

SmartDV™

Proven and Trusted Smart Design and Verification Solutions™



Product Directory

The World's Largest Portfolio of VIP and Design IP

Verification IP										Verification IP																									
Protocol	Verification IP SimXL *	Assertion IP	Post-Silicon Vip				Protocol	Verification IP SimXL *	Assertion IP	Post-Silicon Vip				Protocol	Verification IP SimXL *	Assertion IP	Post-Silicon Vip				Protocol	Verification IP SimXL *	Assertion IP	Post-Silicon Vip				Protocol	Verification IP SimXL *	Assertion IP	Post-Silicon Vip				
100GBase-KR10/CR10/SR10/LR4	✓	✓					AMBA AXI4-Stream	✓	✓	✓			DDR4	✓	✓	✓			GDDR5X	✓	✓	✓			OCP	✓	✓	✓			SLC NAND	✓	✓		
10G 64b/66b WIS	✓						AMBA AXI4-Stream Interconnect	✓	✓	✓			DDR4 Data Buffer	✓					GDDR5X DFI	✓					Octal SPI	✓					SLVS-EC	✓			
10G TBI (PCS)	✓						AMBA AXI5	✓	✓	✓			DDR4 DFI	✓	✓	✓			GDDR6	✓	✓	✓			ONFi	✓	✓				SmartCard (IEC7816)	✓	✓		
10G XAUI	✓						AMBA AXI5 Interconnect	✓	✓	✓			DDR4 DIMM	✓					GDDR6 DFI	✓	✓	✓			OpenCAPI	✓	✓				SMBus	✓	✓	✓	
10GBase-KX4	✓						AMBA AXI5-Lite	✓	✓	✓			DDR4 RCD	✓					GDDR7	✓					OpenLDI	✓					SMPTE SDI	✓	✓		
10GBase-KR	✓	✓					AMBA AXI5-Lite Interconnect	✓	✓	✓			DDR4-3DS	✓	✓				GDDR7 DFI	✓					Parallel NOR Flash	✓	✓				Spacefibre	✓			
2.5GBase- KX/T	✓	✓					ARINC 419	✓	✓	✓			DDR5	✓	✓	✓			GENZ	✓					Parallel PCRAM	✓					SpaceWire	✓	✓		
5GBase- KR/T	✓	✓					ARINC 429	✓	✓	✓			DDR5 DFI	✓	✓	✓			GHBM	✓	✓				PCI	✓	✓				SPDIF (IEC60958)	✓	✓		
200GBase-KR8/KR4/KR2	✓	✓					ARINC 818	✓					DDR5 NVRAM	✓					GMII TBI (8b/10b)	✓					PCI Express 1.0/2.0/3.0/4.0/5.0	✓	✓				SPI	✓	✓	✓	
25GBase- R/KR	✓	✓					AVALON	✓					Display Port	✓	✓				HBM	✓	✓	✓			PDM	✓	✓				SPI Flash	✓			
400GBase-KR4/KR8/KR16	✓	✓					AVSBus	✓	✓				Display Port 2.0	✓					HBM DFI	✓	✓	✓			Peripheral VCI	✓	✓				SRAM	✓			
40GBase-KR4/CR4/SR4/LR4/KR2	✓	✓					Basic VCI	✓					eCPRI	✓					HBM2E	✓	✓	✓			PMBus	✓	✓				SRIOV	✓			
50GBase- KR/KR2	✓	✓					BISS	✓					EDORAM	✓					HBM2E DFI	✓	✓	✓			PSRAM	✓	✓	✓			SSI (Synchronous Serial Interface)	✓			
Advanced VCI	✓						Camera Link HS	✓					Embedded Display Port	✓					HDMI 1.4/2.0/2.1	✓	✓				QDR2	✓	✓				SSRAM	✓			
AMBA ACE	✓	✓	✓				CAN	✓		✓			EMIF	✓					HMC	✓	✓				QDR4	✓	✓				SVID	✓			
AMBA ACE5	✓	✓	✓				CCIX 1.0	✓					eMMC JESD84 4.x/5.x	✓	✓				I2C	✓	✓				Quad SPI	✓					SWD	✓			
AMBA ACE5-Lite	✓	✓	✓				CGMII 100G Ethernet	✓					eSPI	✓		✓			I2S	✓	✓	✓			RapidIO	✓	✓				TDM	✓	✓		
AMBA ACE-Lite	✓	✓	✓				CJTAG IEEE 1149.7	✓					EtherCAT	✓	✓				I2S	✓	✓				RDRAM	✓					TileLink	✓	✓	✓	
AMBA AHB	✓	✓	✓				CoaXPress (CXP)	✓					Ethernet	✓	✓				IEC61162	✓					RERAM	✓					Toggle Flash	✓			
AMBA AHB Bus	✓	✓	✓				Compact Flash	✓					Ethernet AVB	✓					Interlaken	✓	✓				RLDRAM	✓	✓				TPM	✓			
AMBA AHB5	✓	✓	✓				CPI	✓	✓				Ethernet TSN	✓					IPMB	✓					RLDRAM2	✓	✓				TSS	✓			
AMBA AHB5 Bus	✓	✓	✓				CPRI	✓	✓				eUSB	✓					JESD204	✓	✓				RLDRAM3	✓	✓				UART	✓	✓	✓	
AMBA AHB-Lite	✓	✓	✓				CXL 1.0	✓					FC over Ethernet	✓					JESD207	✓	✓				SAE J1850	✓					UFS	✓	✓		
