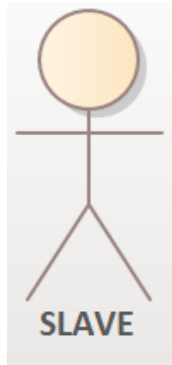


# مدل سازی کتابخانه PROFIBUS

Prepared by Sajjad pourmohammad

# لایه های کتابخانه



**Library**

*Config.h*

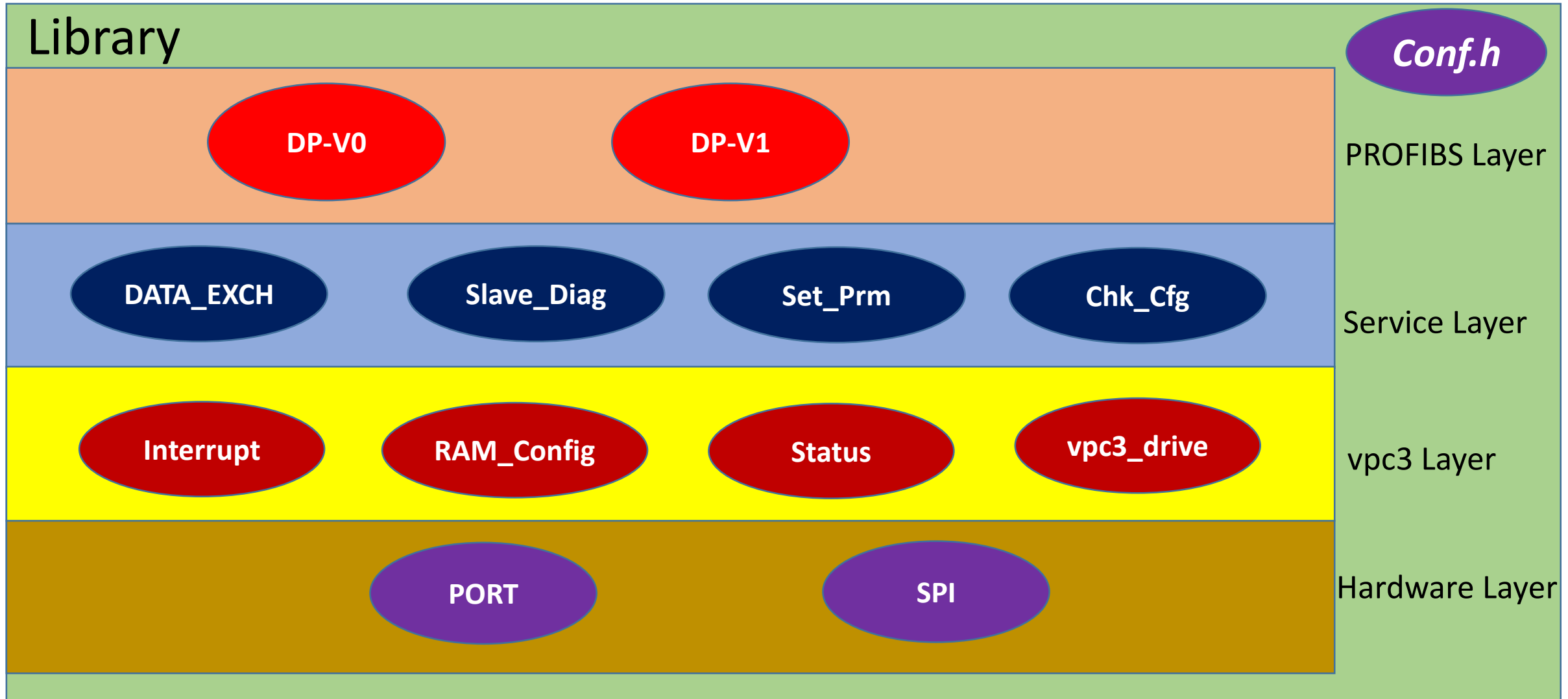
**PROFIBIS Layer**

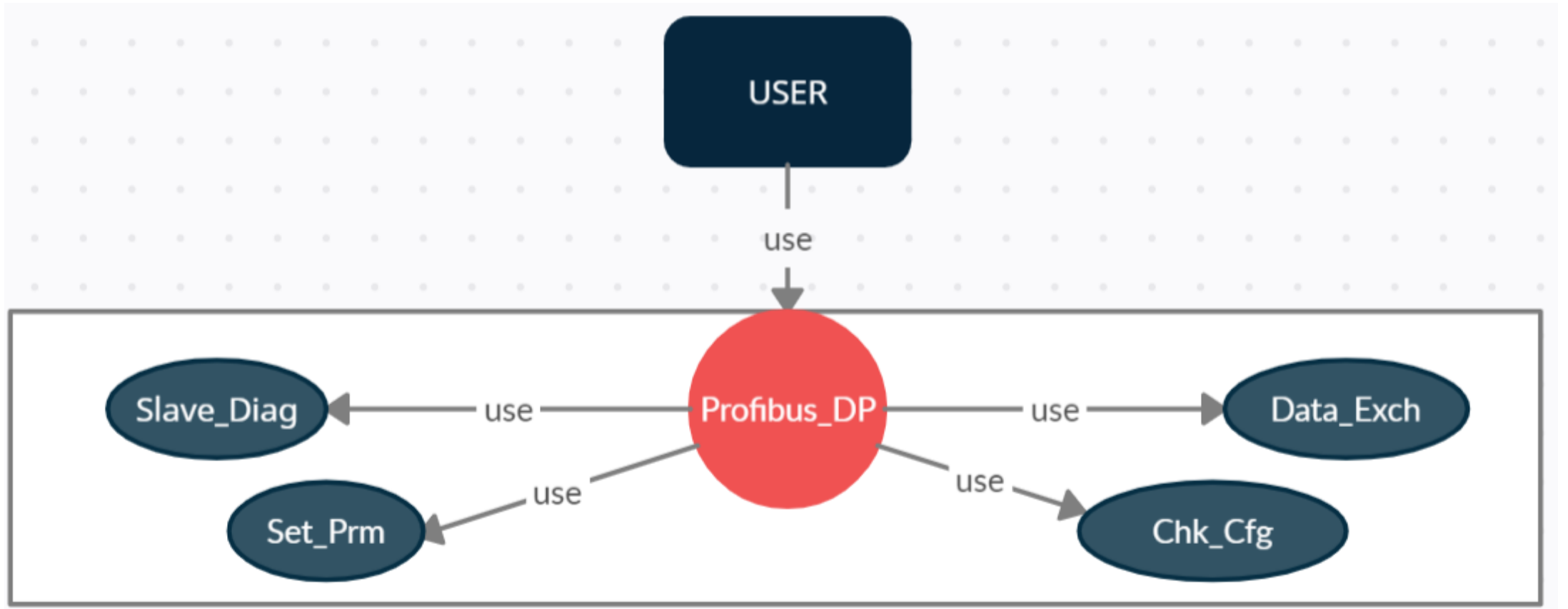
**Service Layer**

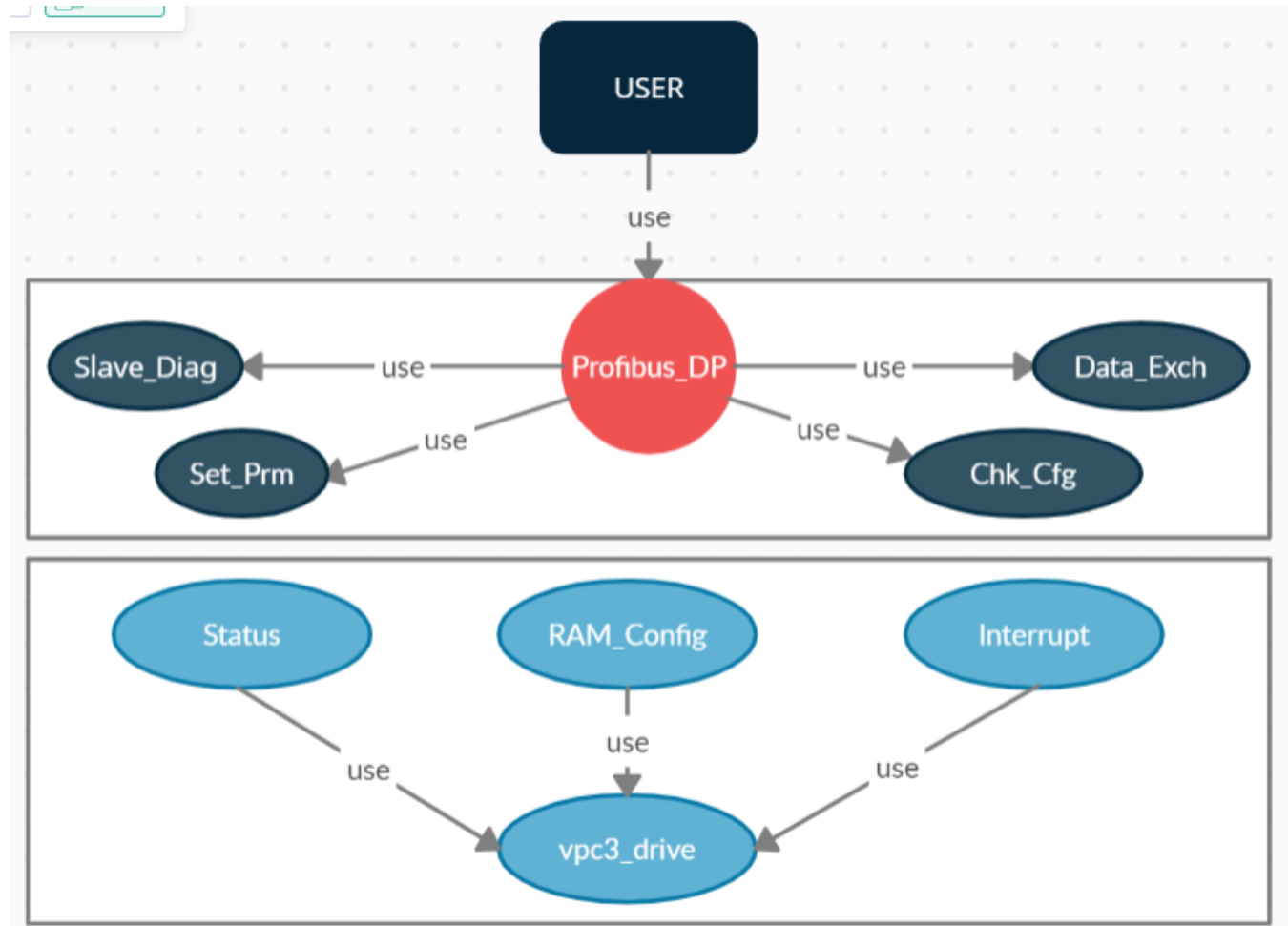
