AR1335 IAS Module

Prototype 1/3.2-Inch 13 Mp

Advance Information

IAS1MOD-AR1335CSSC080110-GEVB

The AR1335 13 MP Imager Access System (IAS) module is part of the ON Semiconductor IAS family of modules offering standardized connectors, layout configuration and OTPM protocol. The modules are compatible with Evaluations systems and reference designs offered by ON Semiconductor. The modules are offered from ON Semiconductor as prototype modules not meant for customer production shipments. Customer can work with On Semiconductor Distribution partners for equivalent mass production versions of these modules.

Table 1. KEY PERFORMANCE PARAMETERS

Parameter	Value
Sensor	
Sensor Part Number	AR1335CSSC32SMD20
FUNCTIONAL	
Output	Raw
CFA	Bayer
Max. fps	30 fps @ 4208 x 3120
Interface	4−lane MIPI
MECHANICAL	
Module size X*Y*Z(mm)	8.74x24.18x6.07
OPTICAL	
Optical Format	1/3.2”
Image active resolution	4208 (H) x 3120 (V)
Pixel size	1.1 μm
Focus Range	10 cm~Inf
Hyperfocal Distance	300 cm
Effective Focal Length (EFL)	3.81 mm
Lens F number	2.2
Lens Structure	5P
Diagonal Filed of View (DFOV)	74.4°
Vertical Field of View (VFOV)	48.7°
Horizontal Field of View (HFOV)	62.7°
TV distortion	<1.50%
VCM Drive IC	
Part Number	DW9790A

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EVAL BOARD USER’S MANUAL

Applications

- IoT and Low Power Applications
- Machine Vision
- Artificial Intelligence
- 4K Auto Focus Video Cam
- Smart Retail
- Robotic Application

This document contains information on a new product. Specifications and information herein are subject to change without notice.

Table 1. KEY PERFORMANCE PARAMETERS

Parameter	Value
ELECTRICAL	
Supply voltages	VDDIO: 1.8 V VDD: 1.2 V VAA: 2.7 V VDD_AF: 2.8 V
I2C Pull−up Resistor in Module (Note 1)	No pull−up resistor in module
PROGRAMMABLE STORAGE	
This module has programmable storage.	EEPROM/OTPM is programed per IAS programming specifications. Please refer to the IAS Module EEPROM and OTPM Application note (AND9865/D) for more information.

1. ON Semiconductor recommends that host sites add a 1.5k pull−up resistor.

Table 2. ORDERING INFORMATION

Part Number	Orderable Product Attribute Description
IAS1MOD−AR1335CSSC080110−GEVB	AR1335 13 MP 1/3.2” Bayer Die in IAS module with 74.4° DFOV Lens
IAS1−ADPTR−DM3D1−GEVB	Adapter Board to Demo3, DevWareX Supported

Table 3. MODULE CONNECTOR PINOUT

Pin Number	Pin Name	Pin Number	Pin Name
1	GPIO1	34	VDD_AF
2	GND	33	GND
3	GND	32	EXTCLK
4	DATA_P	31	GND
5	DATA_N	30	DATA_2P
6	GND	29	DATA_2N
7	CLK_P	28	GND
8	CLK_N	27	DATA_3P
9	GND	26	DATA_3N
10	DATA_4P	25	GND
11	DATA_4N	24	VDD
12	GND	23	VDD
13	VDDIO	22	SDATA
14	SCLK	21	XSHUTDOWN
15	GPIO0	20	GPI2
16	GND	19	GND
17	VAA	18	VAA