AMBA AHB-Lite Bus	✓	✓	✓				DALI	✓	✓				FCRAM	✓	✓				JTAG IEEE 1149.1/1149.6	✓	✓	✓			Safe-by-Wire Plus	✓					USB 1.0/2.0	✓			
AMBA APB3	✓	✓	✓				DDR	✓	✓	✓			Fibre Channel	✓	✓				LIN	✓	✓				SAS 4.0	✓	✓				USB 3.0/3.1	✓			
AMBA APB4	✓	✓	✓				DDR DFI	✓		✓			FlexRay	✓	✓				Low Latency DRAM	✓	✓				SATA 1.5/2.0/3.x	✓	✓				USB 3.2	✓			
AMBA ATB	✓	✓	✓				DDR2	✓	✓	✓			FPMRAM	✓					LPC	✓	✓	✓			SBSRAM	✓					USB 4	✓			
AMBA AXI3	✓	✓	✓				DDR2 DFI	✓		✓			FRAM	✓					LPDDR	✓	✓				SD Express	✓					USB PD	✓	✓		
AMBA AXI3 Interconnect	✓	✓	✓				DDR2 Monitor	✓					G 999.1	✓					LPDDR DFI	✓	✓	✓			SDI	✓					USB SSIC	✓			
AMBA AXI4	✓	✓	✓				DDR3	✓	✓	✓			GCI	✓	✓				LPDDR2	✓	✓	✓			SDIO	✓	✓				VBYONE	✓	✓		
AMBA AXI4 Interconnect	✓	✓	✓				DDR3 DFI	✓		✓			GDDR2	✓	✓				LPDDR2 DFI	✓		✓			SDIO 4.0 UHS-II	✓					VRAM	✓			
AMBA AXI4-Lite	✓	✓	✓				DDR3 DIMM	✓					GDDR2 DFI	✓					LPDDR3	✓	✓	✓			SDRAM	✓	✓	✓			Wide IO	✓	✓		
AMBA AXI4-Lite Interconnect	✓	✓	✓				DDR3 Monitor	✓					GDDR3	✓	✓				LPDDR3 DFI	✓	✓	✓			SENT (SAE J2716)	✓	✓				Wide IO2	✓	✓		
							DDR3-3DS	✓	✓				GDDR3 DFI	✓					LPDDR4	✓	✓	✓			Serial Flash	✓	✓				Wishbone	✓	✓		
							DDR3L	✓	✓				GDDR3L	✓	✓				LPDDR4 DFI	✓	✓	✓			Serial NOR Flash	✓	✓				XLGMII 40G Ethernet	✓			
													GDDR4	✓	✓				LPDDR5	✓	✓	✓			Serial PCRAM	✓					XMBus	✓			
													GDDR4 DFI	✓	✓				LPDDR5 DFI	✓	✓	✓			SFPDP	✓					XSPI	✓	✓		
													GDDR5	✓	✓	✓			LPSDR	✓	✓				SGMII/1000Base-KX	✓									
													GDDR5 DFI	✓					LVDS	✓	✓				SGRAM	✓									
																			MDRAM	✓					Simcard	✓									
																			MHL	✓															
																			Microwire	✓	✓														
																			MII/SMII/RMII/GMII/RGMII	✓	✓														
																			MIL STD 1553	✓	✓														
																			MIL STD 1773	✓	✓														
																			MIPI BIF	✓															
																			MIPI CPHY	✓															
																			MIPI CSI-2	✓	✓														
																			MIPI CSI-3	✓	✓														
																			MIPI DBI	✓															
																			MIPI DigRF	✓															
																			MIPI DPHY	✓															
																			MIPI DPI	✓															
																			MIPI DSI	✓	✓														
																			MIPI DSI-2	✓	✓														
																			MIPI GBD USB 3.0/3.1/3.2	✓															
																			MIPI HSI	✓															
																			MIPI HTI	✓	✓														
																			MIPI I3C	✓	✓			✓											
																			MIPI LLI	✓															
																			MIPI MPHY	✓	✓														
																			MIPI RFFE	✓	✓			✓											
																			MIPI SLIMBUS	✓	✓														
																			MIPI SoundWire	✓	✓			✓											
																			MIPI SoundWire I3S	✓															
																			MIPI SPMI	✓	✓			✓											
																			MIPI SPP	✓															
																			MIPI STP	✓	✓														
																			MIPI UniPro	✓	✓														

