# Firmware Download Link: <https://www-zeuthen.desy.de/~sulanke/Projects/CTA/Dig_trigger/NectarCam/L2/L2CB/firmware/>

# L2CB1 Firmware Properties

FPGA: Xilinx XC6SLX100-L1FGG676I

FLASH (SPI, 32 Mbit): AT45DB321E-SHF-B

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| **Revision** | **Name** | **Clock source** | **VHDL-source** | **Short Description** |
| 005 | l2cb1\_005 | External by TIB or local TCXO | l2cb1\_005.vhd | clock and trigger fanout to 18 slots of the L2-crate, L1 trigger reception of 265 FEBs, FE-board power on/off via SPI (SPI master),  L2 source for the TIB |
| 007 | l2cb1\_007 | External by TIB or local TCXO | L2CB\_007\_top.vhd | Like 005, but creates 66MHz clock out of the 10Mhz TIB-clock |
| 008 | l2cb1\_008 | External by TIB or local TCXO | L2CB\_008\_top.vhd | 66MHz version, time stamp registers replaced by L1A up/down scaler, see L2CB1\_user\_manual\_v4.pdf |
| 009 | L2cb1\_009 | External by TIB or local TCXO | L2CB\_009\_top.vhd | First firmware revision with MCF-trigger, set jumper to connect  J7-15 to J7-17 , J7-16 to J7-18 (camera\_trig->camera\_trig\_dld) |
| 014 | L2cb1\_014 | External by TIB or local TCXO | L2CB\_014\_top.vhd | firmware revision with MCF-trigger, set jumper to connect  J7-15 to J7-17 , J7-16 to J7-18 (camera\_trig->camera\_trig\_dld) |
| 017 | L2cb1\_017 | External by TIB or local TCXO | L2CB\_017\_top.vhd | ctrl\_rg(13) being used as MCF\_ENABLE (Muon Candidate Flag Enable) now, default is ON;  BUSY-de-glitcher module implemented, to filter out seldom / random glitches of 3..4ns, seen at the TIB input, using tib\_gclk3 (125Mhz), 3 samples with stable signal required; |
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