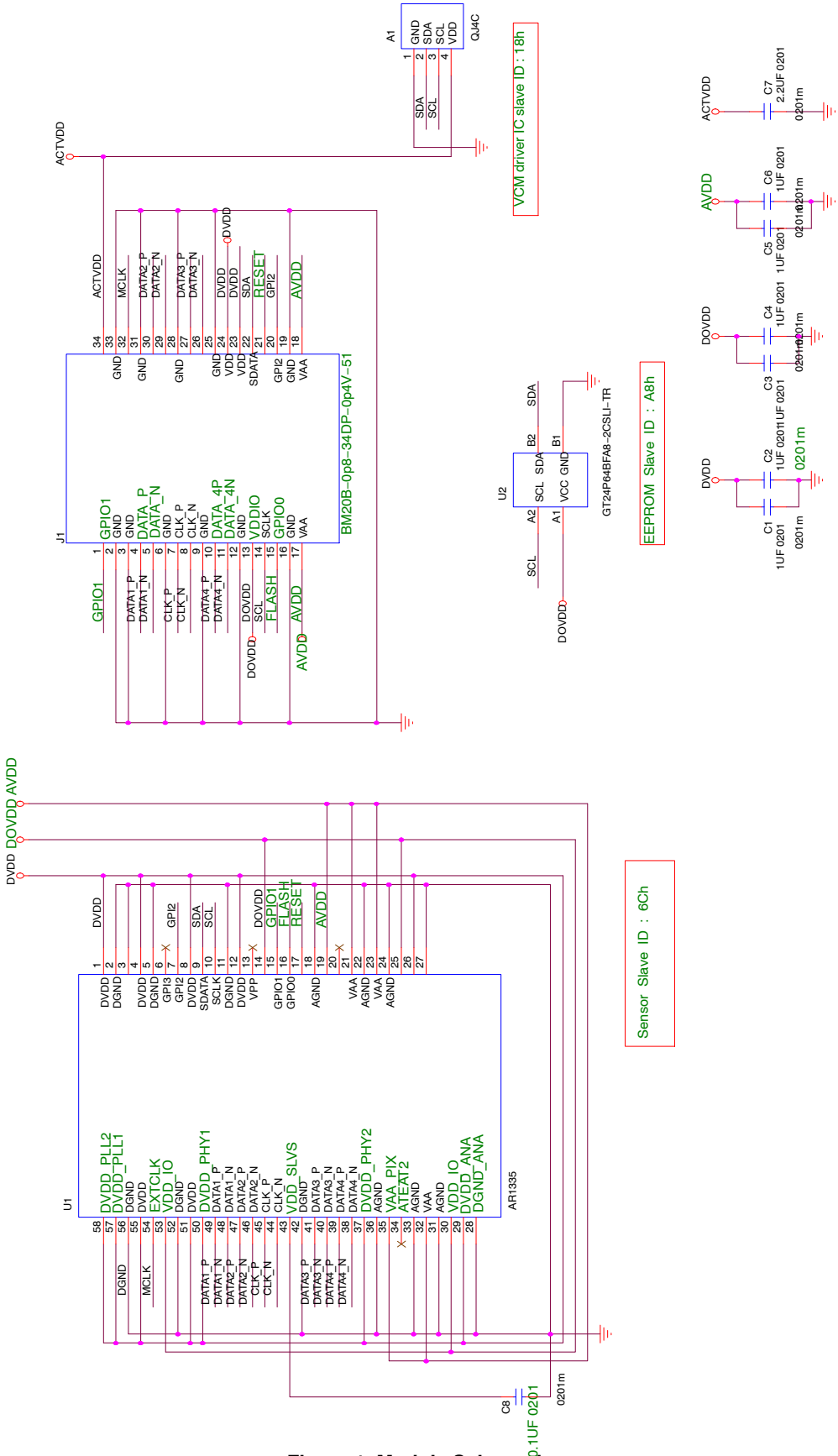


Figure 1. Module Schematic

MODULE CONNECTOR

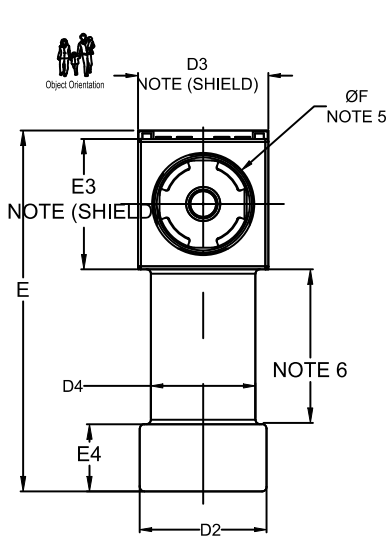
Part Number	Connector Type	Pin Numbers	Mated Height	Contact Pitch
BM20B(0.8)−34DP−0.4V(51)	Plug	34	0.8 mm	0.4 mm

Figure 2.

