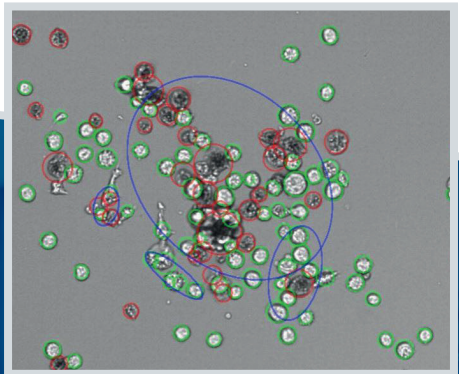
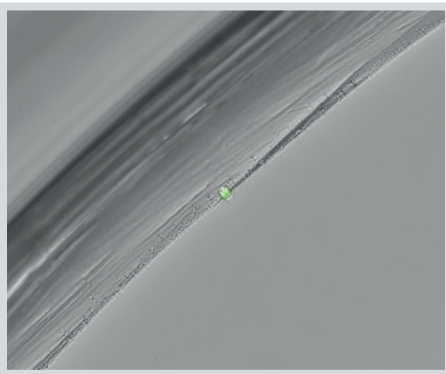


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# SYNETEC

TECHNICAL INFORMATION  
CLD LINE



**CELLAVISTA**

**NYONE**

# CELLAVISTA® & NYONE®

## Technical Specifications

Technical Specifications					
Imager		CELLAVISTA 4 CLD		NYONE	
Version		Basic	Highend	Basic	Highend
Illumination	Brightfield (LED 50.000 hour life time)	✓	✓	✓	✓
	6 fluorescence channels	-	✓	-	Opt.
	4 fluorescence channels	-	-	Opt.	✓
Resolution	2x (NA 0.08, Resolution ~ 3.3 µm ppx)	Opt.	Opt.	Opt.	Opt.
	4x (NA 0.16, Resolution ~ 2 µm ppx)	✓	✓	Opt.	✓
	10x (NA 0.3, Resolution ~ 1.1 µm ppx)	✓	✓	✓	✓
	20x (NA 0.5, Resolution ~ 0.53 µm ppx)	Opt.	Opt.	Opt.	✓
	40x (NA 0.75, Resolution ~ 0.35 µm ppx)	Opt.	Opt.	Opt.	Opt.
	Upgrade possible	✓	-	-	-
	Alternative objective lenses 10x (NA 0.4, Resolution ~ 0.66 µm ppx) 20x (NA 0.75, Resolution ~ 0.35 µm ppx) extensive Nikon lens selection available				
Method of measurement	Digital image recognition				
Culture system	Microwell plates (SBS formats 6, 12, 24, 48, 96 and 384), Microscope slides and Culture dishes				
Camera	Type	Progressive Scan CMOS			
	Pixel density	3056 x 3056	2048 x 2048		
		9.33 megapixel	4.19 megapixel		
	Pixel size	5.5 x 5.5 µm			
	Full well capacity	13 000 (1x1)			
	Read noise	13 e-			
	Dark current	4 e-/pix/s			
	Quantum Efficiency	~55 %	~70 %		
	Digital output	8 bit			
	Video output	Mono 8, Mono 12, Mono 12 Packed, YUV 4:2:2 Packed			
	Refresh rate	60/90 fps			
Measurement time	96-well, full well scan, brightfield, 4x objective	2 minutes	4 minutes		
	384-well, full well scan, brightfield, 4x objective	3 minutes	6.5 minutes		
Operating temperature	20°C - 28°C (68°F - 84.4°F)				
Operating humidity	50 - 85 % relative humidity (Non-considering)				
Dimensions (height/width/depth)		407 / 625 / 530 [mm]		350 / 310 / 620 [mm]	
Weight		61 kg (134 lbs)		35 kg (77 lbs)	
Energy requirements	100 - 240 V AC, 50 - 60 Hz, 295 W maximum				

