

The diagram illustrates the ATCA CRATE architecture, which consists of two identical processing units connected to a common ATCA BACKPLANE (Ethernet, Clock & Trigger).

ATCA BACKPLANE (Ethernet, Clock & Trigger)

Processing Unit Components:

- COB (Control and Observation Board):** Contains four DATA DPM (Data Processing Module) blocks and one RCE/TI DPM (Real-time Control and Triggering Data Processing Module) block.
- RTM (Real-time Triggering Module):** Contains one TI (Triggering Interface) block.

Interconnections:

- The COB and RTM blocks are connected to the ATCA BACKPLANE.
- The COB and RTM blocks are connected to the FLANGE BOARD and TRIGGER blocks via bidirectional arrows.
- The FLANGE BOARD and TRIGGER blocks are connected to the JLAB DAQ (Data Acquisition) system via bidirectional arrows.
- The JLAB DAQ is connected to the 10G ETHERNET SWITCH via bidirectional arrows.
- The 10G ETHERNET SWITCH is connected to the ATCA BACKPLANE.
- Power is supplied to the FLANGE BOARD and TRIGGER blocks from a common Power source.

