TeleVPU: A High-Performance RISC-V Video Transcoding Card

TeleVPU is the first RISC-V video transcoding card developed by China Telecom Research Institute, which can provide high-density and low-cost video transcoding and compression capabilities for billions of channels of videos.

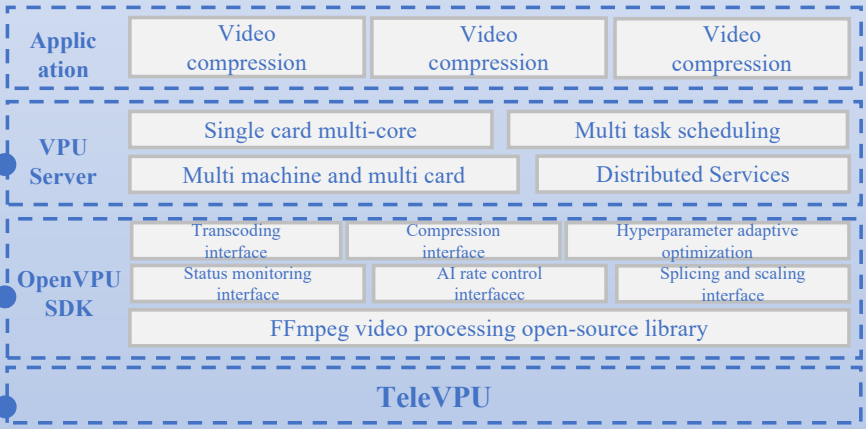
- A Multi-SoC RISC-V architecture
- Integration of transcoding and AI analysis
- Up to over 90% compression ratio

KEY PARAMETERS		
Transcoding and compression performance	Resolution	Channels
	4K	10
	1080P	40
	720P	80
Codec	H.265、H.264	
Image Acceleration	Any resolution scaling, image stitching, sharpening, blurring, noise reduction, watermark/image/text overlay	
AI capability	20Tops@INT8	
Power	60W	

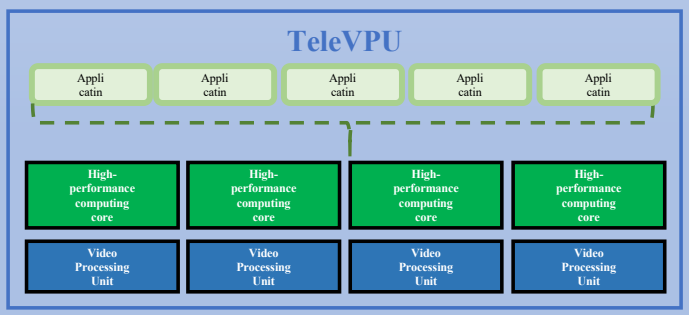
Self-developed VPU Server, achieving multi-card collaboration and unified management and control

Self-developed OpenVPU SDK, providing efficient management and interface support

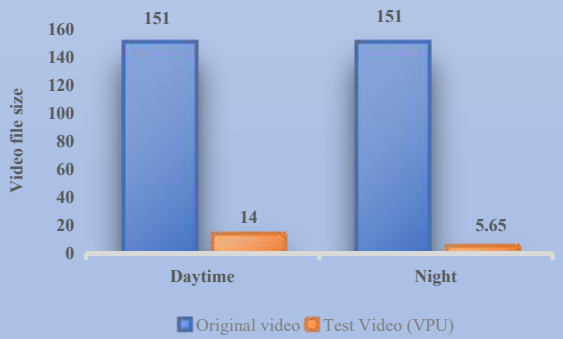
TeleVPU as the computing power foundation, empowering efficient video processing



Software-Defined VPU (SD-VPU): autonomously control and supports software-defined management and computing

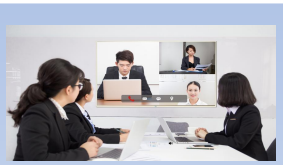


Large-scale Test: achieve at least 90% video compression



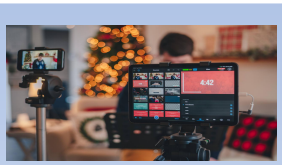
Application Scenarios

Security Monitoring



Video Conference

Video Network



Live Streaming