.	
Parameters:	*ImageConfigurationName* *(Module Level only)*	*Name of the ImageConfiguration* *The system always has a "default" ImageConfiguration that can be used if multiple configurations are not needed.*
	FilePath	*Optional parameter, possibility to save a calibration somewhere else and load it manually later.* *Full path to the file. The file will be located on the AsyView controller or a remote server accessible from the AsyView controller.* *File Extensions:* *Module: *.pcalib* *Feeder: *.fcalib* *Vision: *.vcalib* *The : in D:\Folder must be replaced by &#58 (see example).*
Feedback parameters:	*ImageConfigurationName* *(Module Level only)*	*Name of the ImageConfiguration, same as sent parameter.*
	FilePath	*Only if in the command, same as sent parameter.*
Example:	→ `cmd/? asyview/cell/module:savecalibration imageconfigurationname=default` ← `?/cmd asyview/cell/module:savecalibration @pid=47:@status=200 imageconfigurationname=default`	
See also:	LoadCalibration	

SetParameter [Calibration] (Module / Feeder)		
Syntax:	SetParameter [Name=Calibration]:[ImageConfigurationName=<string ImageConfigurationName>]:[RotationSpace=<**Calibrated**/Constant/Uncalibrated>]:[RotationConstant=<int RotationConstant>]	
Architecture level:	Module, Feeder	
Function:	Sets the calibration parameters for the specific ImageConfiguration	
Parameters:	*Name*	*Calibration*
	ImageConfigurationName	*Name of the ImageConfiguration* *The system always has a "default" ImageConfiguration that can be used if multiple configurations are not needed.*
Feedback parameters:	*Name*	*CalibrationPointPairNumber*
	ImageConfigurationName	*Name of the ImageConfiguration, same as sent parameter.*
Example:	→ `cmd/? asyview/cell/module/asycube:setparameter name=calibration:imageconfigurationname=default:rotationspace=calibrated:rotationconstant=0` ← `?/cmd asyview/cell/module/asycube:setparameter`	

	@pid=354:@status=200 name=calibration:imageconfigurationname=default
See also:	GetParameter [Calibration] (Module / Feeder)

SetParameter [Calibration] (Vision)		
Syntax:	SetParameter [Name=Calibration]:[ImageConfigurationName=<string ImageConfigurationName>]:[TileSizeX=<float TileSizeX>]:[TileSizeY=<float TileSizeY>]:[FiducialMark=<DotGridAxes/None/**StandardRectangles**>]:[FeatureFinder=<Checkerboard/**CheckerboardExhaustive**/DotGrid>]:[ComputationMode=<**Linear**/Linescan2DWarp/LinescanWarp/PerspectiveAndRadialWarp>]:[ExposureTime=<int ExposureTime>]:[Output01=<True/False>]:[Output02=<True/False>]:[Output03=<True/False>]:[Output04=<True/False>]	
Architecture level:	ImageAcquisition	
Function:	Sets the calibration parameters for the specific ImageConfiguration	
Parameters:	*Name*	*Calibration*
	ImageConfigurationName	*Name of the ImageConfiguration* *The system always has a "default" ImageConfiguration that can be used if multiple configurations are not needed.*
	TileSizeX	*Size of the tile in X direction.*
	TileSizeY	*Size of the tile in Y direction.*
	FiducialMark	*Type of fiducial marks* *Usual value: StandardRectangles*
	FeatureFinder	*Type of feature to detect* *Usual value: CheckerboardExhaustive*
	ComputationMode	*Mode to compute the calibration.* *Usual value: Linear*
	ExposureTime	*Exposure time for the calibration picture*
	Output01	*Boolean, indicates if the output is used or not to take the calibration picture.*
	Output02	
	Output03	
	Output04	
Feedback parameters:	*Name*	*CalibrationPointPairNumber*
Example:	→ *cmd/? asyview/cell/module/vision:setparameter name=calibration:imageconfigurationname=default:tilesizex=2:tilesizey=2:featurefinder=checkerboardexhaustive:fiducialmark=standardrectangles:computationmode=linear:exposuretime=5:output01=true:output02=false:output03=false:output04=false* ← *?/cmd asyview/cell/module/vision:setparameter @pid=358:@status=200 name=calibration*	
See also:	GetParameter [Calibration] (Vision)	