**vpc3 Layer**

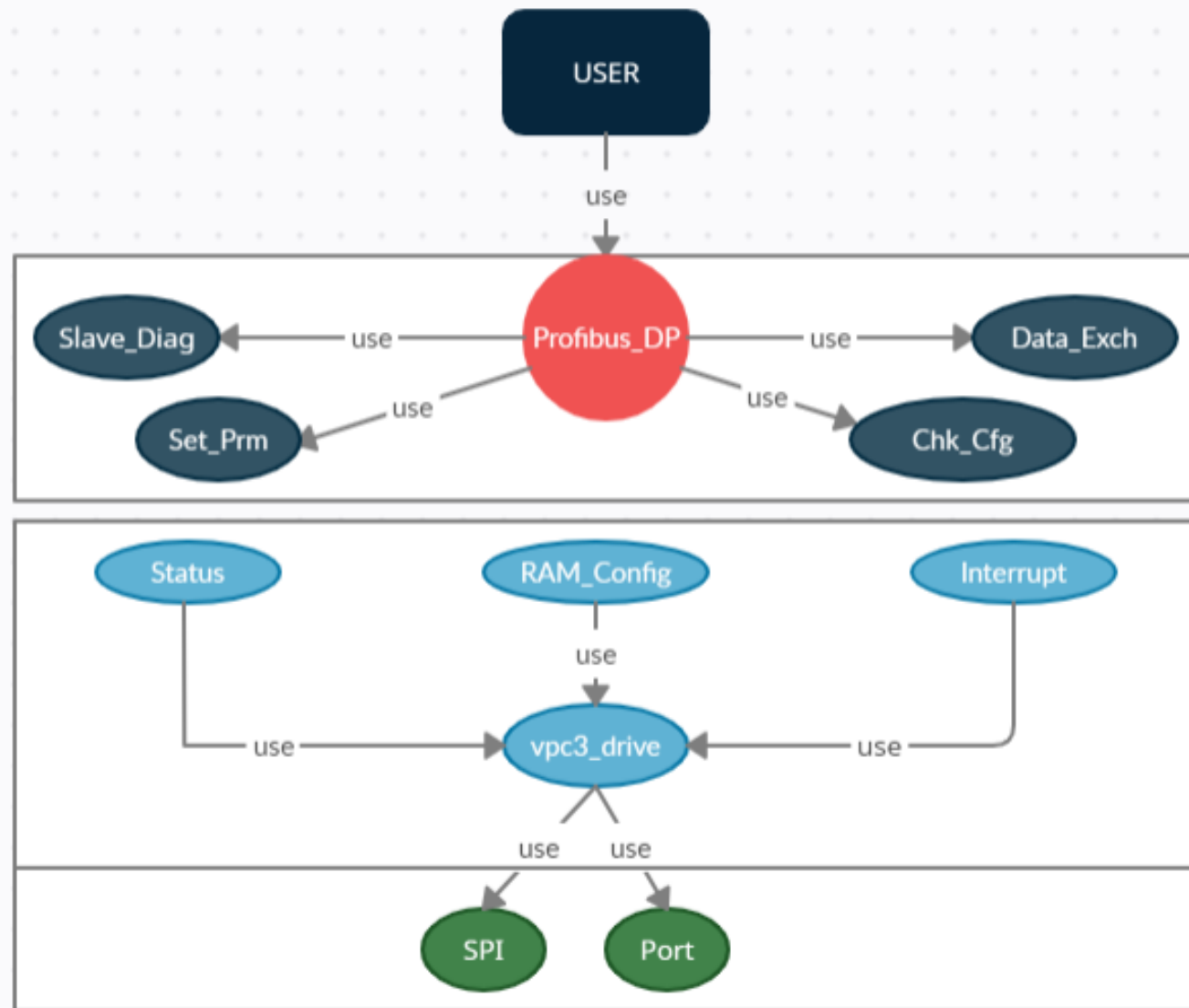
**Hardware Layer**

# لایه های کتابخانه









- ▼ PROFIBUS\_DP
  - > Project Settings
  - > Archives
  - > Includes
  - > CMSIS
  - > board
  - > component
  - > device
  - > drivers
  - ▼ source
    - > MCU\_Cfg
