

EPICS Device Support Intro

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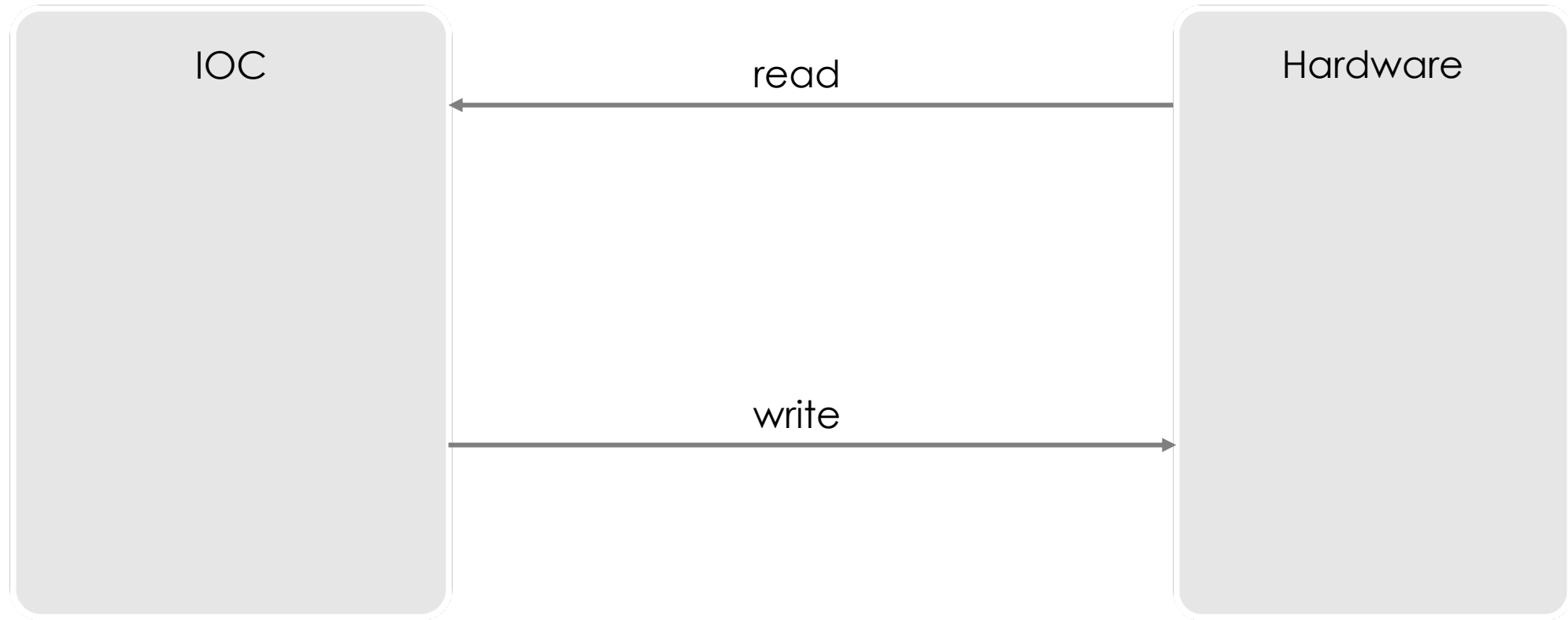