# CELLAVISTA® & NYONE®

## Image Capabilities

### Imaging Capabilities

	CELLAVISTA 4 CLD Basic	CELLAVISTA HighEnd	NYONE BF	NYONE FL	NYONE HighEnd
<b>Whole well imaging</b>	Yes	Yes		Yes	Yes Yes
<b>Illumination/ Fluorescence</b>	White light	White light and 6 fluorescence excitation/ emission channels	White light	White light 4, (4) fluorescence excitation sources, up to 6 fluorescence emission channels	White light 3, (4) fluorescence excitation sources, up to 6 fluorescence emission channels
<b>External Barcode Reader</b>	Option	Option	Option	Option	Option
<b>API (Plate Stacker)</b>	Yes	Yes	Yes	Yes	Yes
<b>Batch Processing</b>	Option	Option	Option	Option	Option
<b>Autofocus System</b>	1000 fps	1000 fps	500 fps	500 fps	500 fps
<b>Illumination System</b>	Electronically switched	Electronically switched	Electronically switched	Electronically switched	Electronically switched
<b>Special Features</b>	<ul style="list-style-type: none"> <li>Improved harmonic motion for imaging without agitation during plate scan</li> <li>Ultrafast multiplex imaging</li> <li>Redesigned highly sensitive fluorescence optics</li> <li>HCS-grade lenses</li> <li>3 times more sensitive: shorter exposure times, faster measurements (high throughput), less bleaching</li> <li>Autofocus performance twice as fast as CELLAVISTA RS</li> </ul>				
	<ul style="list-style-type: none"> <li>Laser autofocus system</li> <li>Image analysis during measurement</li> <li>Combination of brightfield and fluorescence analysis</li> <li>Automation friendly design</li> </ul>				