    - > PROFIBUS\_DPV0
    - > vpc3\_Controller
    - > conf.h
  - > utilities
  - > Debug
  - > doc
  - liblinks.xml
  - PROFIBUS\_DP.mex
  - PROFIBUS\_DP JLink Del

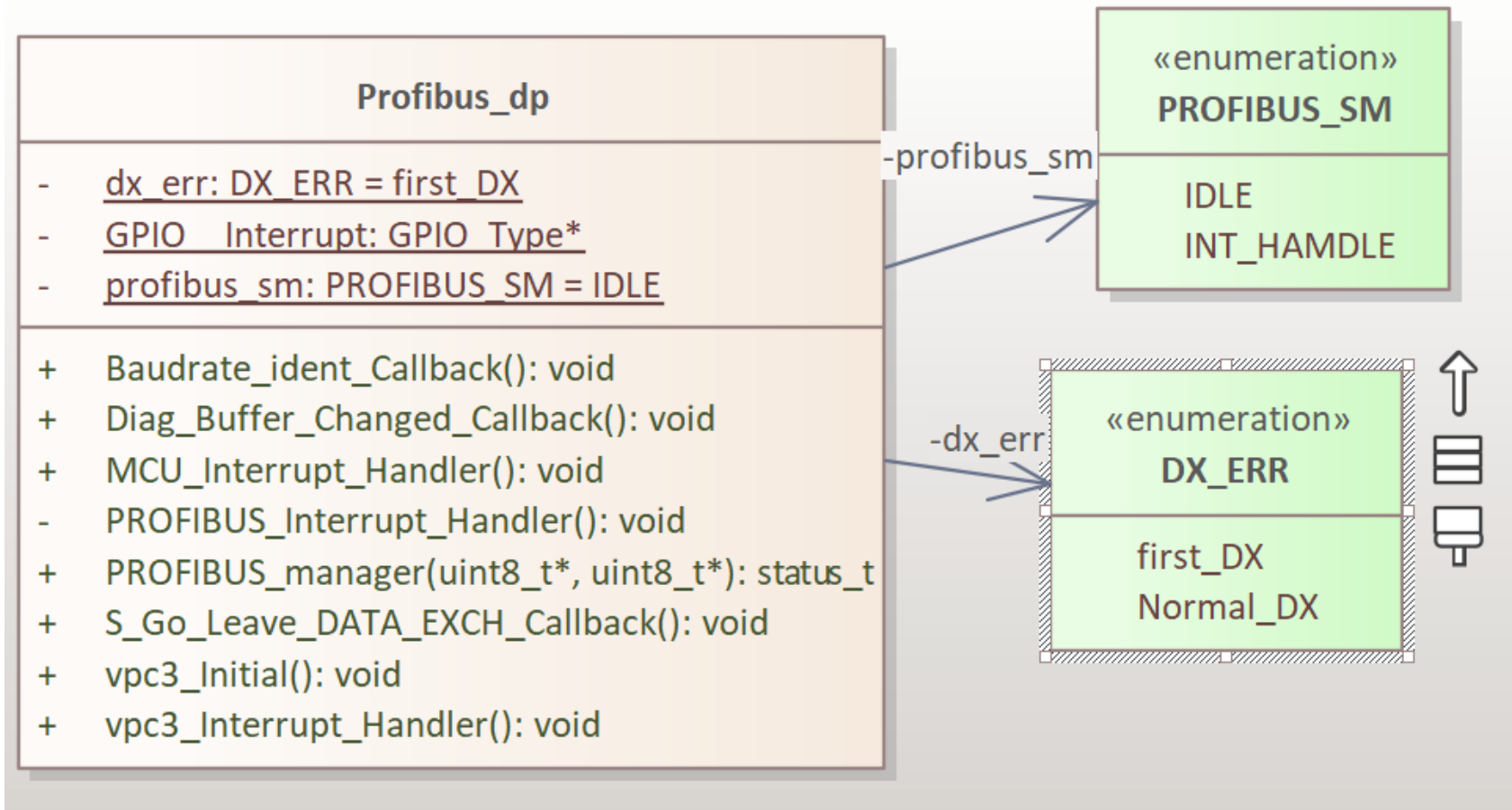
- ▼ source
  - > MCU\_Cfg
  - > PROFIBUS\_DPV0
  - > vpc3\_Controller
  - > conf.h
- > utilities

