Ordering Informations

Commercial Reference

Commercial reference	Description	Ordering information
SenS 1920 M-ST	Cameralink Full-HD Camera SDR26 & HR10-10R connector	9SEC2101AE31MC0# # : **product revision**
SenS 1920 L-ST	Cameralink Full-HD Camera LSHM130 Connector	9SEC2101AE31LC0# # : **product revision**

Included Accessories

- Power and trigger Cable (Hirose HR10 connector)
- 12V power supply
- Heatsinks (M-ST version only)
- Cardboard shipping and storage box

Optional Accessories

- Optical Filter mount
- Hardened protective case

Custom variants (OEM)

Various options may be available depending on your camera model:

- Open frame housing
- Sensor without cover glass
- Flex configuration (sensor board split from camera electronics)
- …

For any specific requirements contact your sales representative or support@new-imaging-technologies.com

FUNCTIONALITIES

Camera

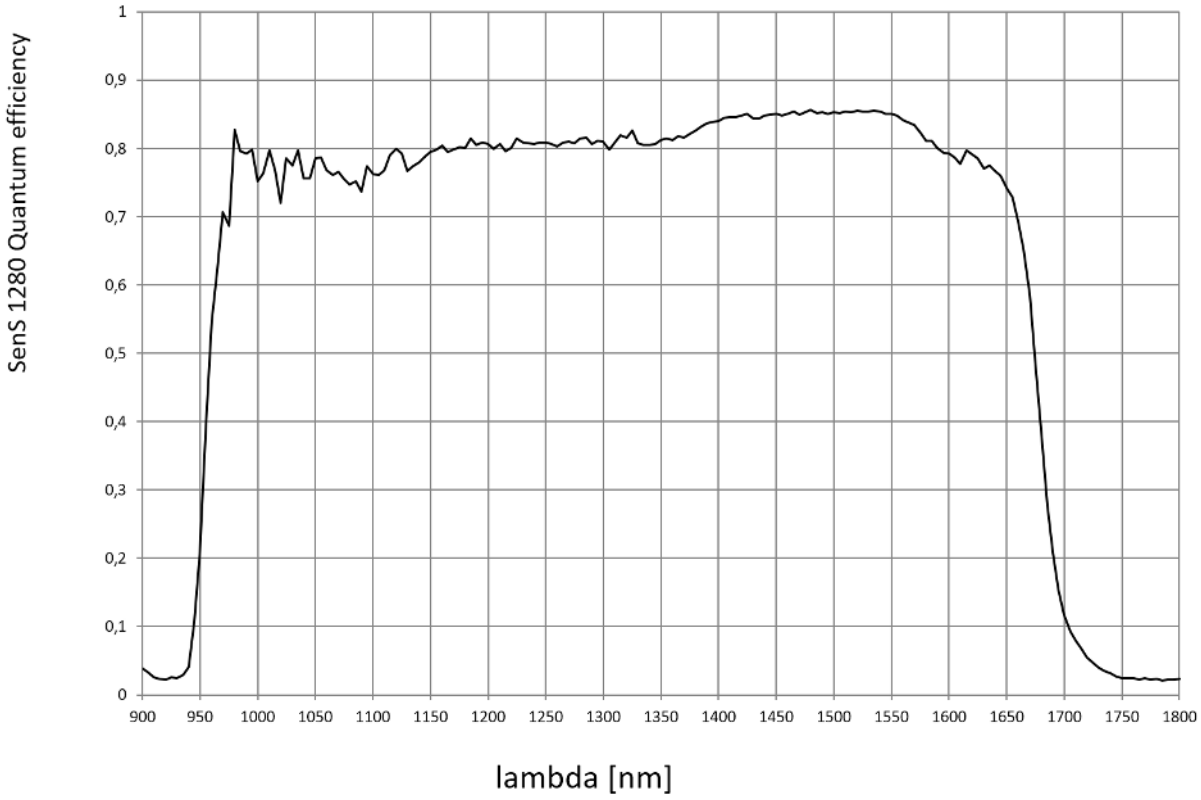
Main camera features (For full documentation contact support@new-imaging-technologies.com):

