IBX Camera Interface

ibx, usom, microsom, carrierboard, braswell, solidpc, intel, camera, mipi

Description

The Camera Serial Interface (CSI) is a specification of the Mobile Industry Processor Interface (MIPI) Alliance. It defines an interface between a camera and a host processor. The MIPI CSI-2 v1.0 specification was released in 2005. It uses either D-PHY or C-PHY (Both standards are set by the MIPI Alliance) as a physical layer option. The protocol is divided into the following layers...

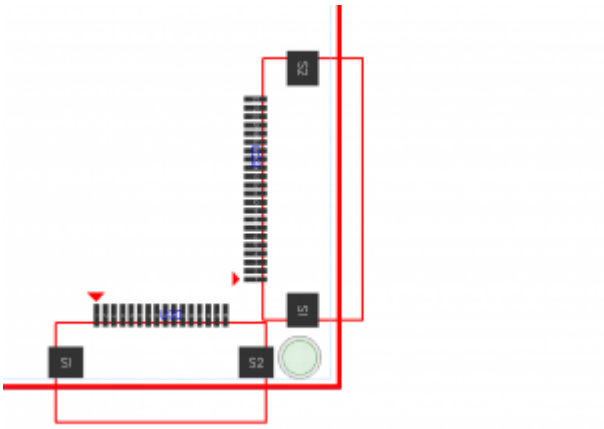
- Physical Layer (C-PHY/D-PHY)
- Lane Merger Layer.
- Low Level Protocol Layer.
- Pixel to Byte Conversion Layer
- Application Layer

There is currently no camera module developed.

Details

The Intel Braswell MicroSoms got two interfaces:

- one 4 lane MIPI CSI-2
- one 2 lane MIPI CSI-2

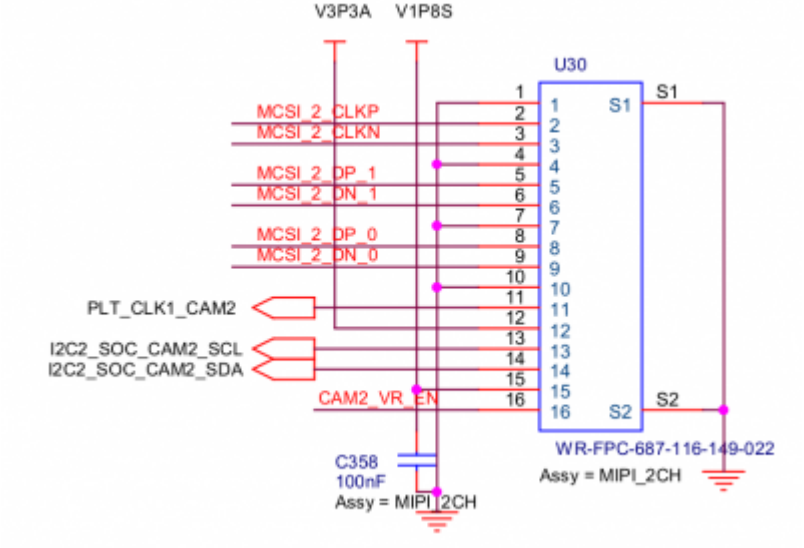


Notes

- FPC connector part numbers are written below the connector symbol.
- I2C signals are 1.8v. If using a 3.3v module then those needs to be level shifted.
- Both I2C buses are pulled up with 1K Ohm to V1P8A (domain is always on).
- Clocks are 19.2MHz clocks and are with 1.8v swing. V3P3A
- CAM1_VR_EN and CAM2_VR_EN are both 1.8v tolerent module enable signals.
- V3P3A is 3.3v always on.
- V1P8S is 1.8v that is shut in suspend mode.

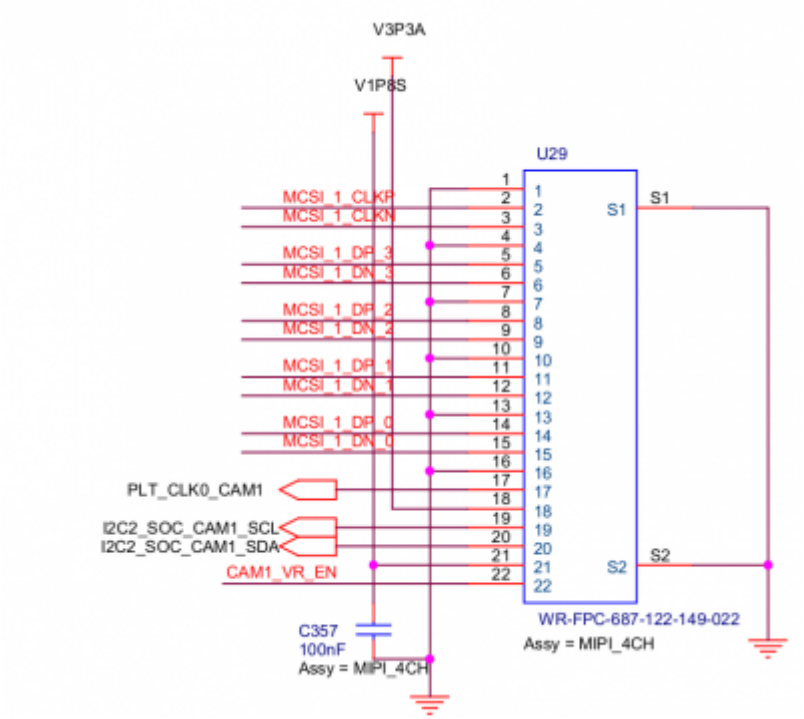
2 lane MIPI CSI-2

Partnumber of the FPC connector: WR-FPC-687-116-149-022



4 lane MIPI CSI-2

Partnumber of the FPC connector: WR-FPC-687-122-149-022



If you use the SolidPC Carrierboard, FPC connectors on the 4 lane MIPI can be added by using a higher mating height for the hirose connectors. To connect a FPC to the 2 lane MIPI, the HDMI connector needs to be disassembled and remove the series caps

Links

- MIPI.org