



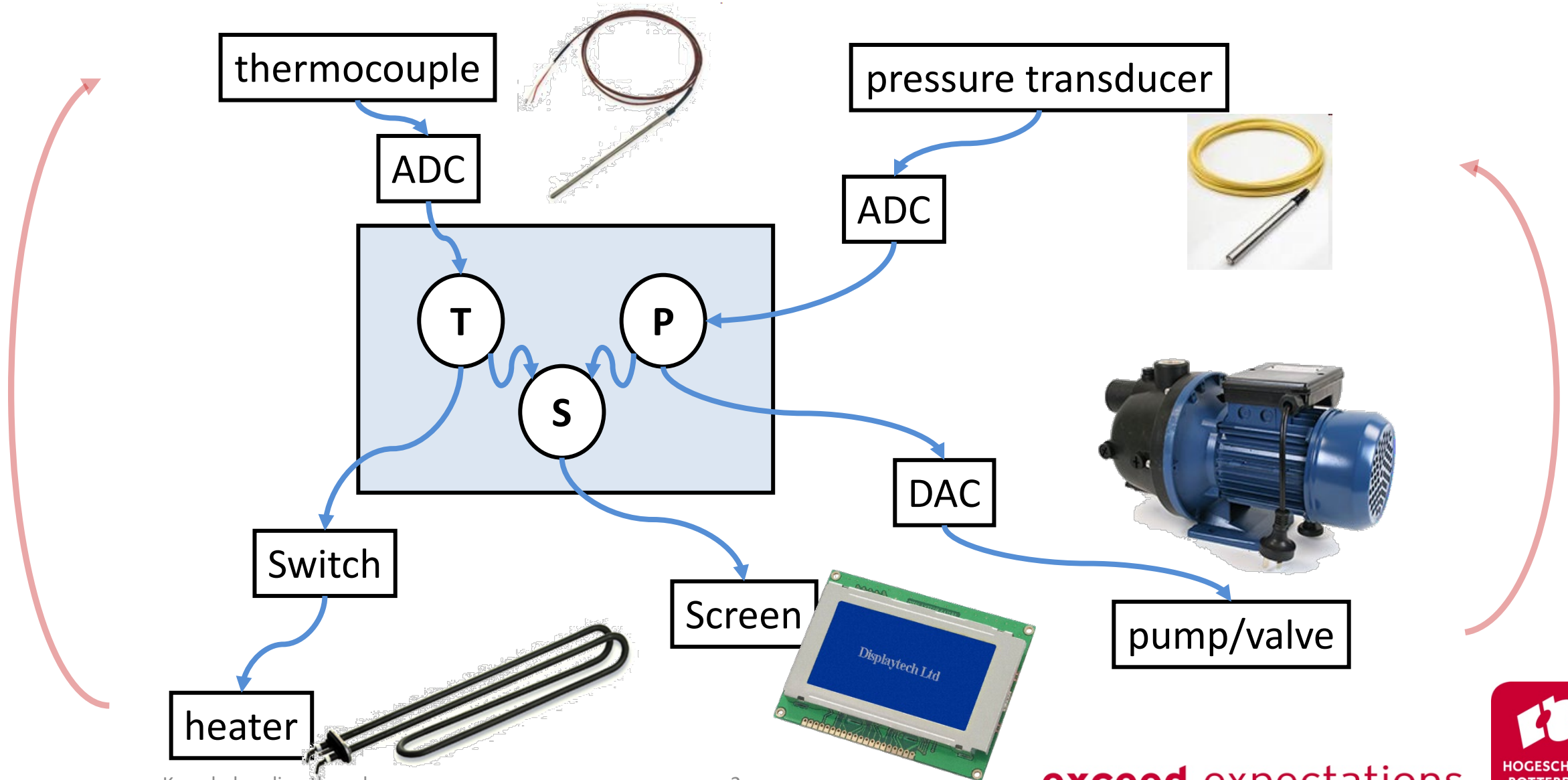
Knowledge Clip

Embedded Systems

pthread

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Example Embedded System



POSIX

POSIX



- Portable Operating System Interface (POSIX) is a standard **API** for Operating Systems.
 - Many OS partially comply with this standard. For example: Linux, Android, OSX, VxWorks, QNX Neutrino, **TI-RTOS** etc.
- Tasks (**threads**) are dynamically created by using API calls.

Pthread Example (1 of 2)

```
void *print1(void *par) {  
    for (int i = 0; i < 10; i++) {  
        usleep(100000);  
        printf("print1\n");  
    }  
    return NULL;  
}
```

```
void *print2(void *par) {  
    for (int i = 0; i < 10; i++) {  
        usleep(200000);  
        printf("print2\n");  
    }  
    return NULL;  
}
```

Pthread Example (2 of 2)

```
void *main_thread(void *arg) {
    pthread_attr_t pta;
    pthread_attr_init(&pta);
    pthread_attr_setstacksize(&pta, 1024);

    pthread_t t1, t2;
    pthread_create(&t1, &pta, &print1, NULL);
    pthread_create(&t2, &pta, &print2, NULL);

    pthread_join(t1, NULL);
    pthread_join(t2, NULL);

    check( pthread_attr_destroy(&pta) );
    return NULL;
}
```

Source: [pthread.c](#)