

Category	Feature	CSI-2 Specification Version and Adoption Date									
		v1.1 1Q 2013	v1.2 3Q 2014	v1.3 4Q 2014	v2.0 1Q 2017	v2.1 2Q 2018	v3.0 3Q 2019	v4.0 4Q 2021	v4.1 2Q 2024	v4.2 4Q 2025	
Minimum System Level Capabilities	Data plane: Image data transmission using frame-start / frame-end short packets and one or more long data packets over a MIPI-authorized physical layer	M	M	M	M	M	M	M	M	M	M
	Control plane: CCI protocol-conformant	M	M	M	M	M	M	M	M	M	M
MIPI-Defined Physical Layer Support	D-PHY version reference ¹ and clock mode support (FCM/ECM = Forwarded Clock Mode/Embedded Clock Mode)	v1.1	v1.2	v1.2	v2.1	v2.1	v2.5	v3.0	v3.5	v3.6	
		FCM	FCM	FCM	FCM	FCM	FCM	FCM	FCM	FCM/ECM	
	C-PHY version reference ¹ and encoding mode support (6-WS/18-WS = 6-Wirestate Mode/18-Wirestate Mode)	-	-	v1.0	v1.2	v1.2	v2.0	v2.1	v3.0	v3.0	
		-	-	6-WS	6-WS	6-WS	6-WS	6-WS	6-WS/18-WS	6-WS/18-WS	
	Max number of data lanes per D-PHY or C-PHY serial link	4	None	None	None	None	None	None	None	None	
	Max Gbps for typical ² 4-lane D-PHY / 3-lane C-PHY serial links	6/-	10/-	10/11.6	18/24	18/24	18/41.1	36/41.1	36/53.3	36/53.3	
	A-PHY version reference ¹ (used with CSE and PAL/CSI-2 specs)	-	-	-	-	-	-	v1.0	v1.0	v2.0	
Command and Control Interface (CCI) 2-Wire Support	I2C Standard-mode (100 kbps)	M	M	M	M	X	X	X	X	X	
	I2C Fast-mode (400 kbps)	M	M	M	M	M	M	M	M	M	
	I2C Fast-mode Plus (1 Mbps)	-	-	-	-	O	O	O	O	O	
	I3C SDR (12.5 Mbps) and HDR-DDR (25 Mbps) modes	-	-	-	-	O	O	O	O	O	
Short Packet Data Types	Frame Start and Frame End	M	M	M	M	M	M	M	M	M	
	Line Start and Line End	O	O	O	O	O	O	O	O	O	
	Generic User-Defined (8 data types)	O	O	O	O	O	O	O	O	O	
	End of Transmission (EoTp)	-	-	-	-	-	M ³	M ³	M ³	M ³	
Long Packet Data Types		M ⁴	M ⁴	M ⁴	M ⁴	M ⁴	M ⁴	M ⁴	M ⁴	M ⁴	
	YUV{422,420}	O	O	O	O	O	O	O	O	O	
	RGB{888,666,565,555,444}	O	O	O	O	O	O	O	O	O	
	RAW{6,7,8,10,12,14}	O	O	O	O	O	O	O	O	O	
	RAW{16,20}	-	-	-	O	O	O	O	O	O	
	RAW24	-	-	-	-	-	O	O	O	O	
	RAW28	-	-	-	-	-	-	O	O	O	
	User-Defined, Byte-Based Data (8 data types)	O	O	O	O	O	O	O	O	O	
	Null, Blanking, and Embedded Data Packets	O	O	O	O	O	O	O	O	O	
	Generic, User-Defined (4 data types)	O	O	O	O	O	O	O	O	O	
	SEP-DT: indicates Service Extension Packet (SEP) payload	-	-	-	-	-	-	M ⁵	M ⁵	M ⁵	
	CSE-TV: indicates CSE Test Vector packet payload	-	-	-	-	-	-	O ¹⁰	O ¹⁰	O	
	USL: indicates Unified Serial Link (USL) packet payload	-	-	-	-	-	M ⁶	M ⁶	M ⁶	M ⁶	
	ESP: indicates Event Sensing and Processing (ESP) packet payload	-	-	-	-	-	-	-	-	M ⁷	
Bayer Pixel Compression	DPCM 10-{8,7,6}-10 and 12-{8,7,6}-12	O	O	O	O	O	O	O	O	O	
	DPCM 12-10-12	-	-	-	O	O	O	O	O	O	
	Multi-Pixel Compression (MPC) for multi-pixel color filter arrays	-	-	-	-	-	-	O ⁸	O ⁸	O	
Long Packet Interleaving	By Virtual Channel	O	O	O	O	O	O	O	O	O	
	By Data Type (within the same virtual channel)	O	O	O	O	O	O	O	O	O	
	Maximum number of virtual channels (for D-PHY/C-PHY)	4/-	4/-	4/4	16/32	16/32	16/32	16/32	16/32	16/32	
Latency Reduction and Transport Efficiency (LRTE)	D-PHY Option 1 Efficient Packet Delimiters (EPDs)	-	-	-	O	O	O	O	O	O	
	D-PHY Option 2 EPDs	-	-	-	O	O	O ⁹	O	O	O	
	C-PHY EPDs	-	-	-	O	O	O	O	O	O	
Other Features and Information	Long packet data scrambling for both D-PHY FCM and C-PHY	-	-	-	O	O	O	O	O	O	
	Smart Region of Interest (SROI)	-	-	-	-	-	O	O	O	O	
	Always-On Sentinel Conduit (AOSC)	-	-	-	-	-	-	O	O ⁹	O	
	Event Sensing and Processing (ESP)	-	-	-	-	-	-	-	-	O	
	Unified Serial Link (USL) PHY support	-	-	-	-	-	-	D-PHY FCM C-PHY 6-WS	D-PHY FCM C-PHY 6-WS	D-PHY FCM C-PHY 6-WS	
	Camera Service Extensions (CSE) specification version reference	-	-	-	-	-	-	v1.0	v2.0	v2.0	

M: Mandatory O: Optional X: Deprecated feature

Note:

1. Indicates which MIPI PHY specification is referenced in the MIPI CSI-2 release. The CSI-2 release might also be forwards / backwards compatible with other versions of the indicated PHY.
2. Assumes MIPI standard channel.