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## Arcadia DAQ requirements:

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### - hardware:

- PC:
  - one Gbit Ethernet port (or USB-to-Gbit Ethernet adapter)
  - one free USB port
- KC705 board
- cables:
  - one USB-micro cable (included in the KC705 box)
  - one Ethernet cable (included in the KC705 box)
  - 2 Firefly cables

### - software:

- operating system:
  - CentOS Stream 8
  - Fedora 31 or newer
  - Ubuntu
- package list:
- for CentOS:
  - `dnf install epel-release python39-devel tcl tcl-devel tk tk-devel libjpeg-devel gcc git make g++ boost boost-devel pugixml-devel`
  - `pip-3.9 install matplotlib numpy tqdm scipy tabulate pybind11`
- IPbus client software: <https://ipbus.web.cern.ch/doc/user/html/software/installation.html>
  - `curl`

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https://ipbus.web.cern.ch/doc/user/html/_downloads/ipbus-sw.centos8.x86_64.repo -o
/etc/yum.repos.d/ipbus-sw.repo
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  - `yum-config-manager --enable powertools`
  - `yum groupinstall uhal controlhub`
- Arcadia DAQ software:
  - `git clone https://baltig.infn.it/arcadia/arcadia-daq-sw.git`
  - `cd arcadia-daq-sw/work`
  - `make cxxopts`
  - `make -C bin`
- For programming the FPGA:
  - `vivado` (or `vivado_lab`) 2020.2
  - or
  - `dnf copr enable mobicarte/openFPGALoader`
  - `dnf install openFPGALoader`
  - (after compiling, run: `openFPGALoader -b kc705 firmware/top.bit`)

For virtual machines, it is important they can access both Ethernet and USB ports