



MRCC & CCAC



ADiis is a division of EASii IC



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INTRODUCTION

ADiis designed, developed and manufacture a complete Cameras Product line for the aeronautical domain. Based on strong internal expertise and experience, ADiis manage every step of the development (Sensor selection, architecture design, schematic and layout of complex electronic boards).

ADiis cameras are dedicated to fulfill the needs of aeronautics application and the following functional features:

- CMOS "Global Shutter" image sensor: no image distortion in time (no rolling shutter effect);
- 1920x1080p60 (60 progressive frames per second), non-interlaced video: no "comb" effect;
- Especially fast automatic gain control (to adapt to major and/or fast brightness changes);
- Double integration (automatic) to make it possible to "see" more detail in shaded areas (inside the cabin) and light zones (outside), and to limit glare effects;
- CoaXPress (1920x1080p60) digital video interface.



No "comb" effect



No image distortion



No back-lighting



No glare

The 1.3Mpix MRCC camera is a compact camera that fulfils the needs of aeronautics applications. It can be used for various applications and can be placed inside or outside the aircraft.

FEATURES



SENSOR

- 1.3 M Pixels CMOS image sensor (e2v)
- Optical format: 1/2"
- Active pixel: 1280x1024
- Pixel size: 5.3µm x 5.3µm
- Shutter type: Global shutter
- Frame rate: 50fps @full resolution

OPTICS

- S-Mount (M12x0.5)
- Standard S-Mount lens (focal length: 4mm, 6mm, 8mm, 12mm)
- The S-Mount lens is integrated in the camera casing
- Protection window:
 - Sapphire (for monochrome image sensor)
 - Glass with IR-cut filter and with anti-reflection treatment (for color image sensor)

CAMERA FONCTIONS

- Fast automatic exposure control
- Exposure Mode: automatic or manual
- Shutter speed: from 1s to 1/100 000s
- White balance: manual setting by independent Red/Blue gain
- Edge enhancement
- Gamma correction
- Remote control: RS232-C serial bus

POWER SUPPLY

- Power supply voltage: 5 VDC
- Power consumption: 2.5 Watts

VIDEO OUTPUTS

- Analog video: PAL (720 x 576)
- Digital video: LVDS pair with SMPTE 259M-C (720 x 576)

REMOTE CONTROL

- RS232 (RXD – TXD)

CONNECTIONS

- Supply: 2 wires (5V, 0V)
- Analog video: 2 wires (Yor Composite, VGND)

- Digital video: 2 wires (SDI_LVDS_P, SDI_LVDS_N)
- Configuration through a serial interface (RS232)

CASING / MECHANICS

- Black anodized aluminum
- Camera head dimensions:
Ø 25 x 101 mm (without the bonding tab)
- Camera head weight:
100g (without cable)
- Control unit dimensions:
100 x 86 x 57 mm (with connectors and mounting tabs)
- Control unit weight: 320g

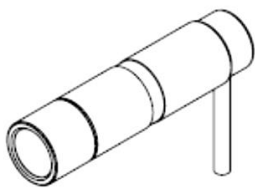
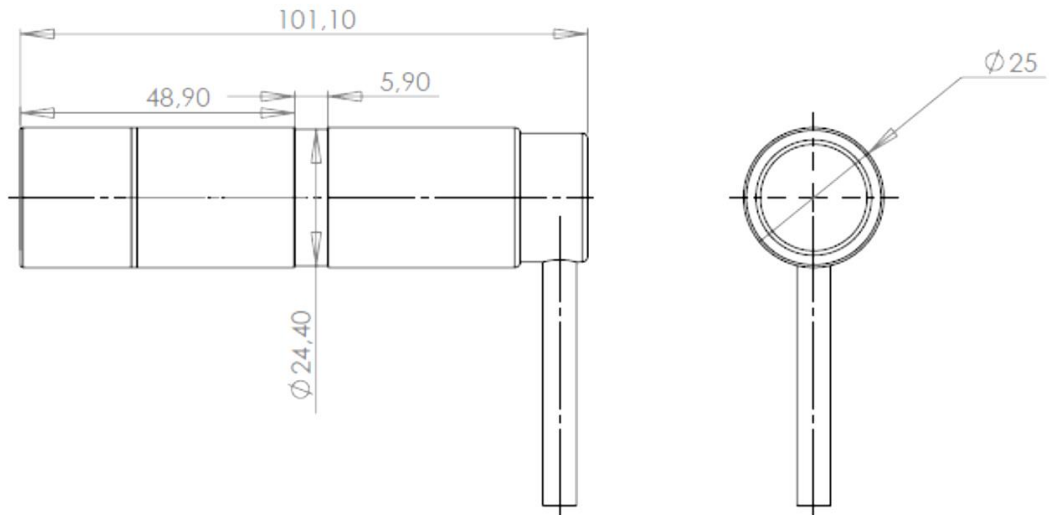
LENS AND OPTICAL PERFORMANCES

The camera can be fitted with different S-Mount lenses.

