

# Data acquisition advancements for QPS

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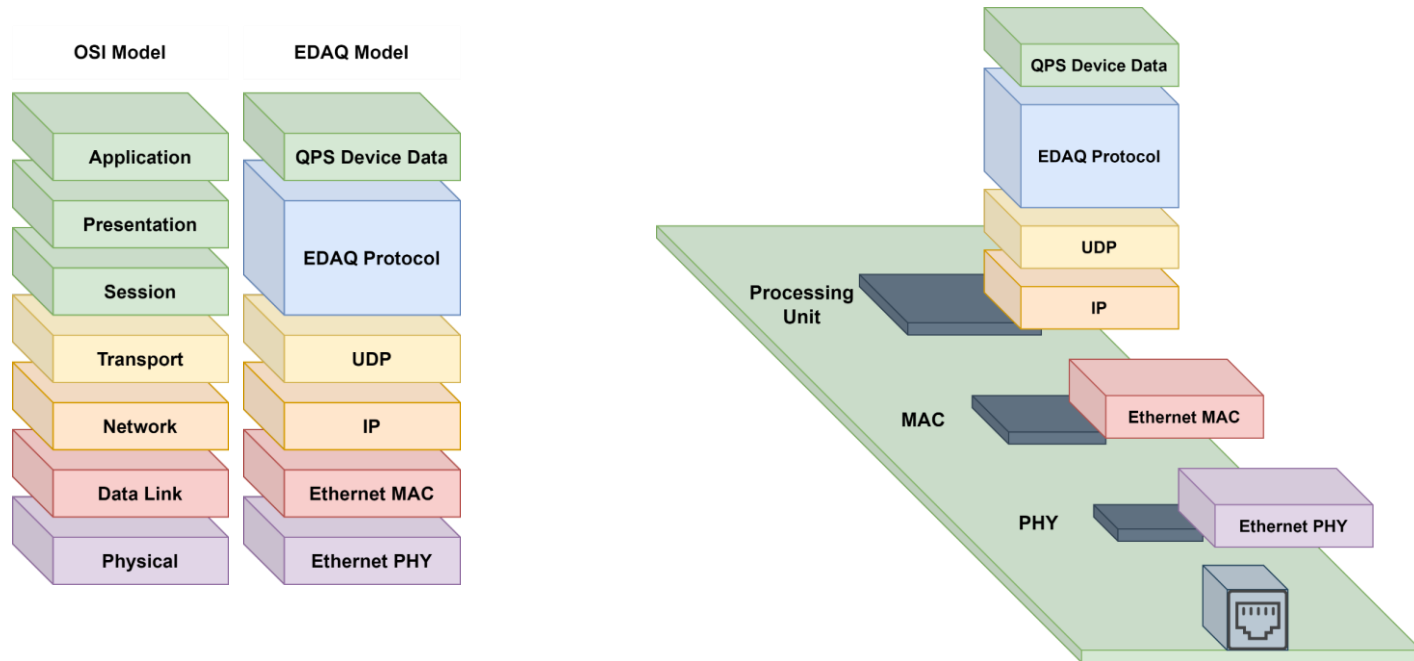
# Importance of data acquisition

- Crucial from the perspective of safe LHC operation
- Mandatory for the assessment of the state of the health of the safety system
- Secures the insight into effects occurring in powered superconducting circuits

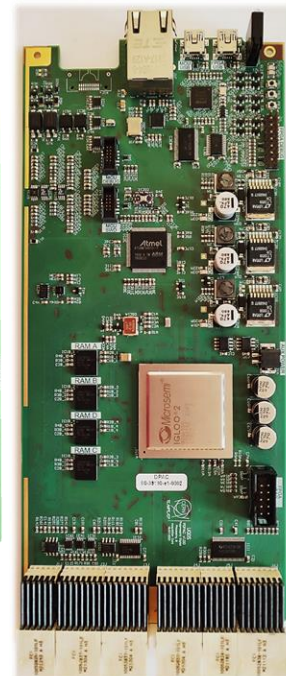
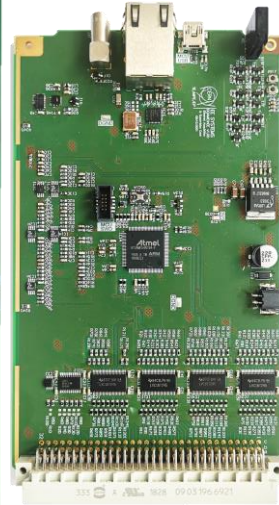
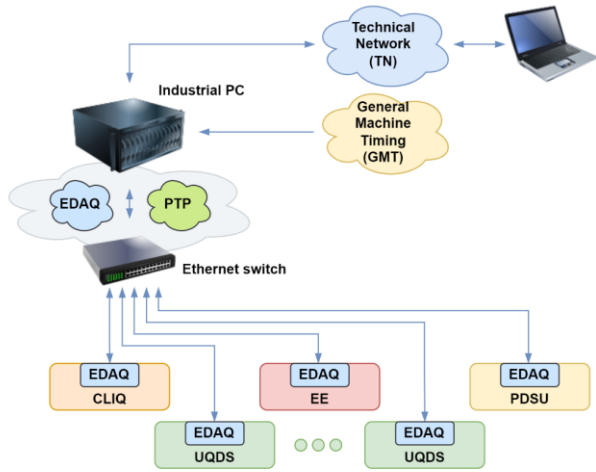
# Is the data acquisition performance sufficient?

