CHAUVIN® ARNOUX
CHAUVIN ARNOUX GROUP

C.A 1884
C.A 1886
C.A 1888

For maintenance and building inspections, RayCAm sees everything!

RayCAm

High-Resolution Infrared Cameras

MixVision

From real images to infrared images

CNPP APPROVAL

Certification granted on the basis of a single test
Available at www.cnpp.com
N° 2008-0012 - N° 2010-0020 -N° 2010-0021

- Thorough analysis with comprehensive parameterization
- Large screen for easier reading NEW
- Temperature up to 600 °C NEW
- Matrix up to 384 x 288 NEW

RayCAm ADVANTAGES

The **RayCAms'** design and the technologies used to manufacture them provide a wide range of advantages. **Their ergonomic design means comfortable measurement even in places where access is difficult:**

- IP 54 leakproofing
- excellent legibility thanks to its multidirectional screen, even in places where access is difficult
- comfortable handling due to its pistol shape

PERFORMANCE:

- automatic detection of hottest/coldest point
- parameter settings affecting measurement:
  - adjustable emissivity
  - adjustment of measurement distance
  - parameters for defining relative humidity and ambient temperature
- parameterizable alarms
- isotherm function
- storage capacity of 1,000 radiometric images organized in 250 folders and back-up on SD card with the **C.A 1886** and **C.A 1888**

MixVision

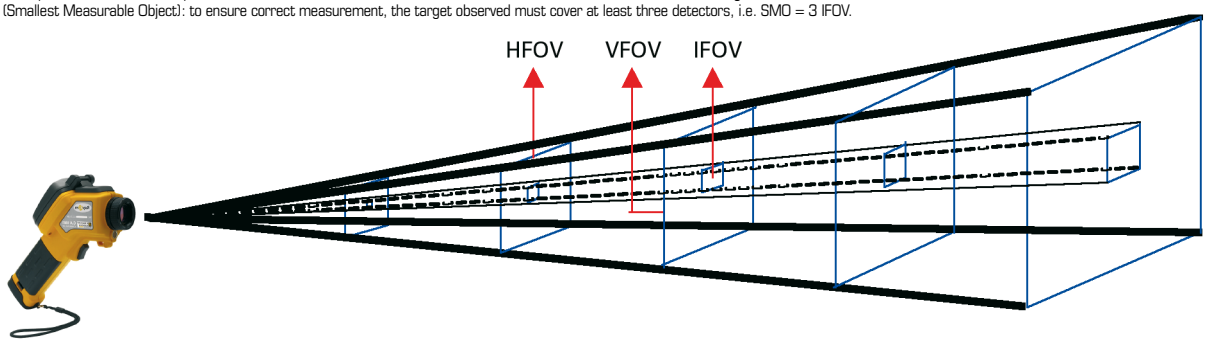
With the new **RayCAms,** users can choose the mode for viewing the target: infrared, real or a mix of both with the **«MixVision»** function. This allows you to adjust the transparency (in %) of the infrared image in relation to the real image, thus helping to identify problem areas immediately.

LENS SPECIFICATIONS

The C.A 1884 & C.A 1886 are delivered with a 20° x 15° lens. The C.A 1888 is equipped with a 24° x 18° lens.

		0.1 m	0.3 m	0.5 m	1 m	2 m	6 m	10 m	30 m	100 m
20°x15° 2.2 mrad 10 cm	HFOV (m)	0.03	0.10	0.17	0.35	0.70	2.11	3.52	10.57	35.26
	VFOV (m)	0.02	0.07	0.13	0.26	0.52	1.57	2.63	7.89	26.33
	IFOV (mm)	0.22	0.66	1.10	2.20	4.40	13.22	22.04	66.12	220.40
	PPOM (mm)	0.66	1.98	3.30	6.60	13.20	39.66	66.12	198.36	661.20
24°x18° 1.3 mrad 10 cm	HFOV (m)	0.05	0.15	0.25	0.5	1	5.99	4.99	14.98	49.92
	VFOV (m)	0.04	0.11	0.19	0.37	0.75	4.49	3.74	11.23	37.44
	IFOV (mm)	0.13	0.39	0.65	1.3	2.6	7.8	13	39	130
	PPOM (mm)	0.39	1.17	1.95	3.9	7.8	23.4	39	117	390