Sensor characteristics	Sensor type	InGaAs (0.9-1.7 spectral response, see QE curve)
	Pixel pitch	$8\mu m$
	Resolution	1920x1080
	Sensor noise	• High gain (CDS): $25e^-$ typical • Low gain : $150e^-$
	Dynamic range	• High gain (CDS): 54dB typical • Low gain: 63dB typical
	Peak QE	>80%
Camera features	Frame rate	60Hz (12 bit output mode), 37Hz (14 bit output mode)
	Sensor Readout	Global shutter ITR (Integrate Then Read)
	Sensor modes	Low Gain / High gain (CDS)
	Output Type	14 bits with 1X_1Y tap geometry (1 tap) 12 bit with 1X2_1Y tap geometry (2 tap)
	Exposure time	Minimum Integration time: 10us (Linear) Controlled by camera register or Trigger width
	Trigger	Internal/External (LVTTL) Software Trigger
	Trigger delay	User-Selectable
	Partial reading mode	Region of Interest (ROI). User-Selectable with a step of 8 pixels. Maximum FPS increase with reduced ROI

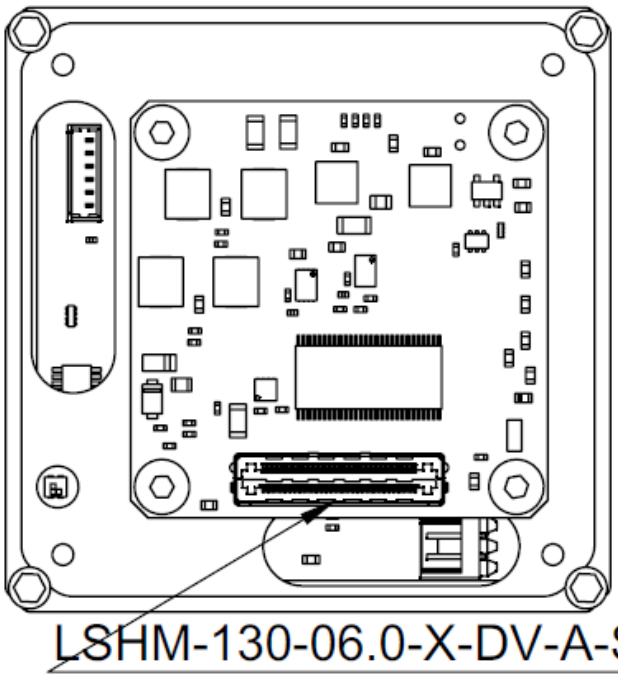
Environment and mechanical characteristics	Power consumption (12V supply)	• Camera: <5.5W
		• Cooling: User-Selectable TEC power limit
		  ○ Off
		  ○ Low : <1W
		  ○ Medium : <2W
		  ○ High : <4W (Default, user defined value)

	Supply voltage range	6 to 15V (Overvoltage, reverse polarity protection).
	Storage temperature	-40 to +80°C
	Operating temperature	-40 to +71°C
	Size (WxHxL, mm)	58x58x71.8 (M-ST)) / 52.8 (L-ST) 118x46x65.4 (M-ST) with heatsinks
	Weight	<350g without accessor heatsinks.
	Lens mount	C-Mount
Software (Processing on host system)	Control protocol	Serial NITCam protocol
	NIT Software	NITVision GUI (Windows/Linux, x64/aarch64 platforms) /!\ Compatible with Dalsa framegrabber only. Tested with XTium/XTium 2 series. NITLibrary SDK (Windows/Linux, x64/aarch64 platform, C++/Python language)
	AGC (Histogram Stretching)	Automatic/Manual. Automatic: continuous offset and gain adjustment based on current image histogram
	NUC correction	Correction 1-Point or 2-Point. 2 Point factory calibrated. (20°C sensor Temperature)
	Bad pixel correction	Factory calibrated Bad Pixel Map
	Temperature monitoring	Image Sensor
	Image Flip	Horizontal/Vertical
	Video recording	