Uncalibrate		
Syntax:	Uncalibrate [ImageConfigurationName=<string ImageConfigurationName>]	
Architecture level:	Module, Feeder, ImageAcquisition	
Function:	Removes the calibration for the selected ImageConfiguration on the targeted element.	
Parameters:	*ImageConfigurationName*	*Name of the ImageConfiguration* *The system always has a "default" ImageConfiguration that can be used if multiple configurations are not needed.*
Feedback parameters:	*ImageConfigurationName*	*Name of the ImageConfiguration, same as sent parameter.*
Example:	→ `cmd/? asyview/cell/module:uncalibrated imageconfigurationname=default` ← `?/cmd asyview/cell/module:uncalibrate @pid=340:@status=200 imageconfigurationname=default`	
See also:	Calibrate	

7.4. Production

Acquire		
Syntax:	Acquire *[ModelName=<string ModelName>]*	
Architecture level:	ImageAcquisition	
Function:	Asks the system to take a picture and start an image analysis. This command is not available in active production mode.	
Parameters:	*ModelName*	*Optional parameter.* *If sent, only the picture(s) for the specified model will be taken and analysed.* *This parameter is useful only when working with multiple models.*
Feedback parameters:		
Example:	→ `cmd/? asyview/cell/module/vision:acquire` ← `?/cmd asyview/cell/module/vision:acquire @pid=556:@status=200`	
See also:		

ClearResults	
Syntax:	ClearResults [OnlyAcquire=<False/True>]
Architecture level:	Module
Function:	Clears the list of all remaining good results. Then, it will start with a vibration (OnlyAcquire=False) or an image acquisition and analysis (OnlyAcquire=True).

	Depending on when the command is sent, it is possible that the system will refuse it and send back a status=409. Then, the command must be sent again until the system accepts it.
Parameters:	*OnlyAcquire* — *Boolean, indicates if the next action is a vibration or image acquisition and process*
Feedback parameters:	
Example:	→ `cmd/? asyview:clearresults onlyacquire=true` ← `?/cmd asyview:clearresults @pid=480:@status=200`
See also:	GetResult

GetParameter [AvailableResults]		
Syntax:	GetParameter [Name=AvailableResults]:*[ModelName=<string ModelName>]*	
Architecture level:	Module	
Function:	Returns the number of good parts that are considered as available (coordinates not sent by a GetResult yet)	
Parameters:	*Name*	*AvailableResults*
	ModelName	*Optional parameter.* *Returns only the number of available parts of the specified model.* *This parameter is useful only when working with multiple models.*
Feedback parameters:	*Name*	*AvailableResults*
	AvailableResults	*Integer, indicates how many results are available.*
Example:	→ `cmd/? asyview/cell/module:getparameter name=availableresults` ← `?/cmd asyview/cell/module:getparameter @pid=411:@status=200 name=availableresults:availableresults=1`	
See also:	GetResult	

GetParameter [FieldOfView]		
Syntax:	GetParameter [Name=FieldOfView]:*[ImageConfigurationName=<string ImageConfigurationName]*	
Architecture level:	ImageAcquisition	
Function:	Returns the state of the FieldOfView for the specified ImageConfiguration. If no ImageConfiguration specified, the state of the FieldOfView of all ImageConfigurations will be returned.	
Parameters:	*Name*	*FieldOfView*
	ImageConfigurationName	*Optional parameter* *Name of the ImageConfiguration* *The system always has a "default"*