* *SimXL (Synthesizable Transactors)*

Design IP

Protocol

AC97 Controller
Apple SPMI Slave
AVSBUS Master
AVSBUS Slave
CAN Controller
CXP Device
CXP Host
DDR4 Controller
DDR5 Controller
Display Port Receiver
Display Port Transmitter
DMA Controller with AHB
DMA Controller with AXI
DMA Controller with OCP
DMA Controller with TileLink
eARC Receiver
eARC Transmitter
eMMC Device Controller
eMMC Host Controller
eSPI Controller
eSPI Master
eSPI Slave
Ethernet 10G MAC
Ethernet 10G XAUI PCS
Ethernet 1G MAC
Ethernet 1G PCS

Protocol

Ethernet 1G TSN MAC
Ethernet TSN 10G MAC
Ethernet TSN 1G MAC
Ethernet TSN 200G/400G MAC
Ethernet TSN 25G/50G MAC
Ethernet TSN 40G/100G MAC
FlexRay Controller
GPIO
HBM2 Controller
HDCP 2.3 Receiver
HDCP 2.3 Transmitter
HDMI-CEC
I2C Master
I2C Slave
I2C Slave To AHB Bridge
I2C Slave To AXI Bridge
I2C/SPI/RFFE Slave
I2S Master Controller
IEEE 1149.7 Compact TAP
IEEE 1149.7 DTS Adapter
JESD204B Receiver
JESD204B Transmitter
JESD204C Receiver
JESD204C Transmitter
JESD207 BBIC
JESD207 RFIC

Protocol

LIN Controller
LPDDR4 Controller
LPDDR5 Controller
MIL STD 1553 Controller
MIPI BIF Slave
MIPI CSI-2 Receiver
MIPI CSI-2 Transmitter
MIPI DSI-2 Receiver
MIPI DSI-2 Transmitter
MIPI I3C Master
MIPI I3C Slave
MIPI I3C Slave To AHB Bridge
MIPI I3C Slave To AXI Bridge
MIPI RFFE Master
MIPI RFFE Slave
MIPI SPMI Master
MIPI SPMI Slave
MIPI STP Master
MIPI UniPro
OCTAL SPI Master
PCI Master Slave
PCI Express Controller
PMBUS Master Controller
PMBUS Slave
RAPIDIO EndPoint Controller
SAE J2716 Device

Protocol

SAE J2716 Sensor
SDIO Device Controller
SDIO Host Controller
Serial Flash Controller
SLVS-EC Receiver
SLVS-EC Transmitter
SmartCard (IEC7816) Slave
SMBUS Master
SMBUS Slave
SMPTE-SDI Receiver
SMPTE-SDI Transmitter
SPI Slave
SPI Slave To AHB Bridge
SPI Slave To AXI Bridge
SPI/RFFE Slave
TIMER
TS5 Master
TS5 Slave
V-By-One Receiver
V-By-One Transmitter
VESA DSC Decoder
VESA DSC Encoder
XSPI Controller

For a specific requirement not found in this directory,
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