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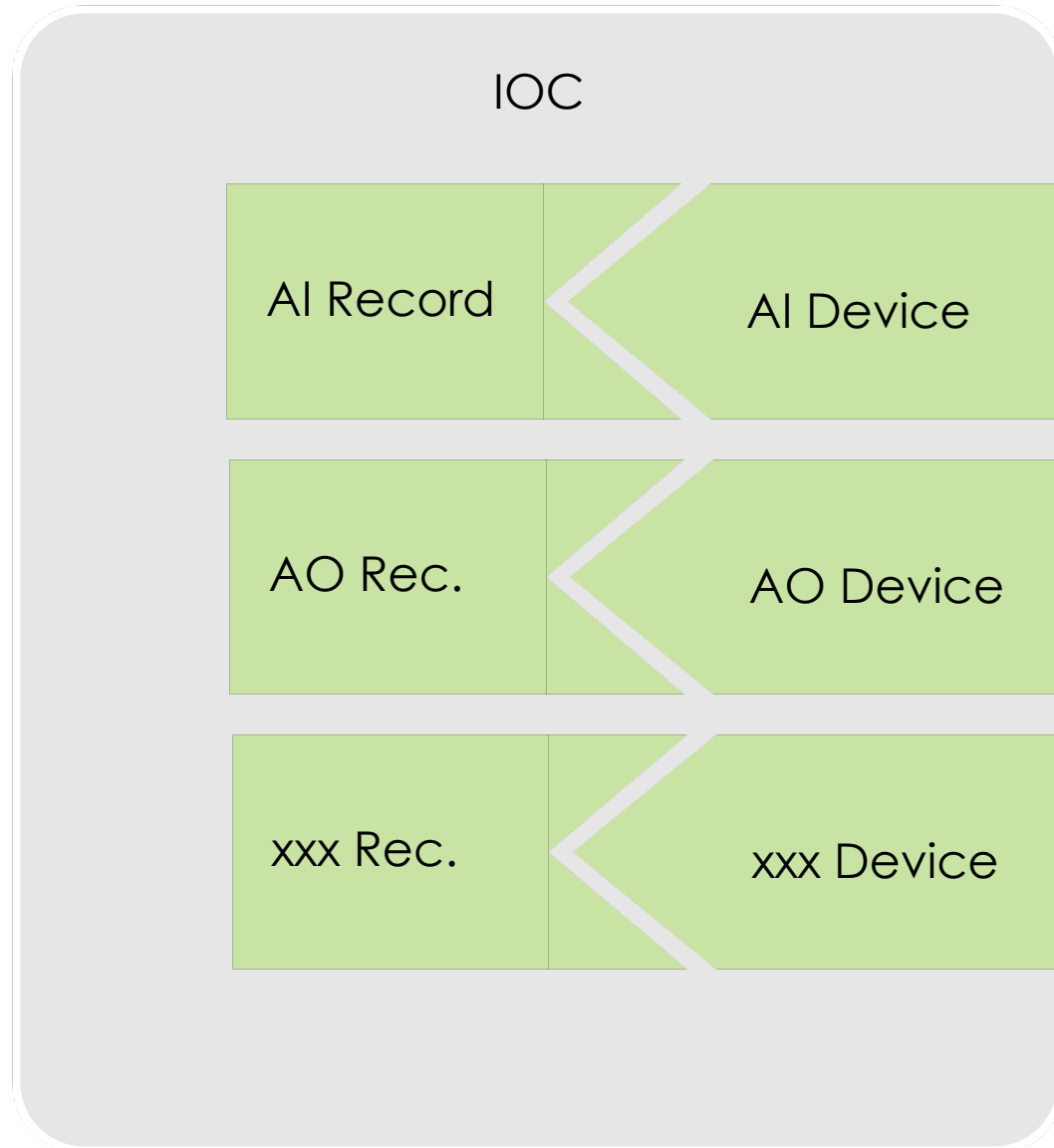