		ImageConfiguration that can be used if multiple configurations are not needed.
Feedback parameters:	*Name*	*FieldOfView*
	<ImageConfigurationName01>	*State of the field of view for each ImageConfiguration.* *Locked or Unlocked*
	<ImageConfigurationName02>	
	<…>	
Example:	→ *cmd/? asyview/cell/module/vision:getparameter name=fieldofview:imageconfigurationname=default* ← *?/cmd asyview/cell/module/vision:getparameter @pid=500:@status=200 name=fieldofview:default=unlocked*	
	→ *cmd/? asyview/cell/module/vision:getparameter name=fieldofview* ← *?/cmd asyview/cell/module/vision:getparameter @pid=502:@status=200 name=fieldofview:default=unlocked:smdpile=unlocked:smdface=unlocked*	
See also:	SetParameter [FieldOfView]	

GetParameter [Mode]		
Syntax:	GetParameter [Name=Mode]	
Architecture level:	Module	
Function:	Returns the mode of the module. See 6.1 Modes	
Parameters:	*Name*	*Mode*
Feedback parameters:	*Name*	*Mode*
	Mode	*Mode of the module.* *Configuration or Process.*
Example:	→ *cmd/? asyview/cell/module:getparameter name=mode* ← *?/cmd asyview/cell/module:getparameter @pid=419:@status=200 name=mode:mode=process*	
See also:	Start **/** Stop	

GetParameter [ModelNames]		
Syntax:	GetParameter [Name=ModelNames]	
Architecture level:	Module	
Function:	Returns the names of all the models currently loaded on the module. The maximum number of models is currently limited to two.	
Parameters:	*Name*	*ModelNames*
Feedback	*Name*	*Mode*

parameters:	*Model01*	*Returned only if existing.* *Name of the 1st model.*
	Model02	*Returned only if existing.* *Name of the 2nd model.*
Example:	→ *cmd/? asyview/cell/module:getparameter name=modelnames* ← *?/cmd asyview/cell/module:getparameter @pid=446:@status=200 name=modelnames:modelname01=model1:modelname02=model2*	
See also:		

GetParameter [PartsOnFeeder]		
Syntax:	GetParameter [Name=PartsOnFeeder]:*[ModelName=<string ModelName>]*	
Architecture level:	Module	
Function:	Returns the total number of parts detected by the vision (good and bad) located on the feeder.	
Parameters:	*Name*	*PartsOnFeeder*
	ModelName	*Optional parameter.* *Returns only the number of parts of the specified model.* *This parameter is useful only when working with multiple models.*
Feedback parameters:	*Name*	*PartsOnFeeder*
	PartsOnFeeder	*Integer, indicates the number of parts on the feeder.*
	AnalyzeRunning	*Boolean, indicates if the analysis is still running or finished.*
Example:	→ *cmd asyview/cell/module:getparameter name=partsonfeeder:modelname=model1* ← *?/cmd asyview/cell/module:getparameter @pid=456:@status=200 name=partsonfeeder:modelname=model1:partsonfeeder=10:analyzerunning=false*	
See also:		

GetParameter [ProcessManagerState]		
Syntax:	GetParameter [Name= ProcessManagerState]:[ModelName=<string ModelName>]	
Architecture level:	Module	
Function:	Returns the state of the process manager for a specified ModelName. Used mostly in passive mode to know if the image analysis is finished.	
Parameters:	*Name*	*ProcessManagerState*
	ModelName	*Name of the model*
Feedback	*Name*	*ProcessManagerState*

parameters:	*ProcessManagerState*	*State of the ProcessManager. IDLE or Running.*
	ImageAcquisitionManagerName	*Name of the ImageAcquisitionManager linked to this ProcessManager.*
	ModelName	*Name of the model, same as request.*
Example:	→ *cmd/? asyview/cell/module:getparameter name=processmanagerstate:modelname=model1* ← *?/cmd asyview/cell/module:getparameter @pid=414:@status=200 name=processmanagerstate:state=idle:imageacquisitionmanagername=vision:modelname=model1*	
See also:	GetResult **/** Acquire **/** SetParameter [WorkingMode]	