- ▼ PROFIBUS\_DPV0
  - > Chk\_Cfg.c
  - > Chk\_Cfg.h
  - > DATA\_Exchange.c
  - > DATA\_Exchange.h
  - > Profibus\_dp.c
  - > Profibus\_dp.h
  - > Set\_Prm.c
  - > Set\_Prm.h
  - > Slave\_Diag.c
  - > Slave\_Diag.h

- ▼ MCU\_Cfg
  - > Port.c
  - > Port.h
  - > SPI.c
  - > SPI.h

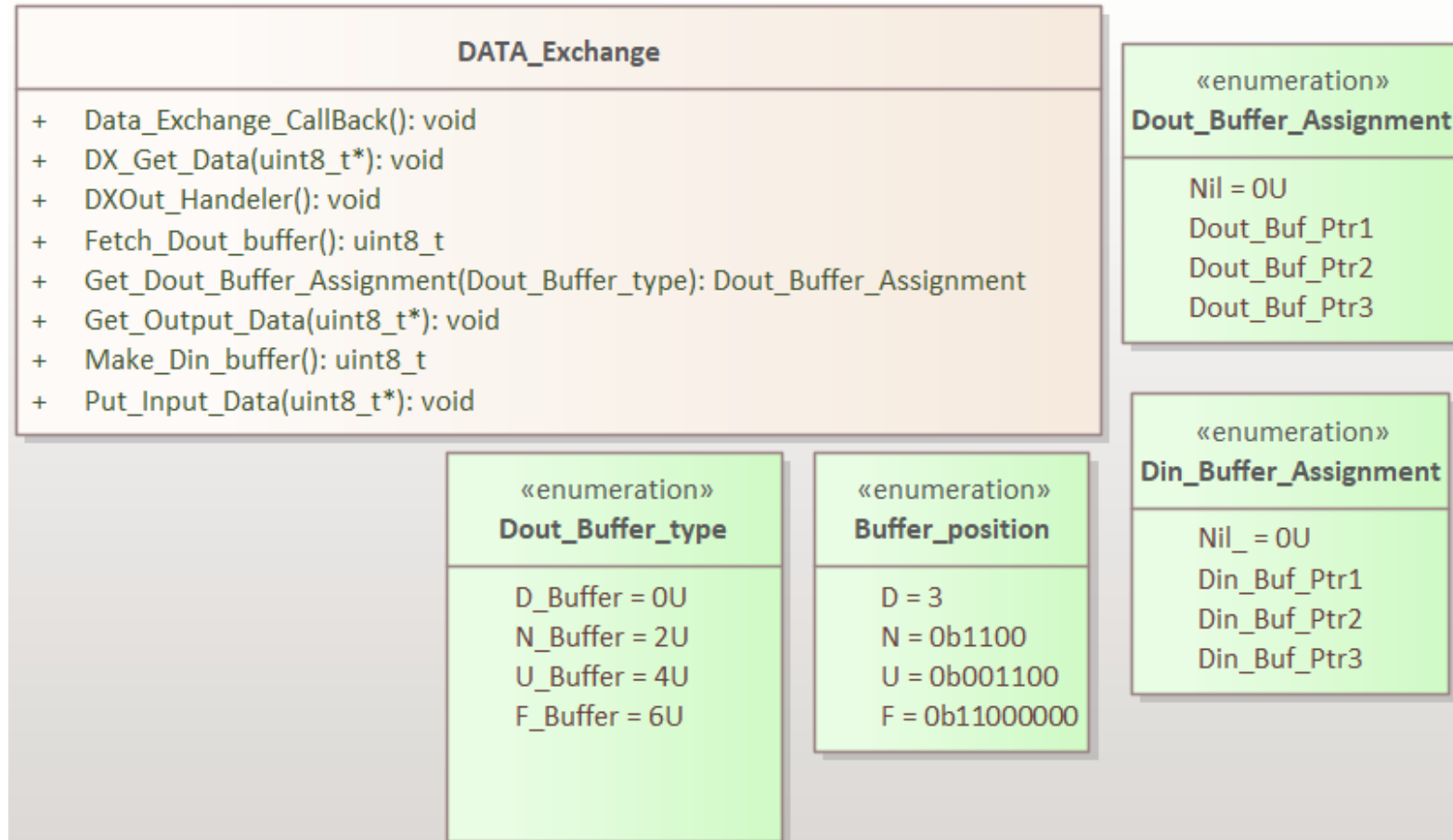
- ▼ vpc3\_Controller
  - > Interrupt.c
  - > Interrupt.h
  - > RAM\_Config.c
  - > RAM\_Config.h
  - > Status.c
  - > Status.h
  - > vpc3\_drive.c
  - > vpc3\_drive.h