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Device Support: Connect Records to Actual Hardware



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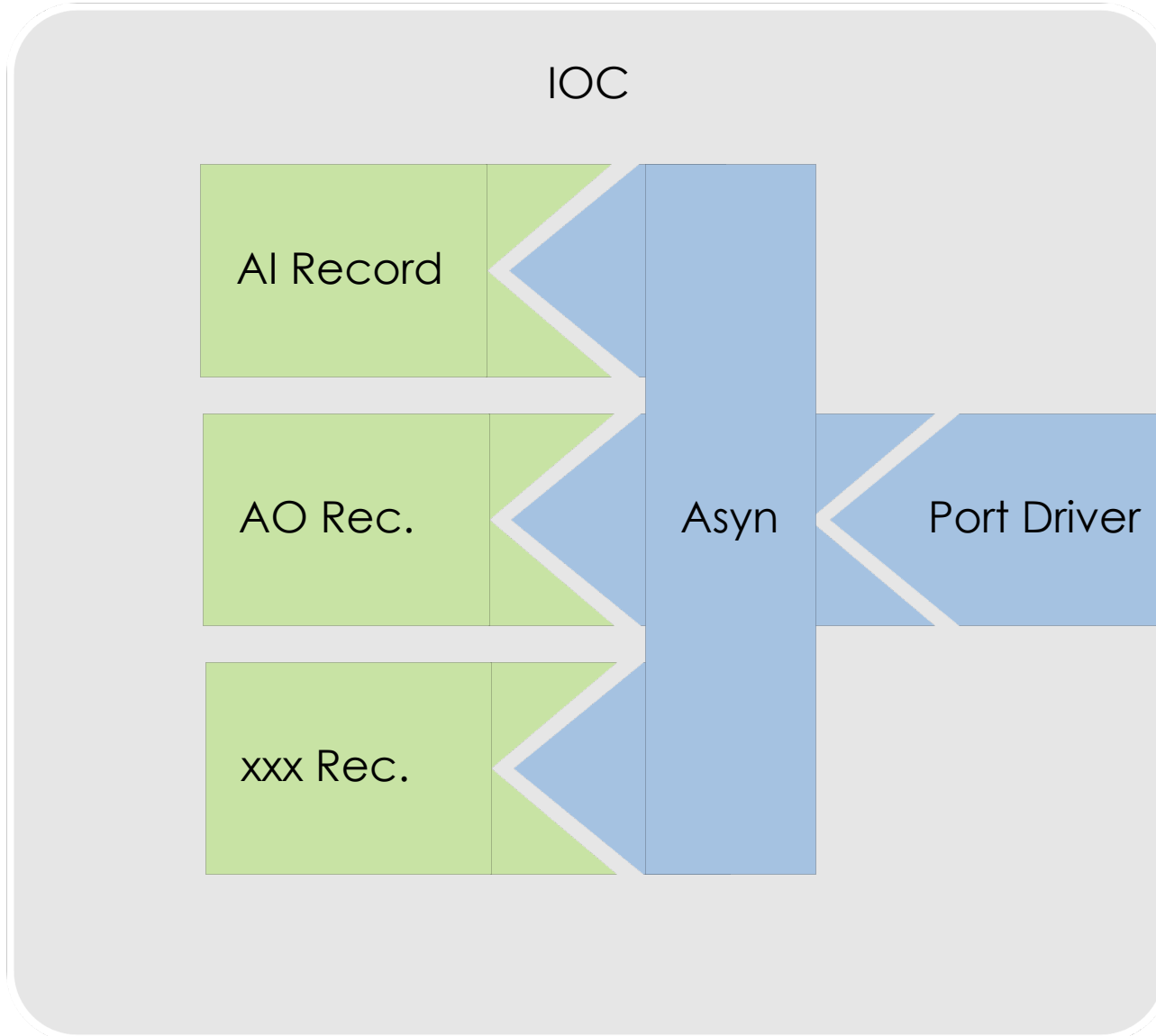
```
long my_read_code(aiRecord *rec)
{
    // Somehow get value like 1234
    // from hardware and place in record...
    rec->rval = 1234;
    return 0;
}
```

```
long my_write_code(aoRecord *rec)
{
    // Somehow send value from record
    // to hardware ...
    printf("Should set hardware to %d\n",
           rec->rval);
    return 0;
}
```