GetParameter [States]		
Syntax:	GetParameter [Name=States]	
Architecture level:	AsyView, Cell, Module, Feeder, ImageAcquisition	
Function:	Informs about the general state of the element.	
Parameters:	*Name*	*States*
Feedback parameters:	*Name*	*States*
	ConnectionState	*Element connection state (connected / disconnected)*
	DataState	*Element data state (loaded / unloaded)*
	Mode	*Element mode (configuration / production)*
	State	*Element state (IDLE / Running)*
Example:	→ *cmd/? asyview:getparameter name=states* ← *?/cmd asyview:getparameter @pid=166:@status=200 name=states:connectionstate=connected:datastate=loaded:mode=configuration:state=idle*	
See also:	Start **/** Stop	

GetParameter [WorkingMode]		
Syntax:	GetParameter [Name=WorkingMode]	
Architecture level:	Module	
Function:	Returns the working mode of the module. See 6.2 Working Mode	
Parameters:	*Name*	*WorkingMode*
Feedback parameters:	*Name*	*WorkingMode*
	Mode	*WorkingMode of the module.* *Active or Passive.*

Example:	→ *cmd/? asyview/cell/module:getparameter name=workingmode* ← *?/cmd asyview/cell/module:getparameter @pid=420:@status=200 name=workingmode:workingmode=active*
See also:	SetParameter [WorkingMode]

GetResult		
Syntax:	GetResult *[ModelName=<string ModelName>]*	
Architecture level:	Module	
Function:	Sends the result of the next good part to be picked. Each result will only be sent once. The next request will return the next good part in the list. If no results are available, the system will wait until a result is ready and then send the result.	
Parameters:	*ModelName*	*Optional parameter.* *The returned result will have the requested ModelName. If no result is available and analysis is finished, the system will start a new sequence (vibration and vision) to find a good part.* *This parameter is useful only when working with multiple models.*
Feedback parameters:	*ID*	*ID of the current result. Necessary to remove the result later.*
	X	*X coordinate of the result.*
	Y	*Y coordinate of the result.*
	Z	*Z coordinate of the result. Always 0 in the SmartSight*
	Theta	*Theta angle of the result (in radian)*
	ModelName	*Name of the model.* *This parameter is useful only when working with multiple models.*
	ImageConfigurationName	*Name of the ImageConfiguration linked to this result.*
Example:	→ *cmd/? asyview/cell/module:getresult* ← *?/cmd asyview/cell/module:getresult @pid=406:@status=200 id=3:x=1104.93051559237:y=341.209515104439:z=0:theta=0:modelname=model1:imageconfigurationname=default*	
See also:	RemoveResult	

RemoveResult	
Syntax:	RemoveResult [ID=<int value>]:[NextModelName=<string ModelName>]
Architecture level:	Module

Function:	Indicates to the Asyview that the result of the given ID can be removed from the pending results list, because the part was picked. This function has to be sent after the part has been removed from the platform of the Asycube.	
Parameters:	*ID*	*Indicates the result ID to remove (had to be saved when received the GetResult response).*
	NextModelName	*Optional parameter.* *Indicates the next ModelName required to allow anticipating a new feeding of Asycube and image capture if no part of the ModelName is available.* *This parameter is useful only when working with multiple models.*
Feedback parameters:	*NextModelname*	*Only if sent in the command.*
Example:	*→ cmd/? AsyView/cell/module:RemoveResult/! ID=1:NextModelName=model1* *← ?/cmd AsyView/cell/module:RemoveResult/# @pid=46:@status=200 NextModelName=model1*	
See also:	GetResult	

