MIPI-CSI Camera Hardware Architecture
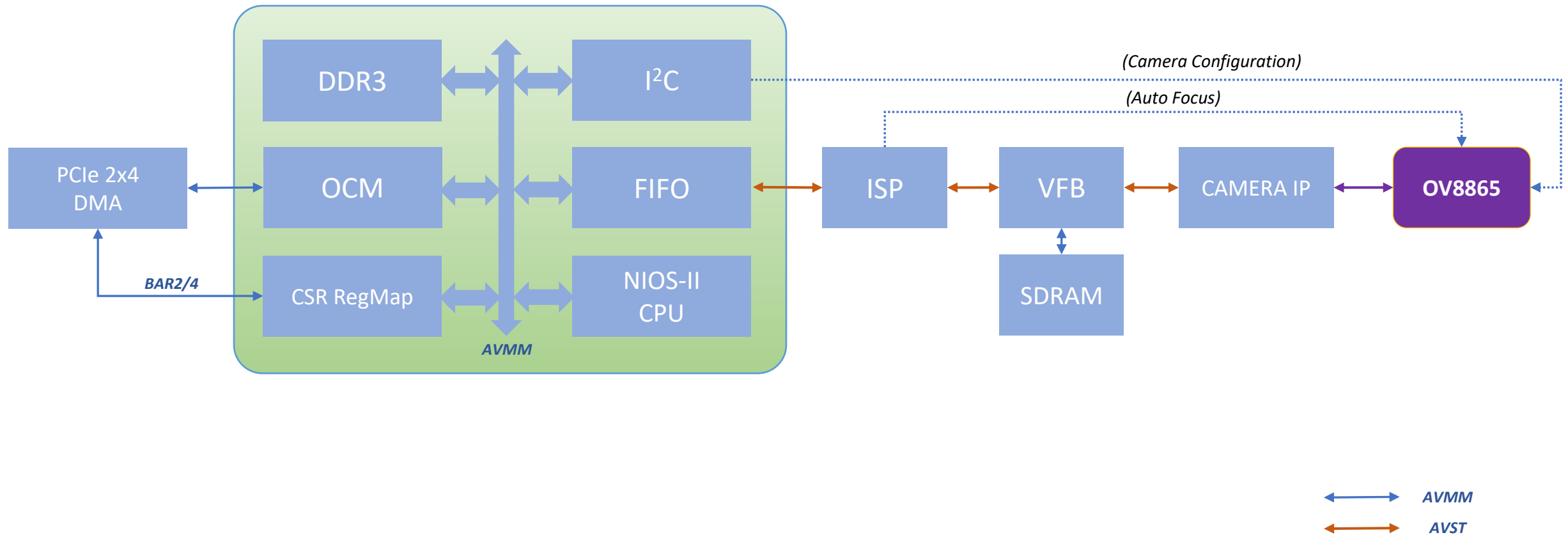
Control Status Registers (CSR)

	32 bits CSR (4 bytes) (31 ... 0)				Description
0	Frame drop [bit 24]	DMA error [bit 16]	DDR3 [bit 8]	Camera Status [bit 0]	Initialization status (RO)
1				Autofocus_en [bit 0]	Autofocus control (RW)
2	Frame_size_h(640)	Frame_size_h(640)	Frame_size_v(480)	Frame_size_v(480)	CAM frame size (RO)
3					CAM DMA Address (L)
4	Reserved				CAM DMA Address (H)
5					CAM DMA Size (RO)
6			Memory Availability Region 1 [bit 8]	Memory Availability Region 0 [bit 0]	CAM DMA Status (RW)
7					Debug Data (RO)

Frame Layout - Package Header and Footer

Byte 7	Byte 6	Byte 5	Byte 4	Byte 3	Byte 2	Byte 1	Byte 0
Header ID: 0x1E 0xAD 0xCA 0xFE				Frame counter (0-255)	Package counter (0-255)	Package size (1-65535) Unite - KB 0 – invalid value	

Byte 7	Byte 6	Byte 5	Byte 4	Byte 3	Byte 2	Byte 1	Byte 0
Normal ID: 0x55 0x55 0x55 0x55				Frame counter (0-255)	Package counter (0-255)	Package size (1-65535) Unite - KB 0 – invalid value	

Byte 7	Byte 6	Byte 5	Byte 4	Byte 3	Byte 2	Byte 1	Byte 0
Footer ID: 0xDE 0xAD 0xCA 0xFE				Frame counter (0-255)	Package counter (0-255)	Package size (1-65535) Unite - KB 0 – invalid value	