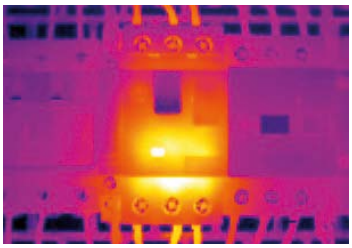
- **HFOV** and **VFOV** represent the horizontal and vertical fields of view, respectively.
- **IFOV** corresponds to the camera's spatial resolution, i.e. what a detector sees. The IFOV of the C.A 1884 is 2.2 mRad, meaning that, at a distance of 1 m, the detector observes an area of 2.2 mm.
- **SMO** (Smallest Measurable Object): to ensure correct measurement, the target observed must cover at least three detectors, i.e. SMO = 3 IFOV.



ELECTRICAL APPLICATIONS

Circuit-breaker / Generator

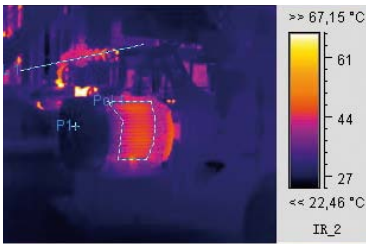
- detection of damaged fuses and bad connections
- verification of correct heat diffusion in the generator



MECHANICAL APPLICATIONS

Electric motors

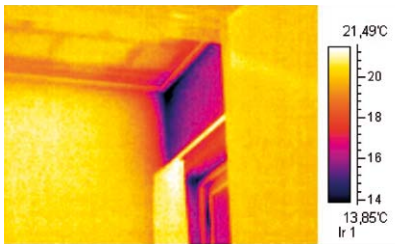
- detection of internal component anomalies or malfunctions to prevent motor overheating



THERMAL APPLICATIONS

Water leaks / energy losses

- energy consumption monitoring / building inspections
- location of losses (heating, insulation, etc.)

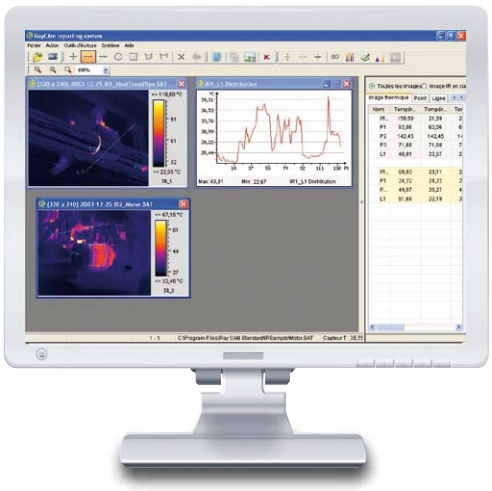


INFRARED IMAGE / REAL IMAGE / MixVision

With the **RayCAm Report software,** you can combine your thermogram with a real image.

This allows you to identify the fault or dysfunction so that you can make the appropriate corrections!

The **MixVision** function is available on the **C.A 1886** and **C.A 1888** models. Users can reinitialize the merge function by modifying the IR / real percentage to suit your requirements and ensure clearly-interpretable reports: this percentage can be adjusted from 0 to 100% !