SetParameter [FieldOfView]		
Syntax:	SetParameter [Name=FieldOfView]:*[ImageConfigurationName=<string ImageConfigurationName]*:[Locked=<False/True>]	
Architecture level:	ImageAcquisition	
Function:	Defines the state of the FieldOfView for the specified ImageConfiguration. If no ImageConfiguration specified, the state of the FieldOfView of all ImageConfigurations will be changed to the defined state. Locking a FieldOfView means that the system is not allowed to take any pictures. Usually it is used to prevent taking a bad picture when for example the robot in in front of the camera.	
Parameters:	*Name*	*FieldOfView*
	ImageConfigurationName	*Optional parameter.* *Name of the ImageConfiguration.* *The system always has a "default" ImageConfiguration that can be used if multiple configurations are not needed.*
	Locked	*Boolean, indicates if the field of view must be locked or not.*
Feedback parameters:	*Name*	*FieldOfView*
	Locked	*Boolean, same value as the request.*
Example:	*→ cmd/? asyview/cell/module/vision:setparameter name=fieldofview:locked=false* *← ?/cmd asyview/cell/module/vision:setparameter @pid=510:@status=200 name=fieldofview:locked=false*	
See also:	GetParameter [FieldOfView]	

SetParameter [WorkingMode]		
Syntax:	SetParameter [Name=WorkingMode]:[WorkingMode=<Active/Passive>]	
Architecture level:	Module	
Function:	Defines the working mode of the module. See 6.2 Working Mode	
Parameters:	*Name*	*WorkingMode*
	WorkingMode	*WorkingMode of the module.* *Active or Passive.*
Feedback parameters:	*Name*	*WorkingMode*
Example:	→ *cmd/? asyview/cell/module:setparameter name=workingmode:workingmode=active* ← *?/cmd asyview/cell/module:setparameter @pid=463:@status=200 name=workingmode*	
See also:	GetParameter [WorkingMode]	

Start	
Syntax:	Start
Architecture level:	AsyView, Cell, Module
Function:	Starts the targeted element (and all sub-elements). This will switch the elements from configuration mode to production mode.
Parameters:	
Feedback parameters:	
Example:	→ *cmd/? asyview:start* ← *?/cmd asyview:start @pid=170:@status=200*
See also:	Stop **/** GetParameter [Mode]

Stop	
Syntax:	Stop
Architecture level:	AsyView, Cell, Module
Function:	Stops the targeted element (and all sub-elements). This will switch the systems from production mode to configuration mode.
Parameters:	
Feedback parameters:	

Example:	→ *cmd/? asyview:stop* ← *?/cmd asyview:stop @pid=170:@status=200*
See also:	Start **/** GetParameter [Mode]

7.5. Utilities

ExecuteCmd		
Syntax:	ExecuteCmd [Cmd=<string Cmd>]	
Architecture level:	Feeder	
Function:	Sends a command directly to the Asycube. The list of available commands can be found in the Asycube Programming Guide. It is only possible to send Asycube commands in configuration mode.	
Parameters:	*Cmd*	*Command to send to the Asycube. See Asycube Programming Guide.*
Feedback parameters:	*Answer*	*Answer sent by the Asycube. See Asycube Programming Guide.*
Example:	→ *cmd/? asyview/cell/module/asycube:executecmd cmd=ca1000* ← *?/cmd asyview/cell/module/asycube:executecmd @pid=491:@status=200 answer={ca01060}*	
See also:	GetParameter [Mode]	

GetParameter [SaveImagesState]		
Syntax:	GetParameter [Name=SaveImagesState]	
Architecture level:	Module	
Function:	Indicates if the save of images is activated.	
Parameters:	*Name*	*SaveImagesState*
Feedback parameters:	*Name*	*SaveImagesState*
	Activated	*Boolean, indicate if it is activated.*
Example:	→ *cmd/? asyview/cell/module:getparameter name=saveimagesstate* ← *?/cmd asyview/cell/module:getparameter @pid=732:@status=200 name=saveimagesstate:activated=false*	
See also:	StartSaveImages **/** StopSaveImages	

GetParameter [Version]	
Syntax:	GetParameter [Name=Version]
Architecture level:	AsyView
Function:	Informs the user about the version of the AsyView Software.