QE Curve (typical)



Electrical ICD (L-ST – LSHM130 output)

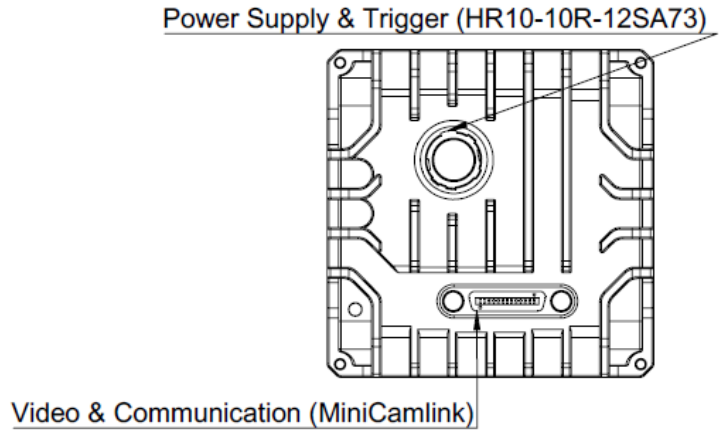


- LSHM-130-06.0-X-DV-A-S Pinout

Pin Number	Name	Type	Comment	Pin Number	Name	Type	Comment
1	GND	Power	Supply voltage ground	31	NC		
2	GND	Power	Supply voltage ground	32	NC		
3	CamLinkPair4+	Clock		33	NC		
4	CamLinkPair5+	Data3		34	Trigger Out	TTL	Programmable
5	CamLinkPair4-	Clock		35	NC		
6	CamLinkPair5-	Data3		36	Trigger Out	TTL	Programmable
7	GND			37	NC		
8	GND			38	Trigger In/Ou	TTL	Programmable
9	CamLinkPair3+	Data2		39	GND		
10	CamLinkPair2+	Data1		40	GND		
11	CamLinkPair3-	Data2		41	NC		
12	CamLinkPair2-	Data1		42	NC		
13	GND			43	NC		
14	GND			44	NC		
15	CamLinkPair1+	Data0		45	Cable detect		100 Ohm to GND
16	NC			46	NC		
17	CamLinkPair1-	Data0		47	Enable		On : 1.6 to 3.3V or floating Off: Connect to GND to turn off
18	NC			48	NC		
19	GND			49	GND		
20	GND			50	GND		
21	CamLinkPair7+	SerTG		51	GND		
22	CamLinkPair8+	CC1		52	GND		
23	CamLinkPair7-	SerTG		53	GND		
24	CamLinkPair8-	CC1		54	GND		
25	CamLinkPair6+	SerTC		55	Power Input	Power	9 to 35V
26	CamLinkPair9+	CC2		56	Power Input	Power	9 to 35V
27	CamLinkPair6-	SerTC		57	Power Input	Power	9 to 35V
28	CamLinkPair9-	CC2		58	Power Input	Power	9 to 35V
29	GND			59	Power Input	Power	9 to 35V
30	GND			60	Power Input	Power	9 to 35V

Electrical ICD (M-ST – SDR26 video output)