# PROFIBUS\_Layer -> Profibus\_dp

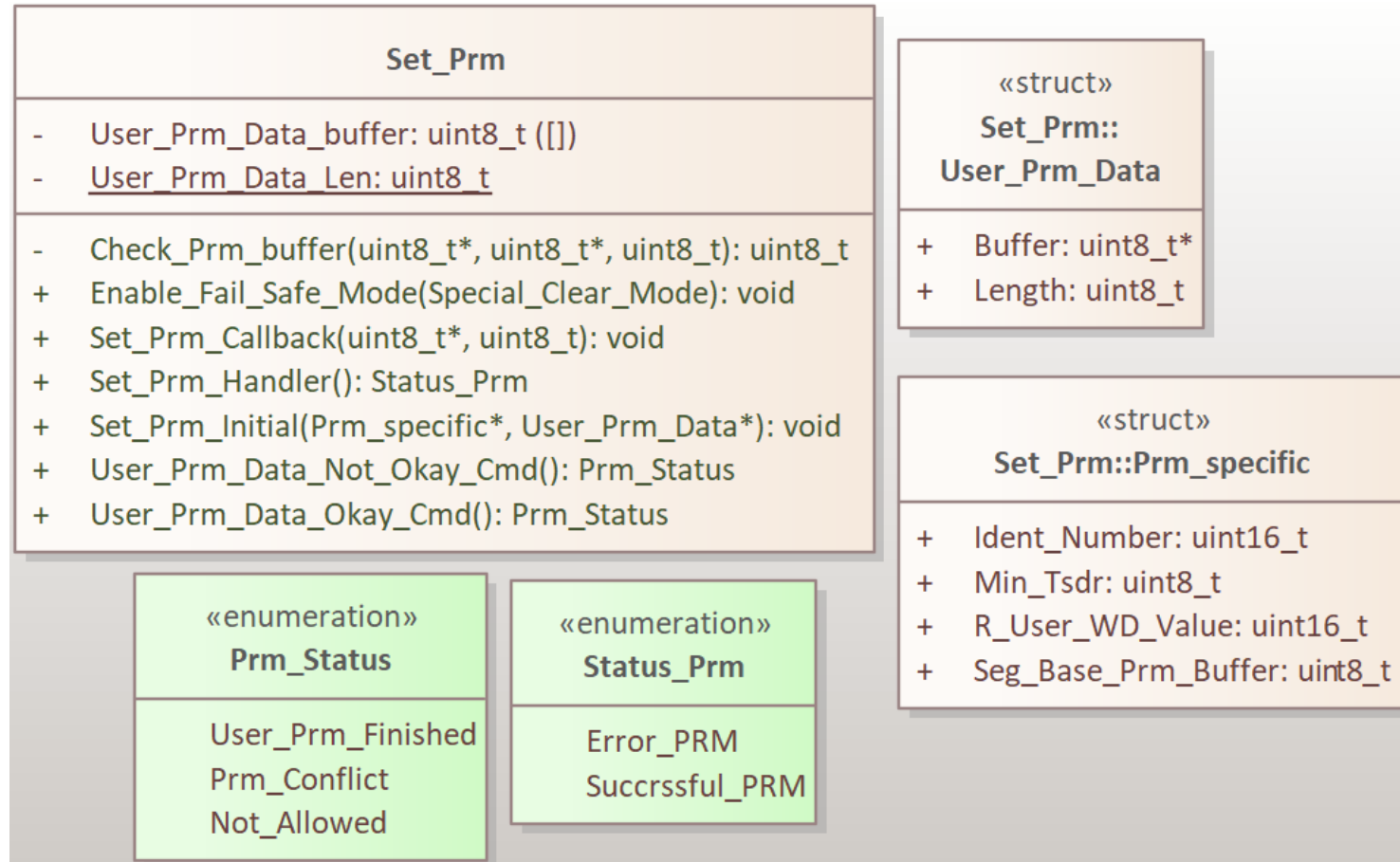




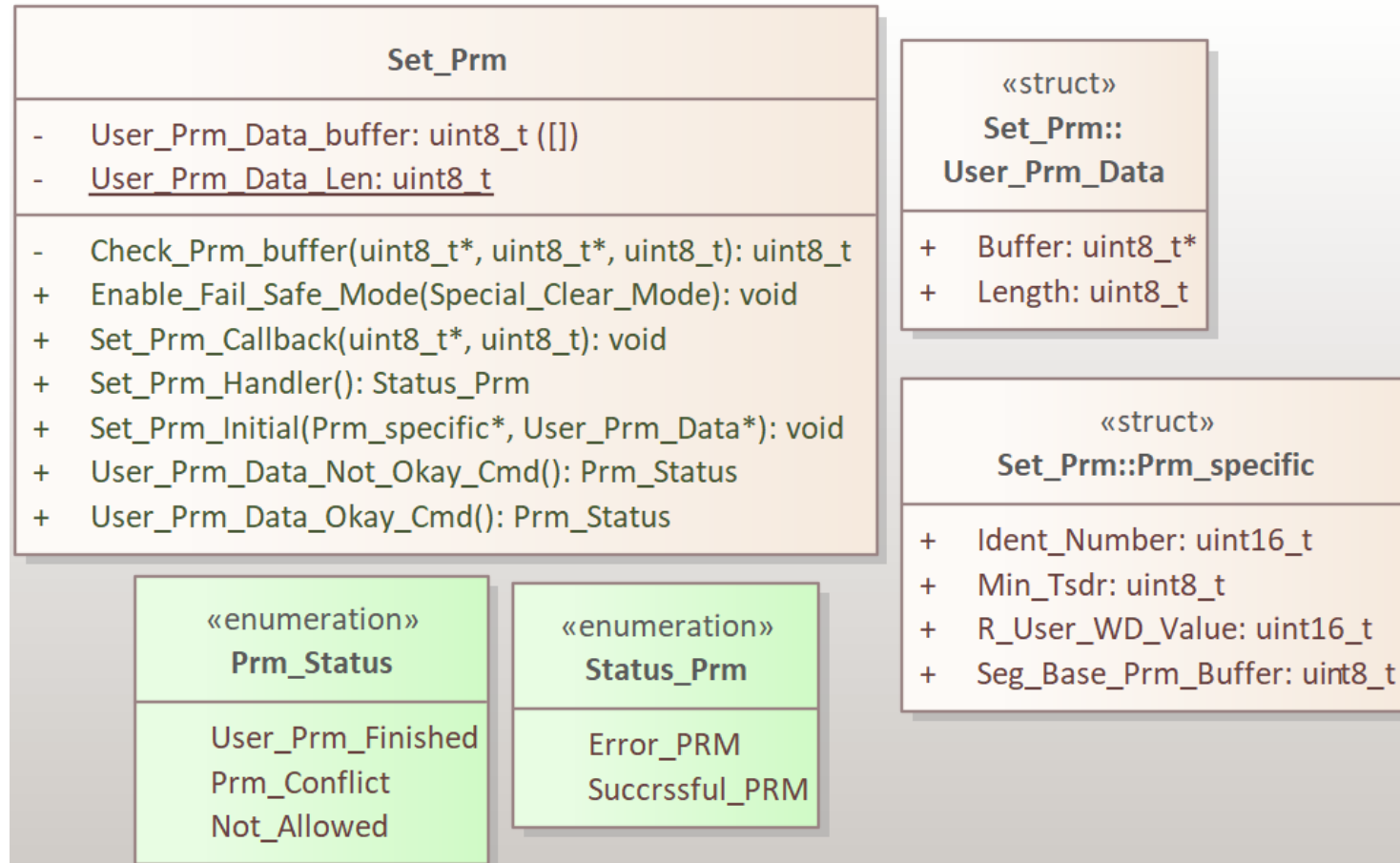
# PROFIBUS\_Layer -> Data\_Exch



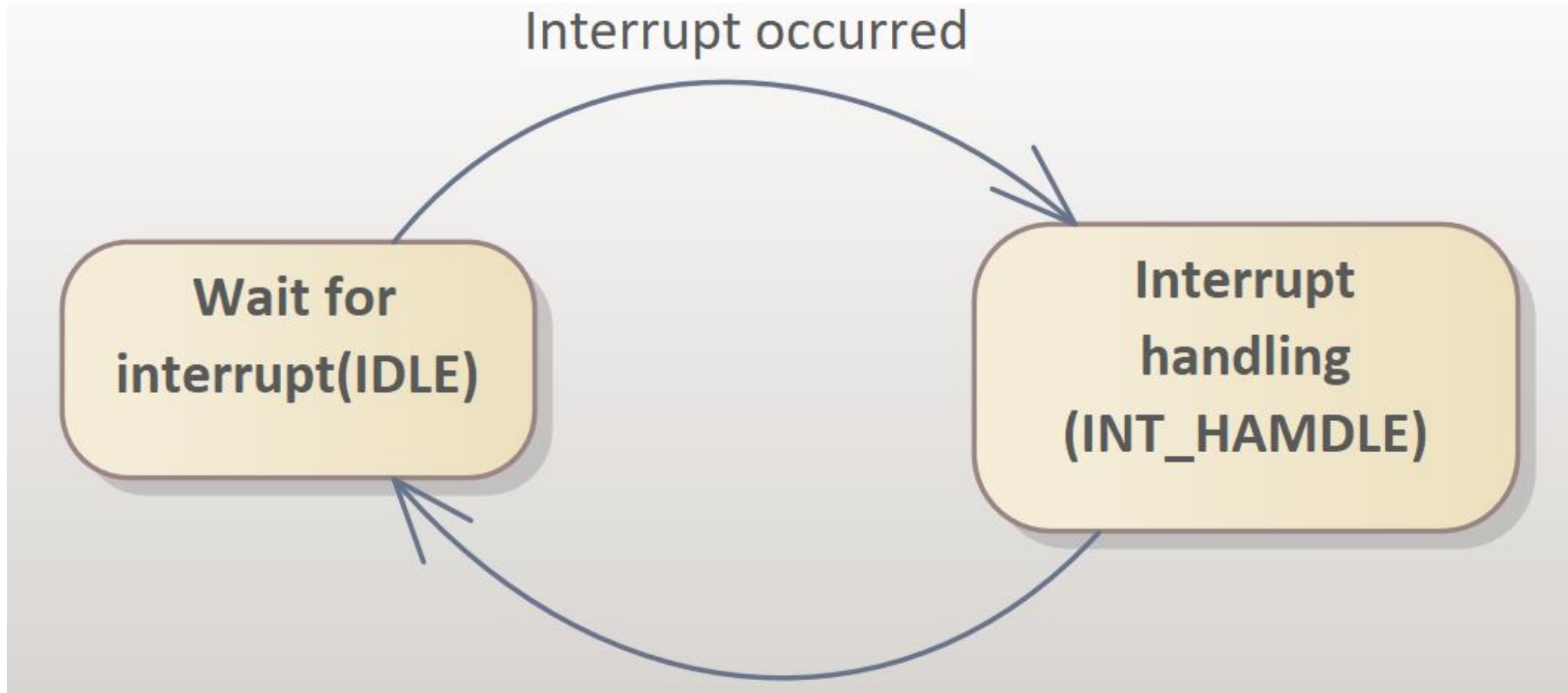
