

# Atlas RCE SDK

- SLAC SDK release
  - First Step BootLoader (board specific)
  - patched UBOOT bootloader
    - save UBOOT setup on SD card instead of SPI memory
  - Xilinx Linux Kernel for ZYNQ
  - Busybox ramdisk (Xilinx kernel + ramdisk)

# Atlas RCE SDK

- Atlas SDK Addons
  - Restored support for Zedboard
    - FSBL/UBOOT
    - uses same Xilinx kernel
  - ArchLinux ROOTFS snapshot (additional packaged installed)
  - cross compiler (crosstool-ng) compiled for SLC6/64-bit
  - rewritten SD card creation tool
    - added zedboard and HSIO2 support
      - different “first run” scripts
      - HSIO2 boot loader patched to allow DTM boot without hardware modification

# Atlas RCE SDK

- Atlas SDK modification
  - added QEMU zedboard software emulation
    - useful to maintain the ArchLinux ROOTFS
    - new busybox
    - rsync added
    - UBOOT tools added to allow manipulation of UBOOT setup from ramdisk
  - snapshot of additional ArchLinux packages hosted at CERN
    - avoid rolling release ArchLinux updates
    - ensure all contributors use the same software OS base
  - added AXI stream kernel module to SDK
  - added ATCA tool binaries

# Atlas RCE SDK

- Software distribution
  - all packages available from CERN servers
  - Firmware example PGP loopback/DMA transfer for COB DPM/DTM
    - failed to run at SLAC
    - need some updates to be tested today
    - many common firmware building blocks
      - merge with HSIO2 firmware and restructure
      - git repository (to be done)

# Atlas RCE SDK

- RCE storefront at CERN
  - <http://cern.ch/RceProject>
  - links to documentation on TWIKI and software
  - discussion forum
    - need to think of useful categories
- Some minor modification today needed to the release
  - fix firmware examples
  - replace default DPM firmware with DTM/PGP example one
    - ethernet not supported in default SDK DTM firmware

# Atlas RCE SDK

- Next steps
  - build Atlas SDK from source
    - make all sources available in CERN git
  - provide cross-compiled TDAQ-05 binaries for ArchLinux
    - feed ArchLinux modifications to TDAQ maintainers
  - documentation for setting up HSIO2 with pixel application
  - replace ATCA tools
  - provide software installation/update tools