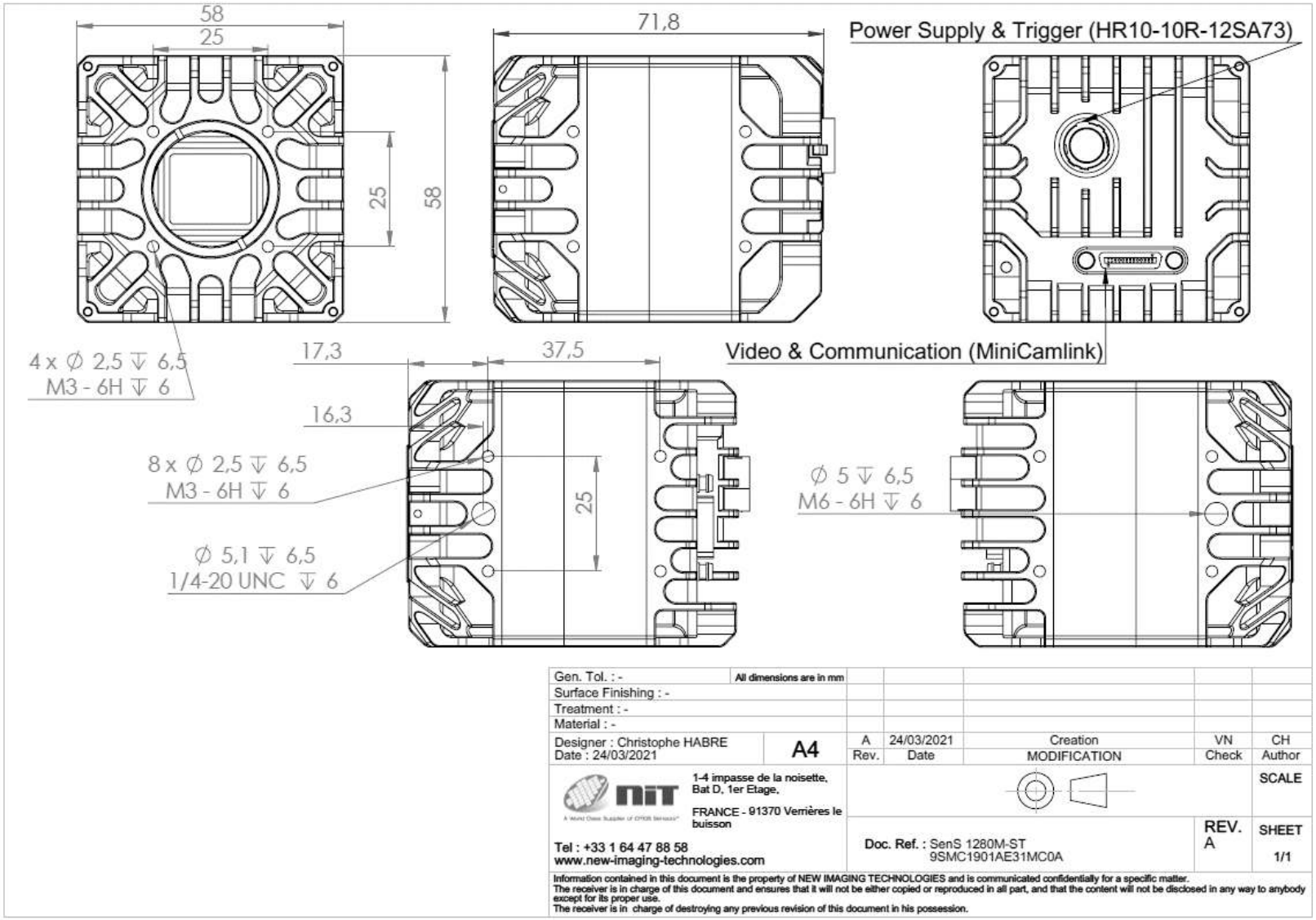
Reference	Designation	Manufacturer
HR10-10R-12SA	Connector Female 12 positions	Hirose



