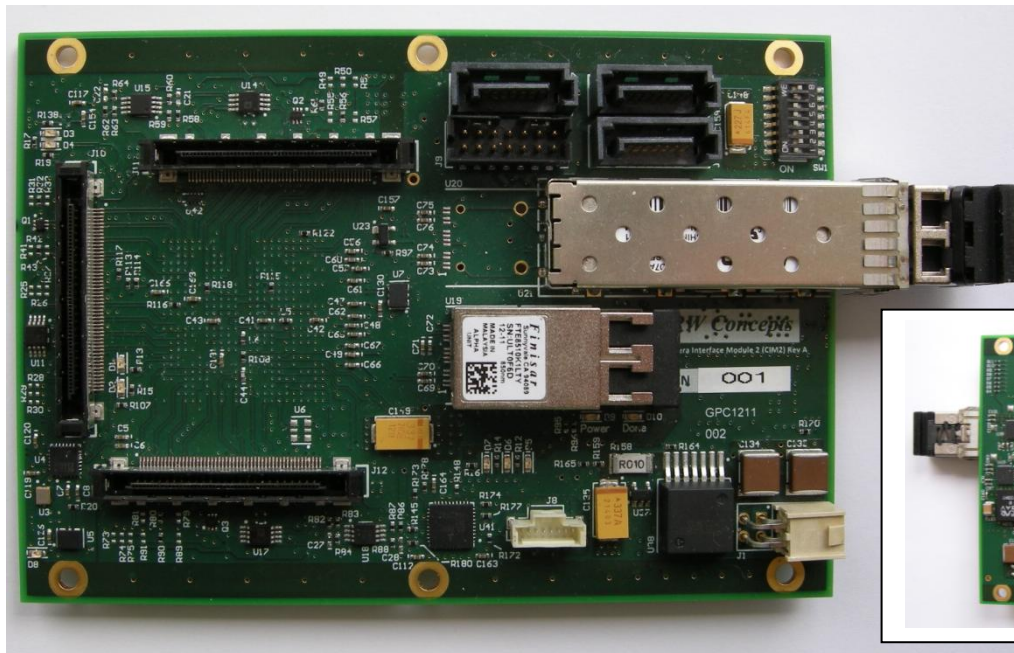
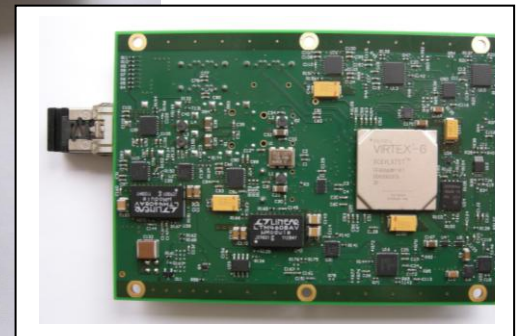


Camera Interface Module (CIM2)



Inset: Rear View of the CIM2



Key features:

Xilinx Virtex-6 FPGA (XC6LX75T / 130T)

2 x 6.5Gbit/sec fibre-optic serial links

3 x 6.5Gbit/sec electrical links

6 Camera Ports, each comprising:

**8 x LVDS pairs, 2 x serial control links
1 x Analogue switch, 1 open drain driver
1 logic driver, 1 analogue driver**

**Capable of connecting to Camlink,
single pair LVDS or parallel LVDS
interfaced cameras.**

Additional RS232 / 422 serial ports.