Parameters:	*Name*	*Version*
Feedback parameters:	*Name*	*Version*
	Version	*Version of the AsyView Software*
Example:	→ *cmd/? asyview:getparameter name=version* ← *?/cmd asyview:getparameter @pid=168:@status=200 name=version:version=4.2.0.15144*	
See also:		

Reset	
Syntax:	Reset
Architecture level:	AsyView, Cell, Module, Feeder, ImageAcquisition
Function:	Reset the element (and all sub-elements). In configuration mode, this will reset the states of the elements in case an error occurred.
Parameters:	
Feedback parameters:	
Example:	→ *cmd/? asyview:reset* ← *?/cmd asyview:reset @pid=170:@status=200*
See also:	Start **/** Stop

SaveLatestImages		
Syntax:	SaveLatestImages [FolderPath=<string FolderPath>]:[Format=<string Format>]	
Architecture level:	AsyView, Cell, Module	
Function:	Save the images from the latest analysis. Saving images reduces the performance of the system and reduces the lifespan of the SSD.	
Parameters:	*FolderPath*	*Full path to the folder. The folder will be located on the AsyView controller or a remote server accessible from the AsyView controller.* *The : in D:\Folder must be replaced by &#58 (see example).*
	Format	*Image format. Must be one of these:* • *BMP : Source image (uncompressed and not annotated)* • *JPEG : Processed image (compressed and with good/bad part information)* • *ALL : Save both images*
Feedback parameters:		

Example:	→ *cmd/? asyview:savelatestimages folderpath=d&#58\asyril\imagedatabase:format=bmp* ← *?/cmd asyview:getparameter @pid=211:@status=200*
See also:	StartSaveImages**/** StopSaveImages

StartSaveImages		
Syntax:	StartSaveImages [FolderPath=<string FolderPath>]:[Format=<string Format>]:[Number=<int Number>]	
Architecture level:	AsyView, Cell, Module	
Function:	Saves the images for the next <Number> analysis. Saving images reduces the performance of the system and reduces the lifespan of the SSD.	
Parameters:	*FolderPath*	*Full path to the folder. The folder will be located on the AsyView controller or a remote server accessible from the AsyView controller.* *The : in D:\Folder must be replaced by &#58 (see example).*
	Format	*Image format. Must be one of these:* • *BMP : Source image (uncompressed and not annotated)* • *JPEG : Processed image (compressed and with good/bad part information)* • *ALL : Save both images*
	Number	*Optional parameter* *Defines the number of analysis saved until it stops automatically. If omitted, no automatic stop.*
Feedback parameters:		
Example:	→ *cmd/? asyview:startsaveimages folderpath=d&#58\asyril\imagedatabase:format=bmp:number=10* ← *?/cmd asyview:startsaveimages @pid=214:@status=200*	
See also:	GetParameter [SaveImagesState] **/** SaveLatestImages **/** StopSaveImages	

StopSaveImages	
Syntax:	StopSaveImages
Architecture level:	AsyView, Cell, Module
Function:	Stop the current save images process if any.
Parameters:	
Feedback parameters:	

Example:
→ *cmd/? asyview:stopsaveimages*
← *?/cmd asyview:stopsaveimages @pid=216:@status=200*

See also: GetParameter [SaveImagesState] **/** StartSaveImages **/** SaveLatestImages

8. Technical Support

8.1. To help us provide the best service …

Have you read the FAQ and the check-list and still not found an answer your questions? Before contacting us, please note down the following information concerning your product:

- Serial number and product key for your equipment
- Software version(s) used
- Error message, alarm, or visual signals displayed by the interface.

8.2. Contact

You can find extensive information on our website: www.asyril.com

You can also contact our Customer Service department:

support@asyril.com

Revision table

Rev.	Date	Author	Comments
B	27.03.2015	DaM	Initial version for Asyview V3.0
B1	24.08.2016	DaM	Minor corrections (architecture, product and documentation name)
B2	12.06.2017	WaJ	Minor modification (Chapter 4.2)
C	16.01.2018	HsJ	Modifications for new version AsyView 4
C1	29.03.2018	HsJ	Modifications for new computer model
C2	29.07.2019	CoG/ GuB	Added instruction descriptions and changes linked to Asyview 4.2.0 (Asyril licencing system)

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