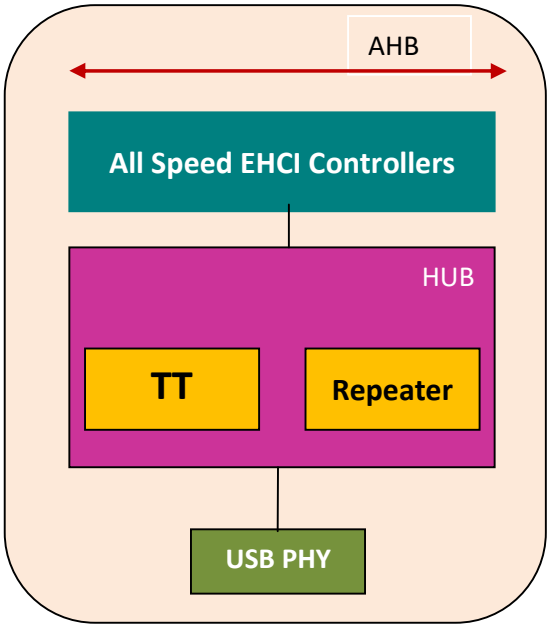


Overview

The Vinchip host/device (OTG) solutions include a variety of host device configurations around a single USB port.

OTG is a supplement to the USB 2.0 specification mainly introduced to provide a low-cost connectivity for portable devices such as mobile phones. Devices that are solely peripherals initiate transfers through a Session Request Protocol (SRP). Dual-role devices support both SRP and Host Negotiation Protocol (HNP).

Host, Multi Device with Hub2.0 options

Many SoCs today use multiple USB devices to make use of the extensive software support available in Linux and Android stack for USB Devices

Vinchip offers customized solutions where USB2.0 hub controller is connected up to eight USB2.0 devices without using a transceiver. The devices may be HS, FS or LS.

Host Controller Options - EHCI

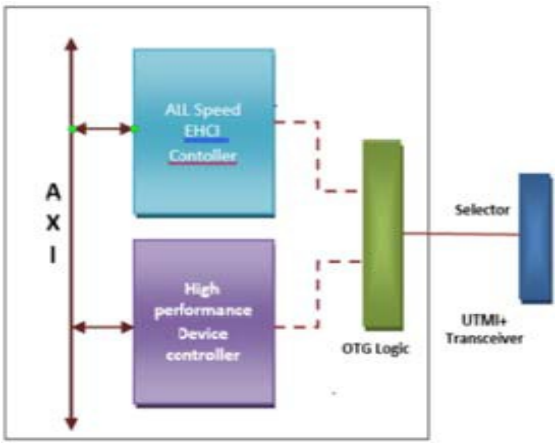
Vinchip provides EHCI host controller that works with Linux/android software stack. This allows upto 127 USB devices to be connected to the host controller. Linux software stack has extensive support for USB devices such as

- Modems
- usb2hdmi
- usb2ethernet
- usb2wifi

Vinchip EHCI host controller was originally developed for HS only support. And OHCI host controller was developed for FS/LS support.

Vinchip EHCI host supports all the USB speeds HS/FS/LS using an integrated USB2.0 single port hub

Host Controller Options – Single device host



This is a lower gate count host controller that supports only single device. Mass storage driver is provided by Vinchip.

Device Controller

Vinchip USB device controller supports 32 endpoints of

- Control
- Bulk
- Interrupt
- Isochronous

Software is provided in the form of 'C' code with support to connect to Linux gadget driver.

A high-performance DMA controller sits on an AXI bus to feed the USB dataflow.