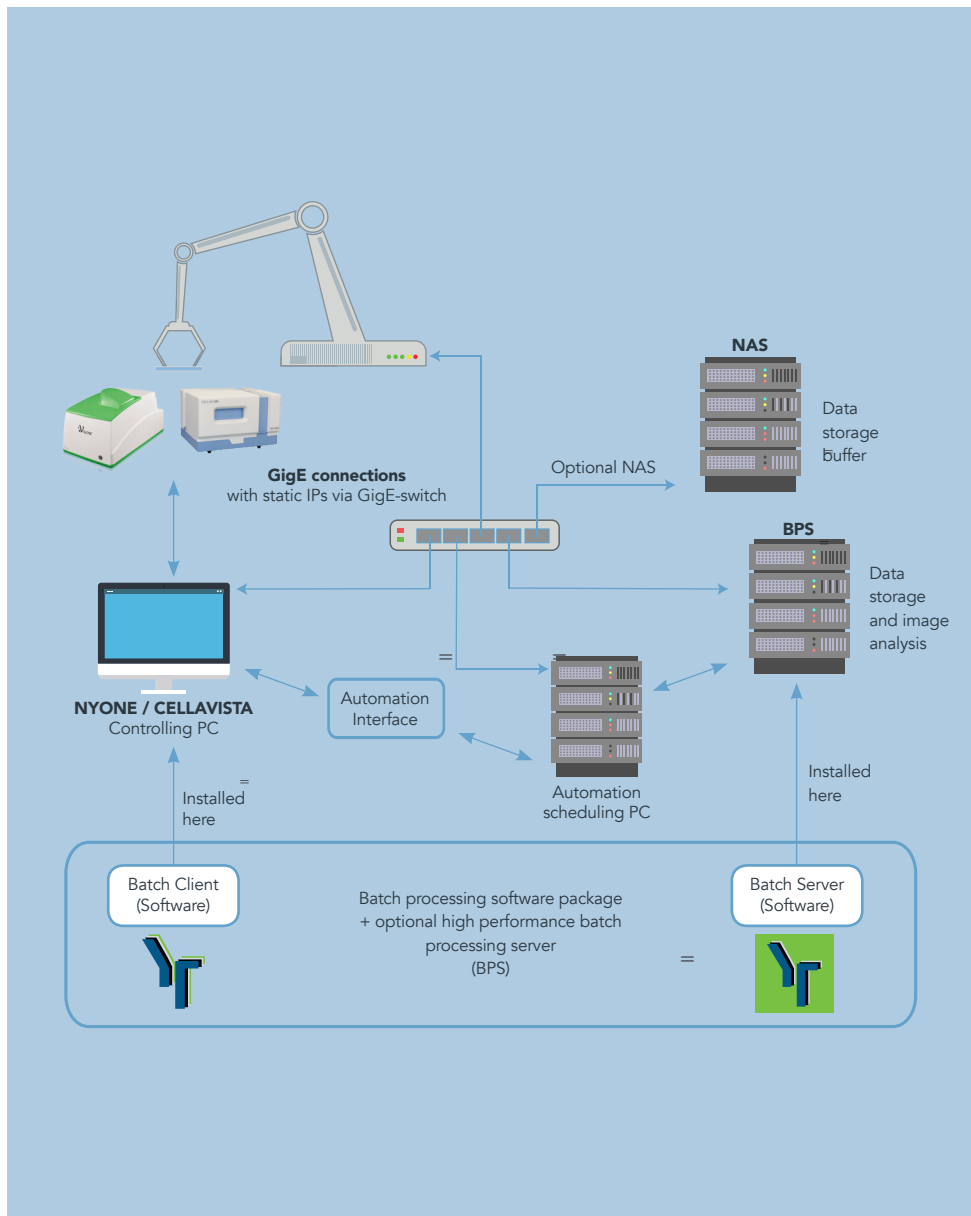
# SYNENTEC High Throughput Systems

## Automation and batch processing features

	Automation Server	Batch Processing Server	Batch Processing Client
		Optional high performance PC	
<b>General purpose</b>	Automated measurements using third party software	High performance image processing and exporting increasing throughput of automation	Control module of batch processing server
<b>Interface (Protocol)</b>	IP-Address/ Port	IP-Address/ Port	IP-Address/ Port
<b>Connection</b>	GigE	GigE	GigE
<b>Features</b>	<ul style="list-style-type: none"> <li>• Measurements</li> <li>• Image processing</li> <li>• Exporting</li> </ul>	<ul style="list-style-type: none"> <li>• Parallel processing of measurements</li> <li>• Live Folder</li> <li>• Automation client</li> <li>• Reprocessing of old experiments</li> <li>• Updating IP-settings</li> <li>• Processing of third party images</li> </ul>	<ul style="list-style-type: none"> <li>• Detailed control of Batch processing server</li> <li>• Reprocess</li> <li>• Export</li> <li>• Process and export</li> <li>• General setup</li> <li>• Remote control of CELLAVISTA &amp; NYONE</li> </ul>