# PROFIBUS\_Layer -> Set\_Prm



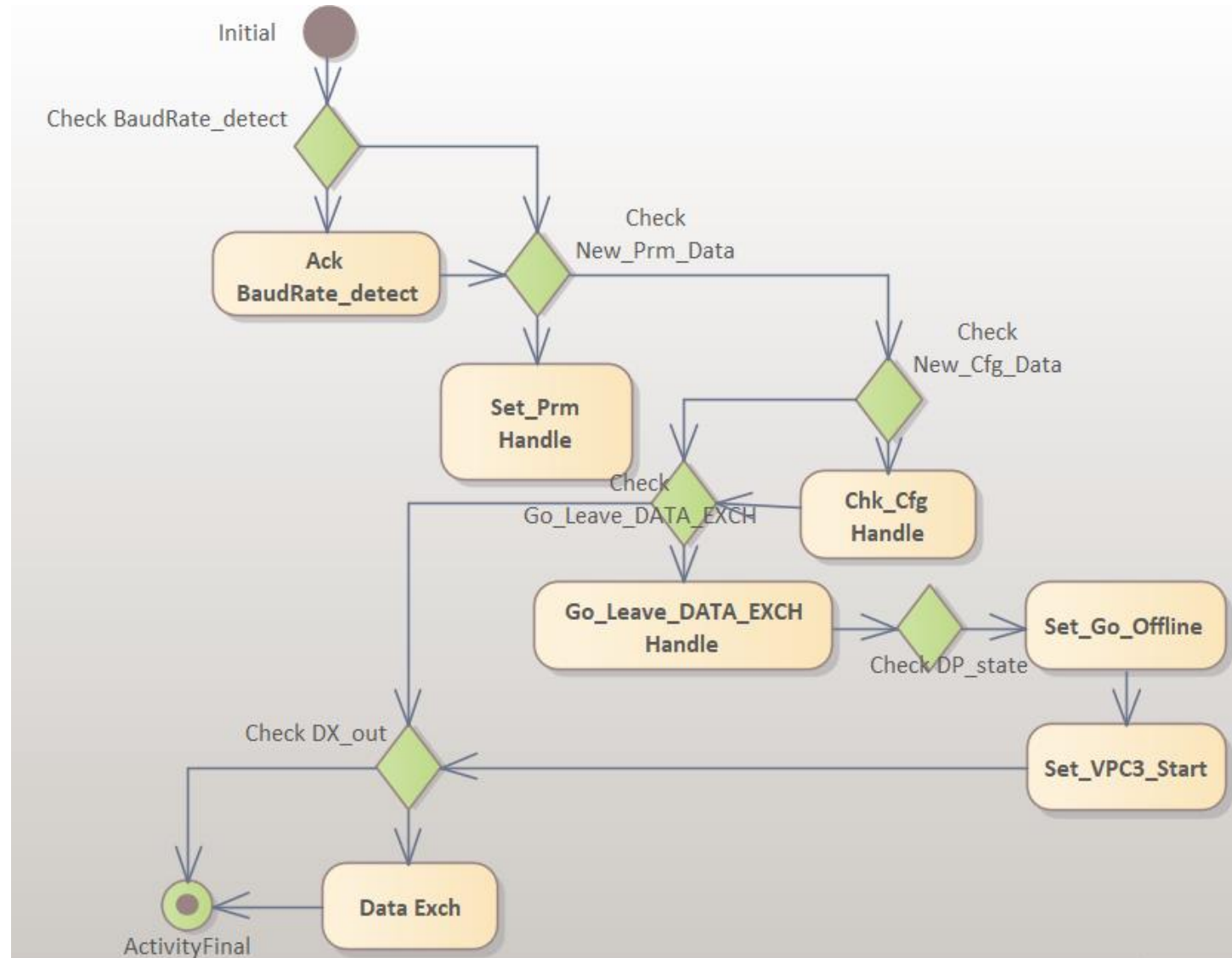
# PROFIBUS\_Layer -> Chk\_Cfg



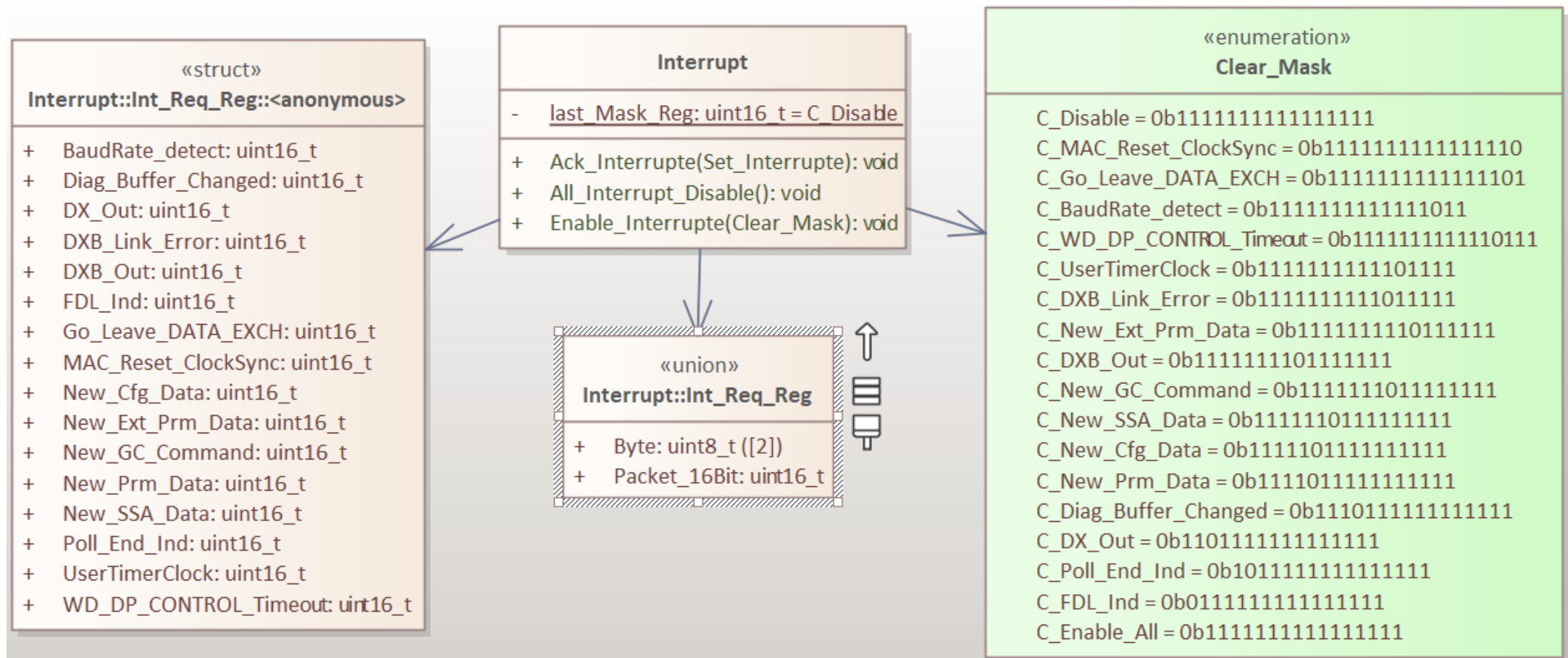
# PROFIBUS Main State



# PROFIBUS Manager