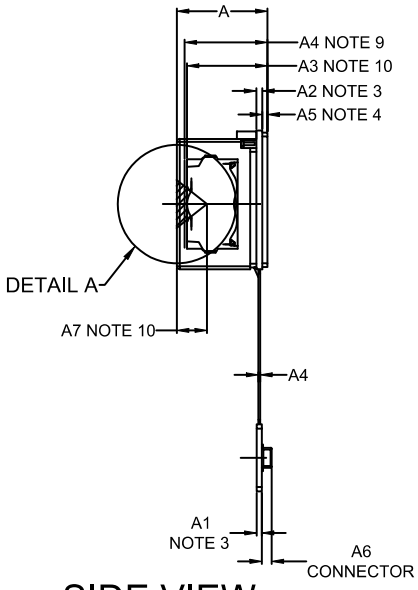
PACKAGE DIMENSIONS

MODULE SUNFLOWER 8.74x24.18
CASE MODHF
ISSUE O

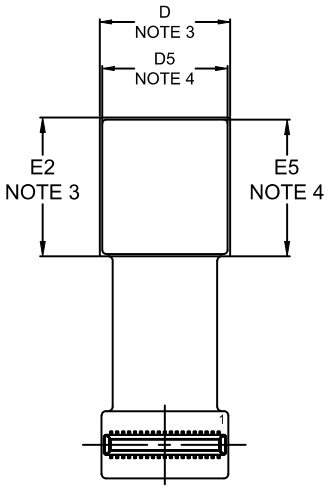
DATE 22 JUN 2020



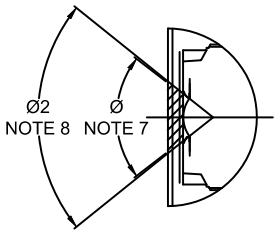
TOP VIEW



SIDE VIEW



BOTTOM VIEW



DETAIL A

DIM	MILLIMETERS		
	MIN.	NOM.	MAX.
A	5.92	6.07	6.22
A1	0.30	0.35	0.40
A2	0.35	0.40	0.45
A3	5.25	5.40	5.55
A4	5.404	5.554	5.704
A5	0.30	0.35	0.40
A6		0.66 REF	
A7	1.868	2.018	2.168
D	8.59	8.74	8.89
D2	8.30	8.50	8.70
D3	8.59	8.74	8.89
D4	6.85	7.00	7.15
D5	8.25	8.40	8.55

DIM	MILLIMETERS		
	MIN.	NOM.	MAX.
E	23.08	24.18	24.38
E2	9.15	9.30	9.45
E3	8.59	8.74	8.89
E4	4.30	4.50	4.70
E5	8.85	9.00	9.15
F	6.70	6.85	7.00
Ø	—	74.4°	—
Ø2	—	76.8°	—

NOTES:
1. DIMENSIONING AND TOLERANCING PER. ASME Y14.5M, 2009.
2. CONTROLLING DIMENSION: MILLIMETERS
3. PCB AREA
4. STIFFENER PART
5. STIFFENER HOLE DIAMETER
6. FELXIBLE PRINTED CIRCUIT WITH EMI FILM
7. Θ - OPTICAL FIELD OF VIEW, AT A7
8. Θ2 - MECHANICAL FIELD OF VIEW AT A7
9. LENS AT 0.1M
10. LENS AT INFINITY
11. CONNECTOR: BM20B(0.8)-34DP-0.4V(51),34 PIN
12. OBJECT ORIENTATION IS DEFINED BY THE IMAGE SHOWN

GENERIC MARKING DIAGRAM*

XXXX = Specific Device Code
A = Assembly Location
L = Wafer Lot
Y = Year
W = Work Week
▪ = Pb−Free Package

*This information is generic. Please refer to device data sheet for actual part marking. Pb−Free indicator, “G” or microdot “▪”, may or may not be present. Some products may not follow the Generic Marking.

PUBLICATION ORDERING INFORMATION

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