Device Support: Devil is in the Details

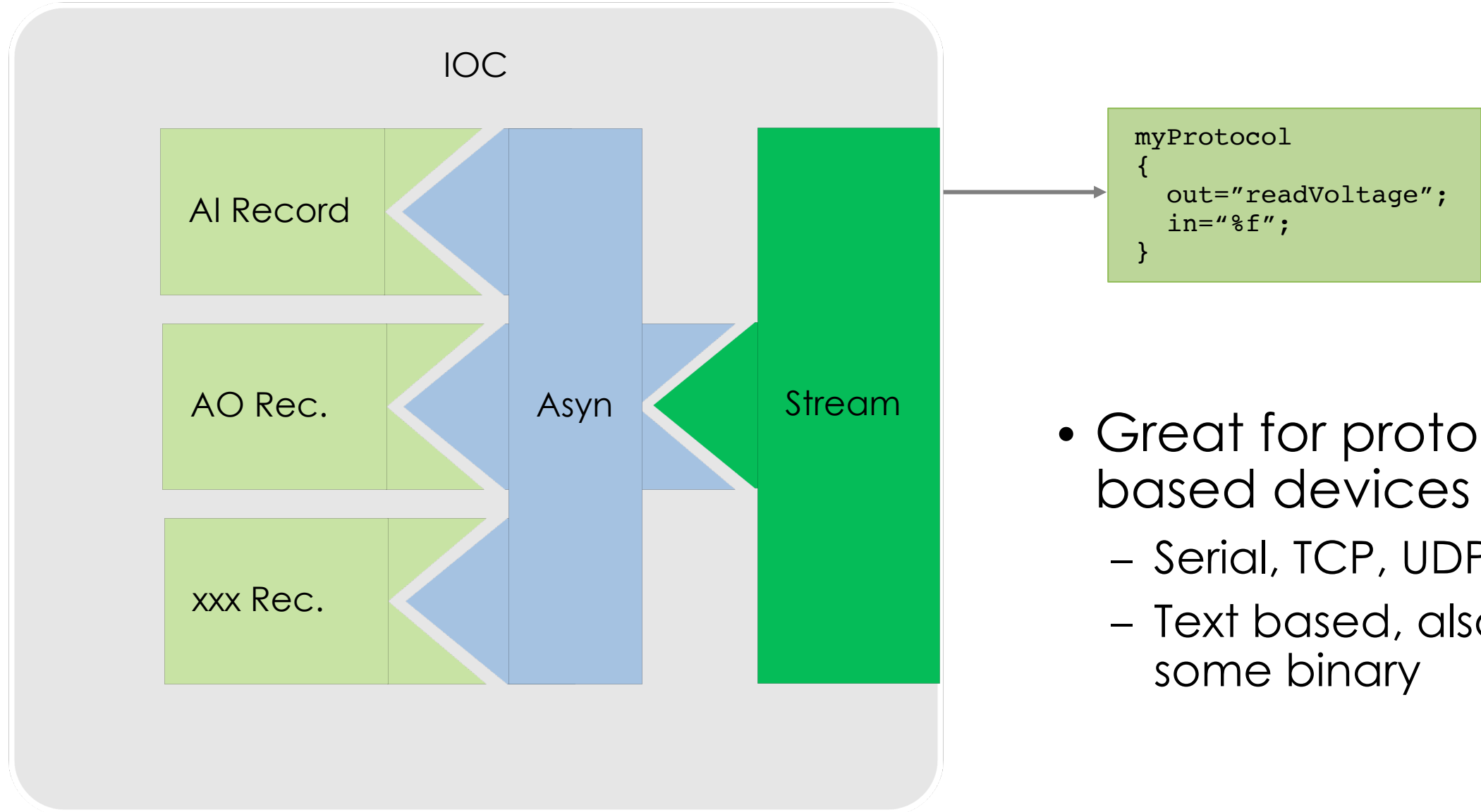
- Some boilerplate to associate
 - “my_read_code” with AI record
 - “my_write_code” with AO record
 - field(DTYP, “MyXXXCode”) with your device support module
- Specific to each record type
 - .. but ai, mbbi, mbbiDirect, longin, ... fundamentally all handle a number, why duplicate code?
- my_xxx_code must not block!

Asyn: Another Layer of Abstraction



- Asyn acts as “Device Support”
- Transfers data between “port” and records
- Helpers if “port” is serial, TCP, UDP, needs to be re-opened on error

Stream: Yet Another Layer of Abstraction



- Great for protocol-based devices
 - Serial, TCP, UDP
 - Text based, also some binary