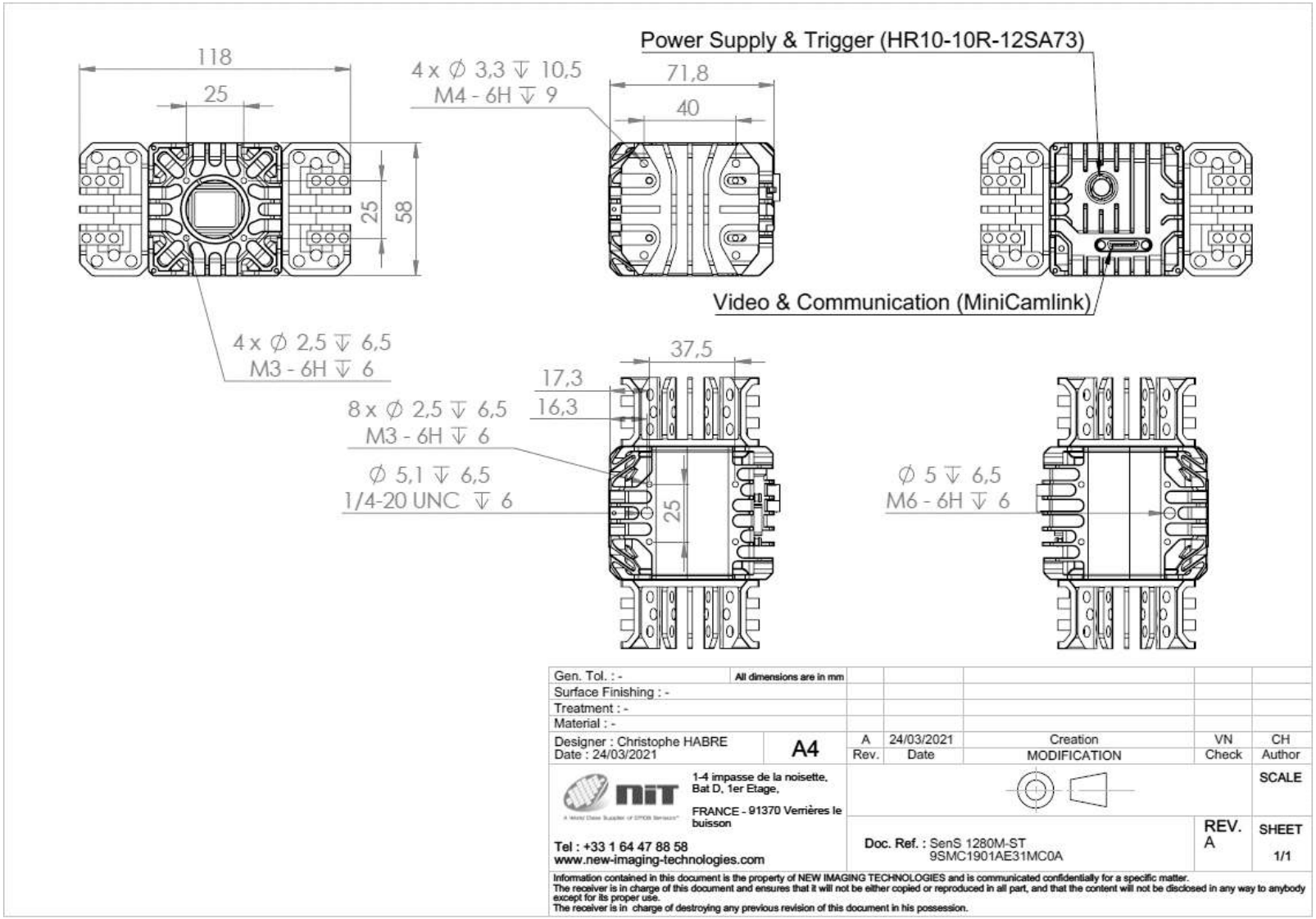
Reference	Designation	Manufacturer
12226-1150-00FR	SDR26 connector	3M

Hirose Connector Pinout		
Pin	Signal Name	Cable color
1	Power (6-24V)	Red/Purple/(Orange)
2	Power GND	Blue/Brown
3	Trigger OUT2	White
4	Trigger OUT1	Yellow
5	NC	
6	NC	
7	Reserved	
8	Power GND	Blue/Brown
9	Power (6-24V)	Red/Purple/(Orange)
10	Trigger IN/OUT (LVTTL)	Green
11	Not connected	
12	Trigger GND	Black

