

Design Services

Vtech offers LSI front-end design services with third-party verification as its core technology. We have rich experience in Verilog, VHDL and SystemVerilog designs, and high skill in dynamic, static, formal, random and UVM verifications. We have also accumulated application specific expertise for the advanced systems such as CMOS image sensor, medical equipment, factory automation, automotive ECU, communication device, edge computing and SSD.

Features

- Good at UVM random verification and property verification with formal tools
- RTL design with consideration for ease of verification
- Good customer reputations for the quality of design documents
- Skilled in developing interrupt software and possible to develop test software required for CPU built-in SoC verification and design SoC type FPGA
- Full-scale embedded software development, and board design jointly with partners
- Service based EDA solutions
 - VARON: Bus performance optimization and reporting, support for customer proprietary bus protocol
 - VSTAR: FPGA design defects debugging and reporting, GUI development for customer equipment in the field

Scope of Work

- ASIC: Specification creation, RTL coding & verification, logic synthesis and chip verification
- FPGA: Specification creation, RTL coding & verification, implementation and on-system verification

Track record

Application	Product	Scope of Work
Image processing	Electronic image stabilization LSI	SystemC design & high level synthesis and RTL design & verification for application interface, CIS data reception, memory subsystem and system synchronization units
	Infrared ranging sensor	Verification for sensor control unit
	CMOS sensor with face recognition	Subsystem verification and on-system verification for digital processing unit
	Mirrorless single lens reflex camera	SystemC design & high level synthesis and RTL design & verification for HDR synthesis
		RTL design & verification for imaging peripheral and image processing circuits including JPEG compression / decompression
High speed camera	FPGA RTL design & verification for pixel interpolation	
Medical	Digestive organs endoscope	RTL design & verification in light source control FPGA development; Tool validation; RTL design & verification in image processing IP development
	Capsule endoscopy	RTL design & verification and prototype system verification in FPGA development
	Surgical endoscope	RTL design, synthesis & verification and prototype system & raw sample verifications in light source control and image processing FPGA developments
FA	Machine controller	FPGA RTL design & verification for function expansion & scale reduction
Automotive	Laser ranging sensor	RTL design & verification for sensor data processing unit
	CMOS image sensor	RTL design & subsystem verification for data processing & control units
	Laser controlled headlights	Reverse engineering and RTL design & verification in FPGA development
Communication	5G communication device	RTL design & verification, software development and third party management for scheduler circuit, and internal processing performance improvement
SSD	PCIe Gen4 IP	Specification creation, SystemVerilog RTL design and UVM environment build & verification for Gen4 additional features and LTSSM / PHY control unit designs
	NVMe controller IP	UVM environment build and verification
	Flash controller IP	RTL verification for bus bridge
Computing	Edge device	ISS development and to UVM environment build & verification for RISC-V core



Verification Technology USA, Inc.

URL: <https://vtech-usa.com/>

Address: 4300 Stevens Creek Blvd., Suite 220, San Jose, CA 95129 USA

Tel: 650-946-8717, Robert Biczek: r_biczek@vtech-inc.co.jp