ANALYSIS MODE

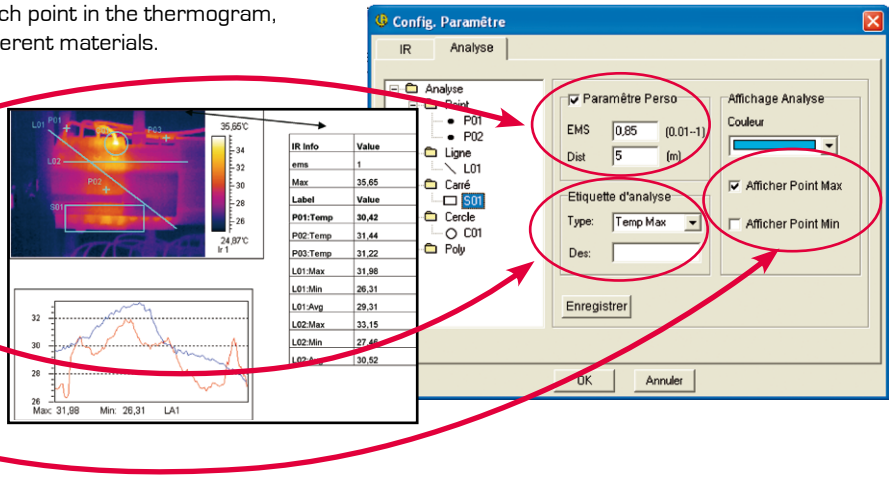
This new mode is available on the **C.A 1886** and **C.A 1888.** It can be used to open one or more images, add various analytical tools and obtain a summarized presentation of all the results in a table. This mode is useful for first-level analysis when you simply want a rough idea of the temperature values without saving the analyses.

GENUINE, ACCURATE ANALYSIS

If a characteristic on the radiometric image is changed, the other values are automatically recalculated.
RayCAm Report allows you to define the emissivity of each point in the thermogram, an essential feature when the thermogram contains different materials.

Choose a different configuration for each analytical tool inserted on your thermogram.
A wide range of possibilities:

- specify a different emissivity from that of the thermogram as a whole
- display a value label next to the tool
- display the Max/Min temperature within an area of analysis

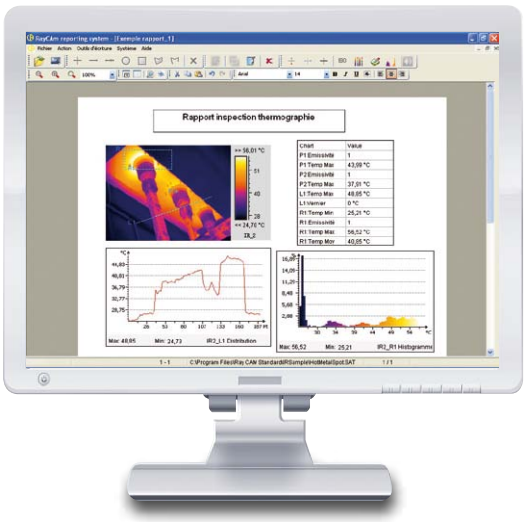


DELIVERED WITH THE RAYCAM REPORT SOFTWARE

RayCAm Report is the ideal tool for analysing the results and creating customized reports. Its interface is so simple that anyone can learn to use it very quickly.

All the analysis functions are accessible via the toolbar. Depending on their requirements, users can position various elements:

- cursors (automatic display of the temperature at the point selected)
- thermal profile (automatic display of the Min/Max/Average temperatures of the line)
- a square or circle for area analysis (ideal for Min/Max/Average temperature comparisons between terminals, for example)
- Result tables quickly display all the data / analytical tools on the thermogram automatically
- The «Max» function automatically indicates the hottest point in the whole thermogram or in a predefined area of analysis.



There are now also new functions available with the **C.A 1886** and **C.A 1888:**

- Polygons and polylines for more precise analysis of certain areas in the thermogram
- A barchart for studying the temperature distribution according to several intervals