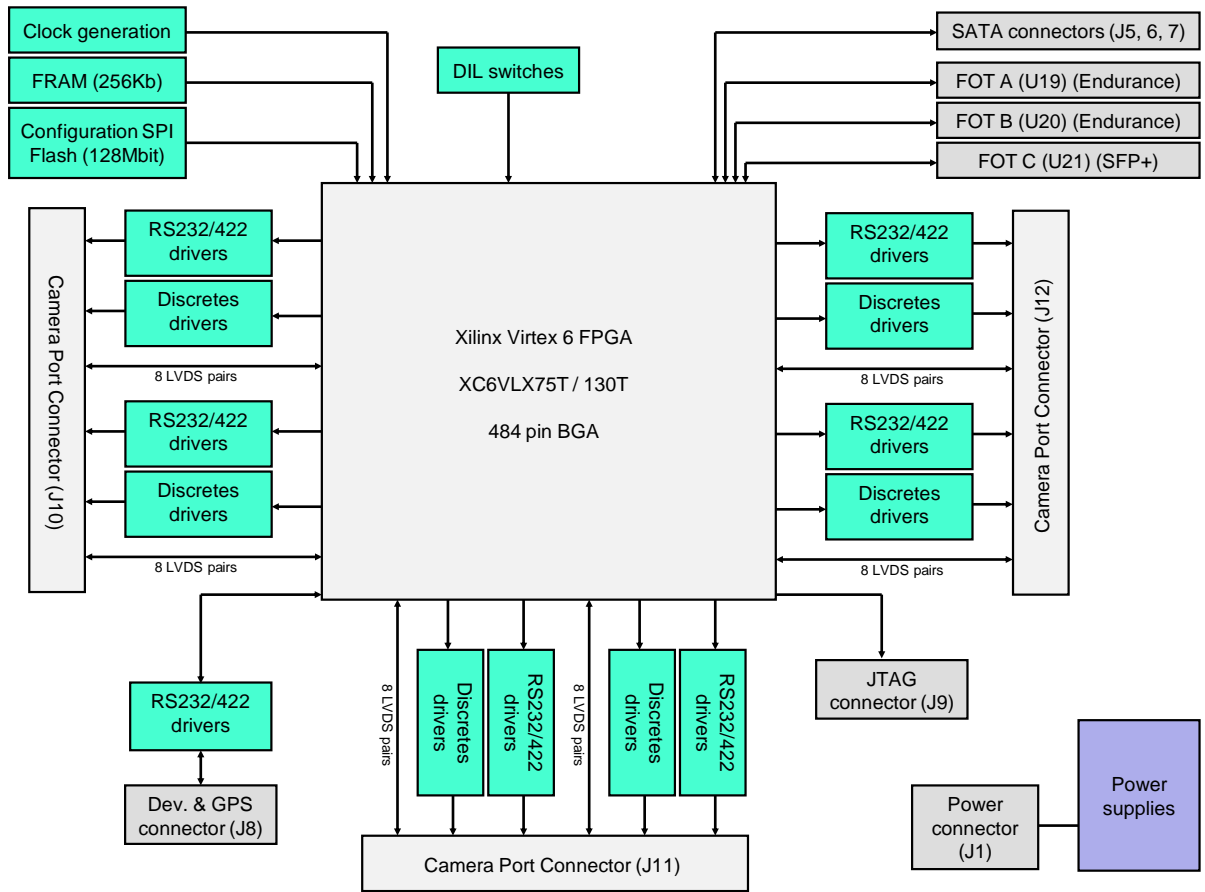
8 - 36V supply @ 10W est. maximum

The Camera Interface Module (CIM2) provides a multi-channel digital video input and camera control capability for systems based on Xilinx FPGAs. The CIM2 is intended to be located near to the cameras and allow video data to be streamed from the CIM2 using Xilinx Multi-Gigabit links (electrical and optically coupled).

The 6 identical Camera Ports each comprise 8 LVDS pairs, 2 serial ports (RS232 / 422) and a set of discrete outputs. The Camera Ports can be used in combinations to cater for different interface requirements such as:

6 x Base CamLink i/fs or
3 x Medium CamLink i/fs or
2 x Full CamLink i/fs or
2 x 20 bit LVDS i/fs

An additional RS232 / 422 port is provided to allow other external data (e.g. GPS) to be added to the data stream from the CIM2. Non-volatile memory (FRAM) is provided to allow usage information or configuration data to be stored.



FPGA Node

FPGA XC6VLX75T / 130T
 MGT speed 6.5Gbps (-2 Speed Grade)

Mechanical

Format 115mm x 80mm
 Weight 100g
 Power 10W est. (user code dependent)

Connectors (High density)

Camera Ports (J10, 11, 12) Hirose FX15SC-51 (51 way) shielded, latched

Connectors (Low density)

Power (J1) Samtec ILP1-102 (4 way)
 JTAG (J9) Molex 2mm IDC (14 way)
 Elec. MGT (J5 - 7) 3M SATA (7 way)
 Dev. Port & GPS (U8) Molex Pico Clasp

Clock generation

Oscillators Abracon MEMS (4)
 Clock generator Silicon Labs Si5338A

FO Transceivers

U19 & U20 Finisar 'Endurance'
 U21 Finisar SFP+ or equivalent

NV Memory

FRAM Ramtron 32K x 8 bit

Discrete outputs (per port)

Open Drain DMN5L06VAK-7 MOSFET
 Analogue switch Analog Devices ADG821
 Logic o/p NXP 74AVC2T45GT
 Analogue driver Maxim MAX4017EUA+

Serial ports

8 x RS232 / 422 Intersil ISL3333 transceiver