

2016 AIA Machine Vision Camera Study

Table of Contents

Chapter	Description	Page Number
1	Executive Summary	1
	Introduction	1
	Market Profile	1
	Regional Performance	3
	Pricing	4
	Camera Features & Trends	6
	Resolution	7
	Sensor Type	8
	Area vs. Line Scan	9
	Color vs. Monochrome	9
	Lighting	9
	Market Trends	9
	Conclusion	10
2	Study Objectives & Methodology	11
	Overview	11
	Study Objectives	11
	Scope	12
	Relationship of Study to Past Reports	13
	Methodology	13
3	General Market Description	15
	Introduction	15
	Regional Performance	16
	Industry Segments	19
	Interfaces & Standards	20
	Machine Vision Landscape	22
	Sales by Customer Type	24
	Conclusion	25
4	Pricing	27
	Retail Camera Prices by Interface	27
	Average Price by Resolution (Area Scan)	28
	Average Price by Resolution (Line Scan)	29
	Conclusion	30
5	Sales & Camera Feature Analysis	31
	Introduction	31
	Sales by Interface	31
	Camera Link	33

Chapter	Description	Page Number
	GigE	34
	USB3	34
	Thunderbolt	35
	FireWire (IEEE-1394)	35
	CoaXPress	35
	Genicam	35
	Camera Speed	36
	Analog vs. Digital	37
	Resolution	38
	Bandwidth	40
	3CCD Cameras	41
	Interfaces by Color & Resolution	41
	Sensor Type	44
	Area vs. Line Scan	45
	Color vs. Monochrome	47
	Lighting	50
	Conclusion	51
6	Trends & Study Conclusion	53
	Introduction	53
	Trends & Other Technology Developments	53
	3D Vision	53
	Backlight Illumination	53
	High Dynamic Range (HDR)	54
	Thermal Vision	54
	Sensor Developments	54
	High Bandwidth Interfaces	55
	Embedded Technology	55
	Study Conclusion	55