# SYNENTEC Automation and Batch Processing System



# SYNENTEC

## High Throughput Systems

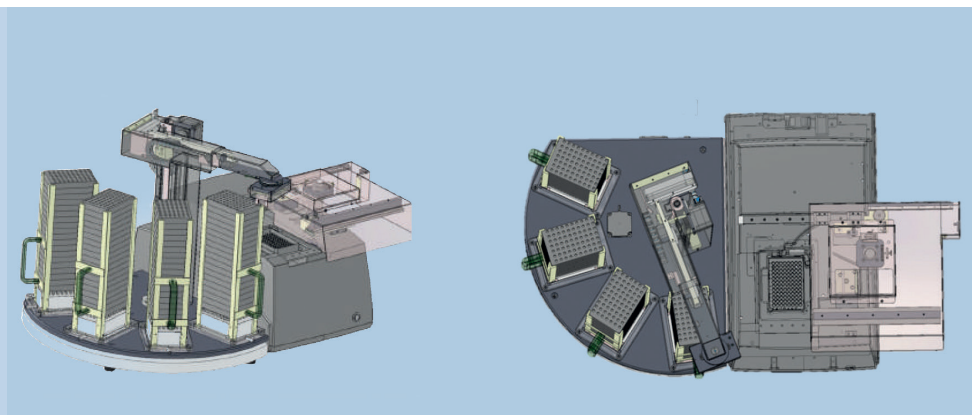
### Plate Handler Capabilities

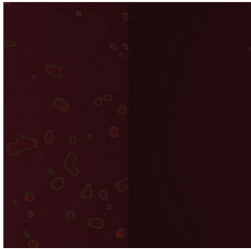
Integrated in YT-Software

(Run-) Campaigns

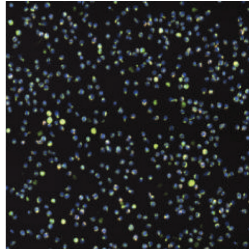
Date handling and evaluation of multiple plates

Capacity	20 plates
Handling time	30 seconds
Compatible Systems	CELLAVISTA & NYONE
Racks	3 supplied, (height 400 mm)
Supported carries	SBS format plates, lidded plate supported
Assays	All applications

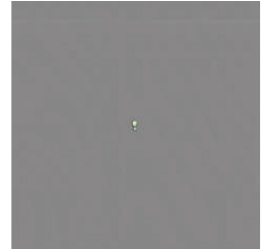




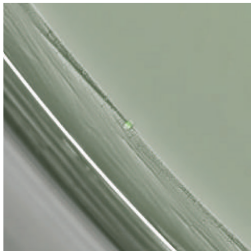
Antibody Binding



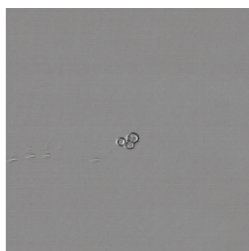
Apoptosis



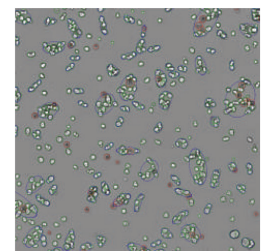
CRISPR/Cas9



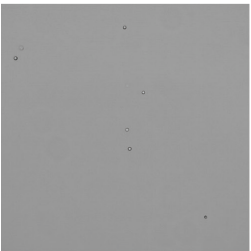
FASCC



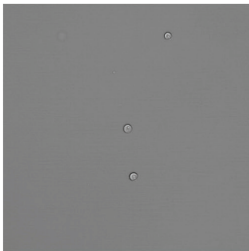
Single Cell Cloning



Trypan Blue Viability



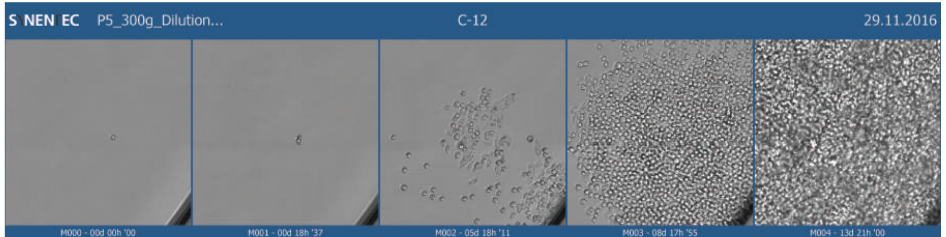
4x @ 2 µm/px



10x @ 1.1 µm/px



20x @ 0.55 µm/px



Clone Gallery

- CRISPR/Cas9 Gene Editing
- Single Cell Cloning (SCC/ FASCC)
- mAb-Aggregate Screening (mAbregation-Kit®)
- Nuclei Count/ Organell Characterization
- CD-Antigens
- iPS-Cell Detection
- Toxicity Studies
- Trypan Blue Viability (Trypan Blue-Kit®)
- Apoptosis Monitoring
- ICC (Multiplex Imaging)
- Transfection Efficiency
- FASC Seeding Control
- IgG (Fc/Fab) Quantitation (PAIA-Assay®)
- Total Well Intensity
- Wound Healing
- Suspension Cell Count
- Confluence
- FISH Imaging