Manufacturer	Model	Optical format	Focal length	Aperture	Zoom x1			Zoom x2			Optical format
					FOV Diag	FOV Horiz	FOV Vert	FOV Diag	FOV Horiz	FOV Vert	
Lensation	BSM4016S12	1/2"	4,0 mm	F/1,6	136°	105°	77°	69°	53°	42°	1/2"
Lensation	BSM6016S12	1/2"	6,0 mm	F/1,6	99°	70°	54°	48°	37°	29°	> 1/1,8"
Lensation	BSM8016S12	1/2"	8,0 mm	F/1,6	66°	50°	40°	36°	28°	22°	1/2"
Lensation	BSM12016S12	1/2"	12,0 mm	F/1,6	42°	32°	26°	24°	18°	14°	> 1/1,8"
Lensation	BM2820	1/3"	2,8 mm	F/2,0	-	-	-	100°	79°	63°	1/3"
Sunex	DSL901J-650-F3.0	2/3"	12,0 mm	F/3,0	40°	32°	26°	23°	18°	15°	> 1/1,8"
Sunex	DSL212D-650-F3.0	1/3"	2,0 mm	F/3,0	-	-	-	132°	109°	87°	1/3"

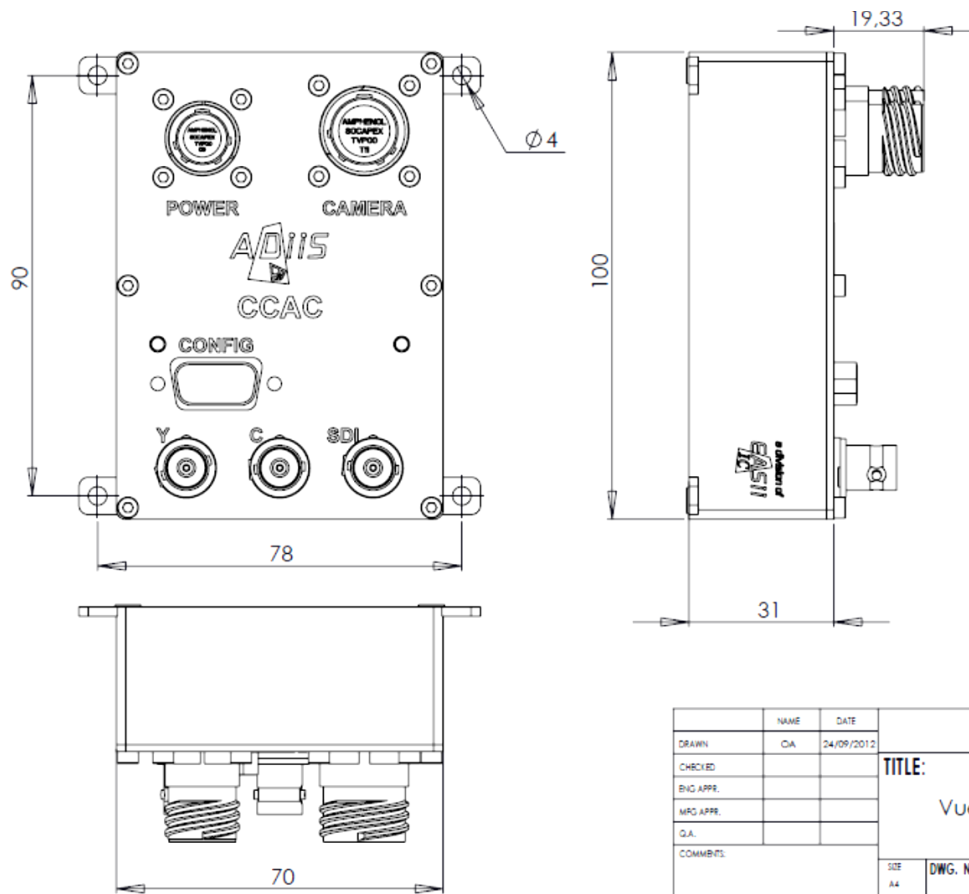
EXTERNAL VIEW DRAWING

MRCC Camera Head



SAUF SPECIFICATIONS : DIMENSIONS EN MILLIMETRES ETAT DE SURFACE: Ra 6,3 TOLERANCES: H7/g6 LINEAIRE: ANGULAIRE:			FINITION:	Ebavurer les arêtes vives	DO NOT SCALE DRAWING	REVISION
	NAME	SIGNATURE	DATE	Easii IC 90 Av Léon Blum, BP 2612 38036 Grenoble Cedex 2		
DRAWN	OA		25/09/2012		TITRE	
CHEF				www.easii-ic.com	<h1>MRCC</h1>	
APPV'D				Ce plan est la propriété de Easii-IC et ne peut être reproduit ou communiqué sans autorisation		
Commentaires :				MATERIAU:	DWG NO.	
Plan d'ensemble caméra MRCC						1

CCAC Control Unit



	NAME	DATE	ADIIS		
DRAWN	OIA	24/09/2012	TITLE: Vue d'ensemble CCAC		
CHECKED					
ENG APPR.					
MFG APPR.					
COMMENTS:			SIZE A4	DWG. NO. 1	REV 1
			Echelle 1:1	WSCHT	SHEET 01

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