

# m-epics-twincat-ads

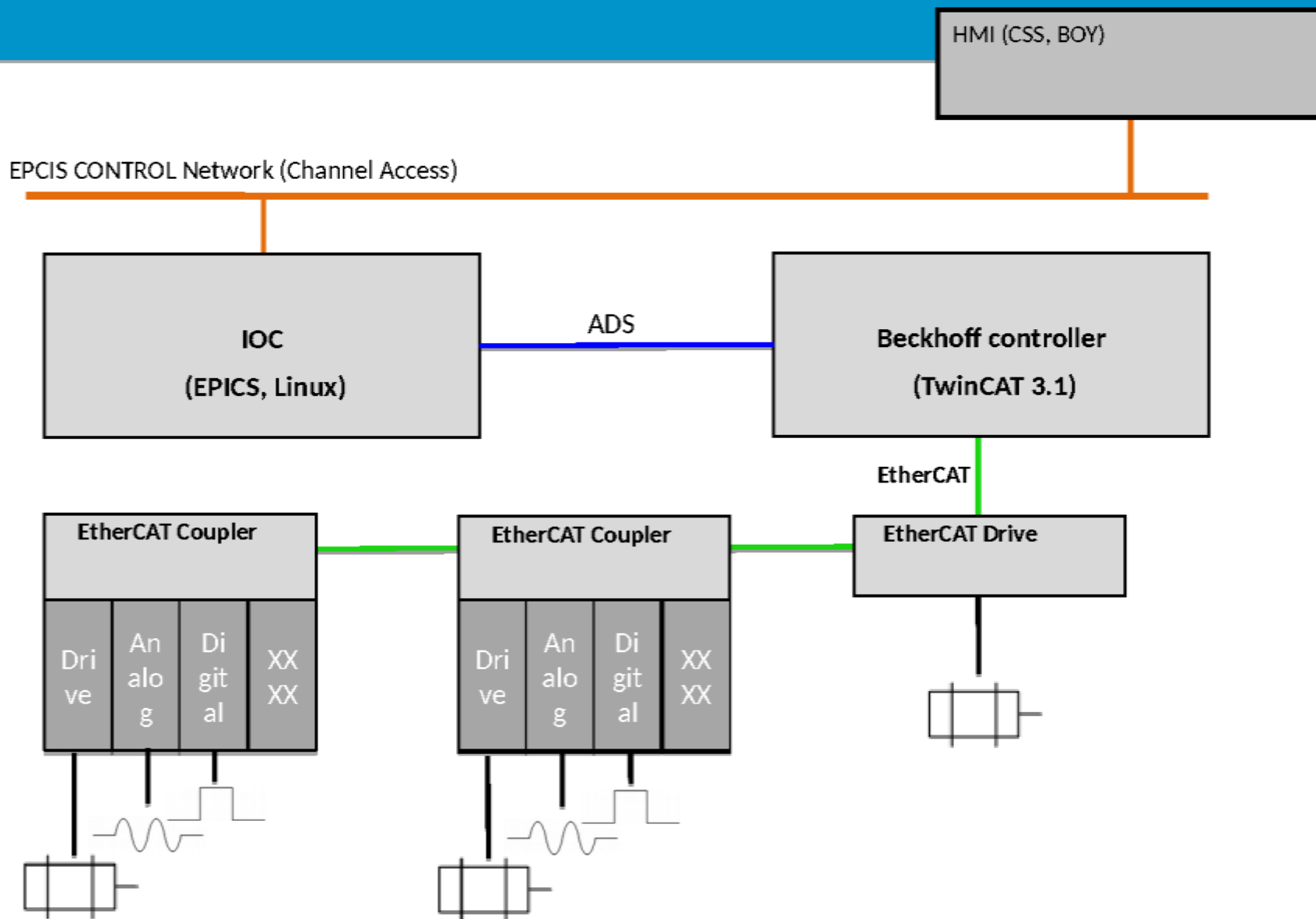
## TwinCAT 3 integration into EPICS

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Wednesday, June 13, 2018

# Overview



- Based on:
  - Beckhoff ADS: <https://github.com/Beckhoff/ADS>
  - AsynPortDriver: <https://github.com/eoics-modules/asyn/tree/master/asyn/asynPortDriver>
- Accessible data:
  - Symbolic access (Main.iTest)
  - Absolute access (adsport, group, offset)
  - Different Ads Ports:
    - PLC1, PLC2, (851,852,..)
    - Other ADS ports NC (500,..)
- Access types:
  - Read:
    - Subscription "On change" (I/O intr), selectable sample rate and max delay time
    - Sampled
    - Simple datatypes, Arrays
  - Write
    - Simple datatypes, Arrays
- Timestamp:
  - TwinCAT
  - EPICS
- Motor Record Support
- No licenses needed
- No PLC-code needed for communication

# Record Definition Example:

```
record(ai,"IOC:GetFTest"){  
  field(PINI, "1")  
  field(TSE, -2)  
  field(DTYP, "asynFloat64")  
  field(INP, "@asyn($(PORT),0,1)TIMEBASE=PLC/T_DLY_MS=500/TS_MS=10/ADSPORT=851/Main.fTest?")  
  field(PREC, "3")  
  field(SCAN, "I/O Intr")  
}
```

- Variable name "Main.fTest"
- Subscribe: (SCAN="I/O Intr")
- Adsport 851: (ADSPORT=851)
- Read access: ("?" in end of var name)
- Timestamp in TwinCAT: (TIMESTAMP=PLC, TSE=-2)
- Check if changed each 10ms: (TS\_MS=10)
- Maximum send buffer delay 500ms: (T\_DLY\_MS=500)