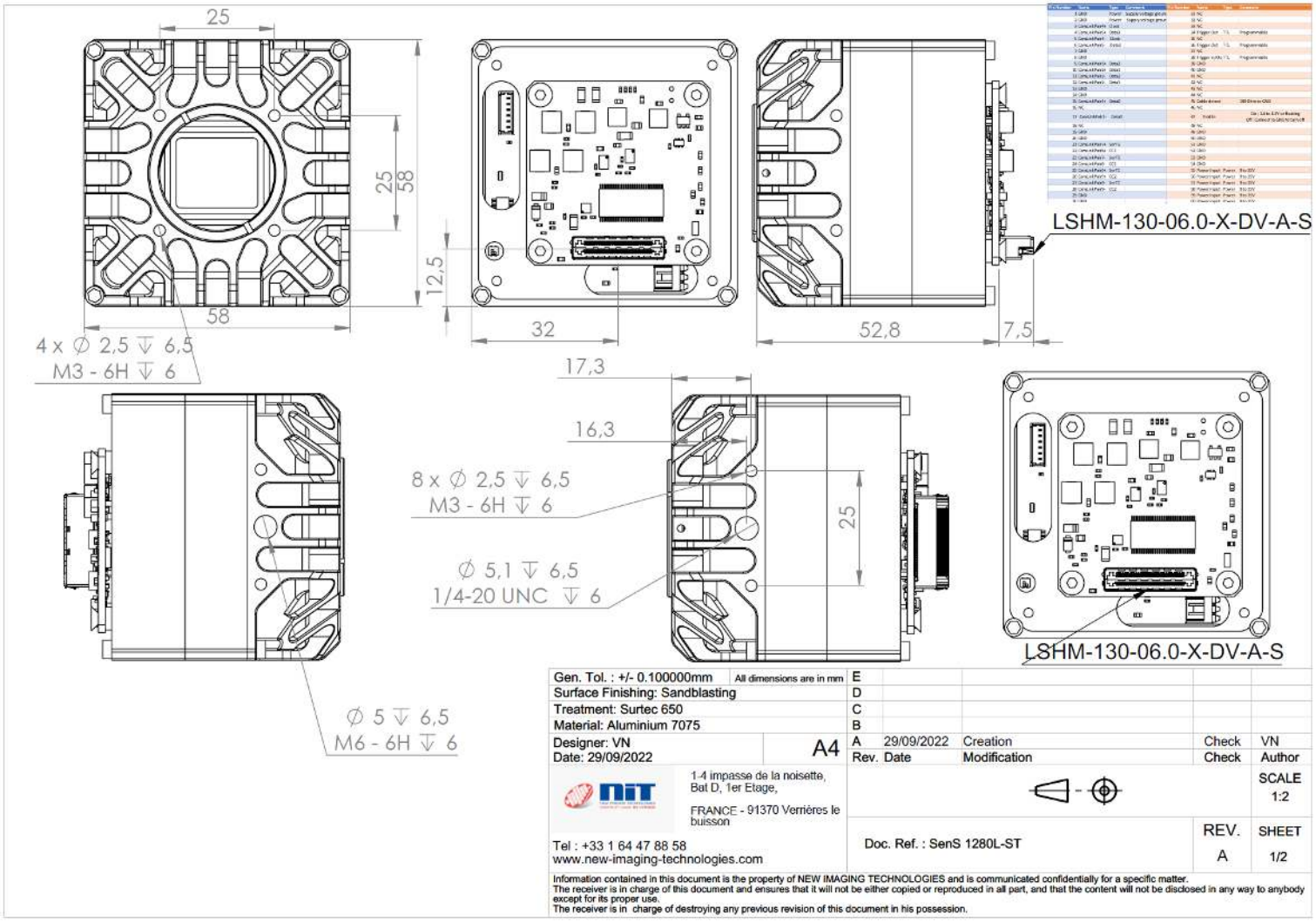
Mechanical ICD (SenS 1920 M-ST)



Mechanical ICD - With Heatsinks (SenS 1920 M-ST)



Mechanical ICD (SenS 1920 L-ST)



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