- Data hungry applications:
  - Commissioning of demanding circuits like Nb<sub>3</sub>Sn magnets
  - Magnet development and test
  - Development of novel quench detection and magnet instrumentation
- Running software defined systems
- Pre-emptive maintenance
- High quality data is essential for automated analysis

# Data acquisition for scalability and evolution

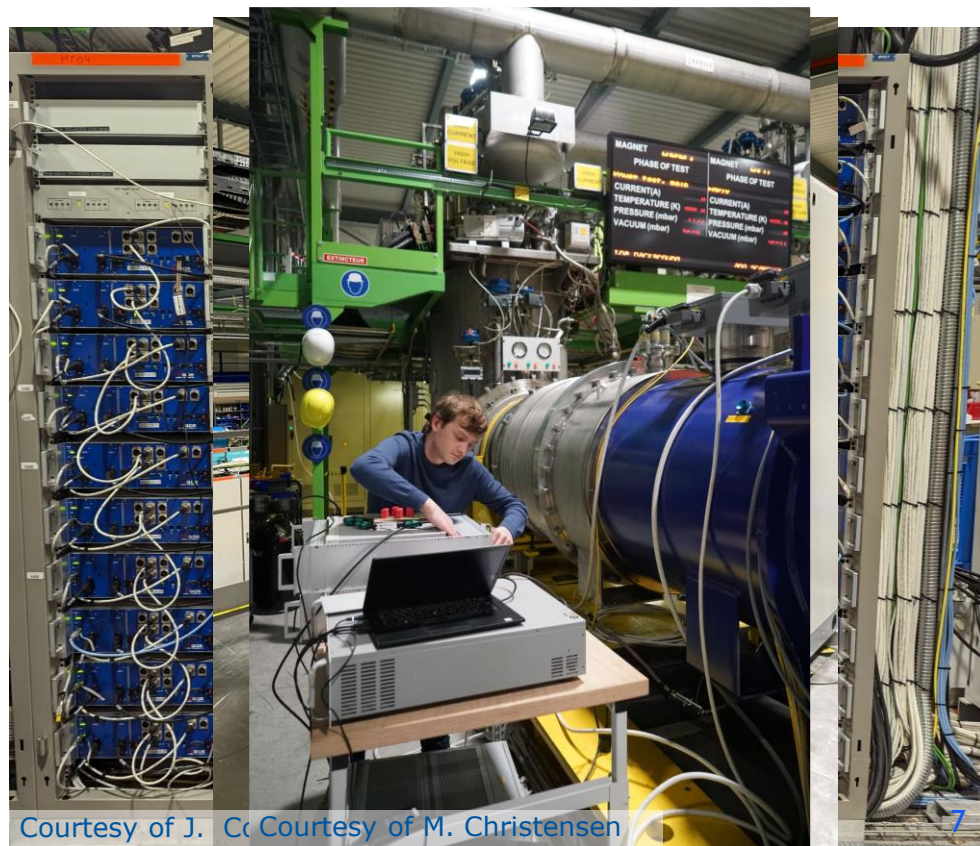


# EDAQ enabled QPS devices



# Deployments

- Cluster-F installation
  - 33 devices – 100 Mbps
- IT-String installation
  - 58 devices to be installed
  - 7 devices installed
- R&D
  - Novel quench detection
  - 100 kHz sampling



Courtesy of J. C. Courtesy of M. Christensen

Thank you!