TECHNICAL SPECIFICATIONS

	C.A 1884	C.A 1886	C.A 1888
DETECTOR SPECIFICATIONS			
Detector	160 x 120		384 x 288
Type	UFPA microbolometer, 8-14 microns		
Frequency	50 Hz		
Sensitivity (NETD)	0.1 °C to 30 °C	0.1 °C to 30 °C	0.08 °C to 30 °C
TEMPERATURE MEASUREMENTS			
Standard temp. range	-20 °C to +250 °C	-20 °C to +600 °C	
Temp. range with option	1,500 °C		
Accuracy	±(2 °C + 2 %)		
IMAGE PERFORMANCE			
IR image			
Field of view	20° x 15°		24° x 18°
Spatial resolution	2.2 mrad		1.3 mrad
Min. focusing distance	10 cm		
Focusing	Manual		
Real image	No	Yes	
Min. focusing distance	-	10 cm	
IR-Merge	-	Complete IR-Merge functions IR image in real image from 0 to 100 %	
Image size	-	640 x 480 pixels	
OTHER FUNCTIONS			
Emissivity correction	Yes		
Parameter settings	Ambient temperature in °C, distance, humidity		
Measurement tools	3 manual cursors + 1 auto Max/Min detection, adjustable, isotherm, high/low alarm		
Comments	-	Voice annotations (option)	
Storage	1,000 (radiometric format) + 250 folders		
Storage type	Internal	2 GB mini-SD Card	
Screen	2.5 inches, multidirectional	3.5 inches, multidirectional	
GENERAL			
Battery	Battery life: 2.5 hrs (continuous use)	Battery life: 3 hrs (continuous use)	
Battery recharging	External battery charger		
Protection	IP 54		

A WIDE RANGE OF ACCESSORIES FOR MEASUREMENTS IN OPTIMUM CONDITIONS:

- USB cable for data transfer onto a PC
- Video cable for display on external screen
- RayCAm Report software for processing the data

This set of accessories is supplied as standard with your RayCAm in a hard case.

- Operation on internal batteries or mains adapter*
- Bluetooth accessories
- Sun-shade* to make the screen easy to read even in bright lighting
- Tripod adapter* for hands-free use and operation in a fixed position

*Accessories available as an option

Standard state at delivery:

C.A 1884: delivered in a case with 1 battery charger, 1 battery, 1 USB cable, 1 video cable, RayCAm Report software and a measurement report.
C.A 1886 or **C.A 1888:** delivered in a case with 1 battery charger, 2 batteries, a 2 GB mini-SD Card, 1 SD card reader, 1 video cable, RayCAm Report software and a measurement report.

REFERENCES TO ORDER:

CA 1884	P01651228
CA 1884 high temperature 600 °C	P01651240
CA 1884 high temperature 1000 °C	P01651241
CA 1884 high temperature 1500 °C	P01651242
CA 1884 wide-angle lens 38°	P01651243
CA 1884 wide-angle lens 38° and standard lens 20°	P01651244
CA 1884 telephoto lens 6.4°	P01651245
CA 1884 telephoto lens 6.4° and standard lens 20°	P01651246
CA 1886	P01651260
C.A 1886 high temperature 1000 °C	P01651261
C.A 1886 high temperature 1500 °C	P01651262
CA 1888	P01651270
C.A 1888 high temperature 1000 °C	P01651271
C.A 1888 high temperature 1500 °C	P01651272
CA 1886 Bluetooth	P01651263
CA 1888 Bluetooth	P01651273

ACCESSORIES AND REPLACEMENT PARTS

Photo tripod adapter	P01651526
Lens cap	P01651522
USB cable	P01295274
RayCAm Report	P01651524
Battery	P01296041
Battery charger	P01296043
Mains power supply	P01651527
In-vehicle battery charger (cigarette lighter)	HX0061
Thermography training	Please contact us

For assistance and ordering

FRANCE
Chauvin Arnoux
190, rue Championnet
75876 PARIS Cedex 18
Tel: +33 1 44 85 44 86
Fax: +33 1 46 27 95 59
export@chauvin-arnoux.fr
www.chauvin-arnoux.fr

UNITED KINGDOM
Chauvin Arnoux Ltd
Unit 1 Nelson Ct, Flagship Sq, Shaw Cross Business Pk
Dewsbury, West Yorkshire - WF12 7TH
Tel: +44 1924 460 494
Fax: +44 1924 455 328
info@chauvin-arnoux.co.uk
www.chauvin-arnoux.com

MIDDLE EAST
Chauvin Arnoux Middle East
P.O. BOX 60-154
1241 2020 JAL EL DIB (Beirut) - LEBANON
Tel: +961 1 890 425
Fax: +961 1 890 424
camie@chauvin-arnoux.com
www.chauvin-arnoux.com

CHAUVIN ARNOUX GROUP

906211220 - Ed. 3 - VS 10/2010 - Non contractual document. Confirm specifications before ordering.