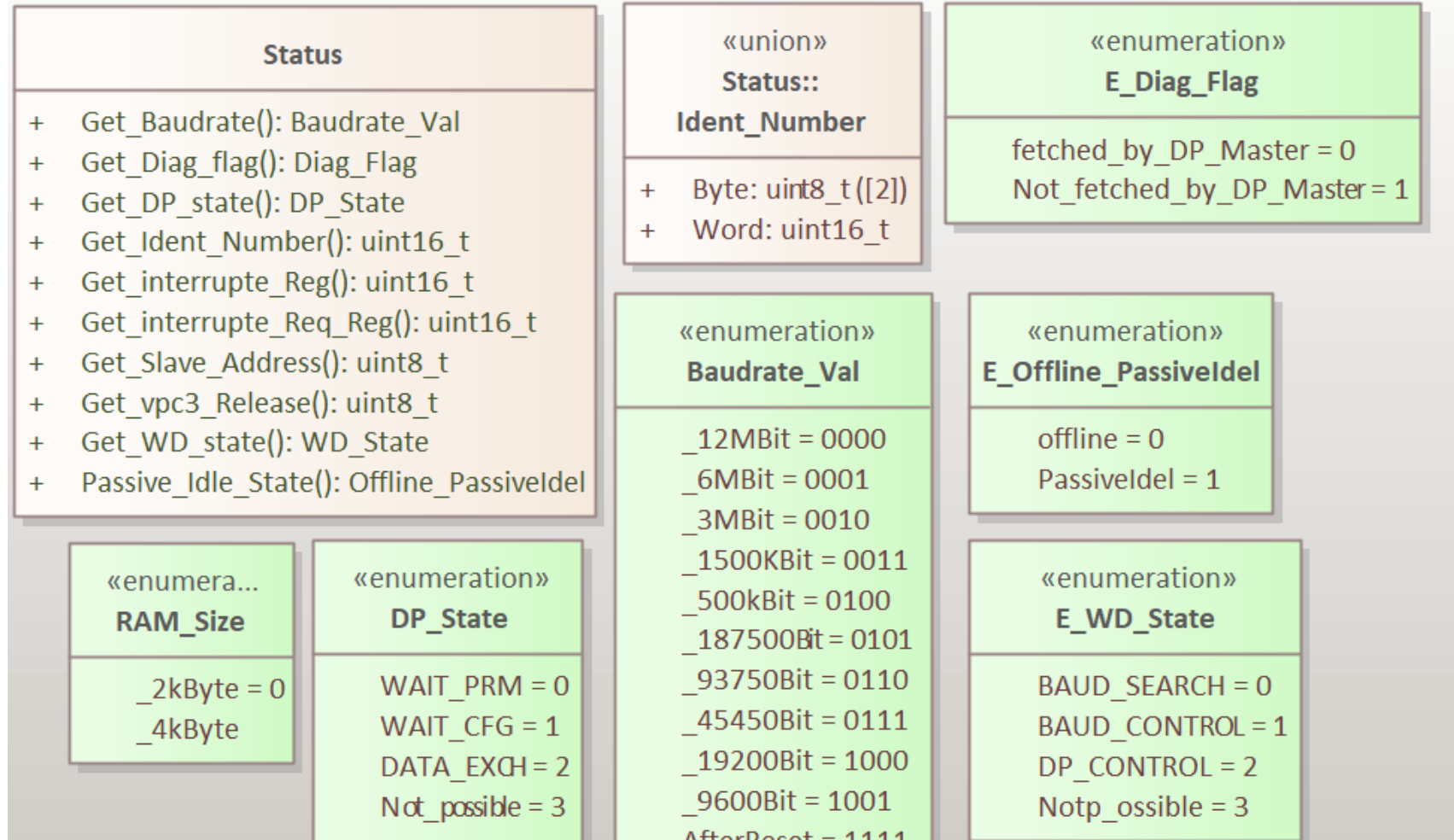
# Vpc3\_Layer -> Interrupt



# Vpc3\_Layer -> RAM\_Config

- این لایه از کتابخانه به علت بزرگ بودن class به خود فایل eapx. مراجعه شود.

# Vpc3\_Layer -> Status





# Vpc3\_Layer -> vpc3\_drive

## **vpc3\_drive**

- + vpc3\_Read\_Array(uint16\_t, uint8\_t\*, uint8\_t): void
- + vpc3\_Read\_Byte(uint16\_t): uint8\_t
- + vpc3\_Reset(): void
- + vpc3\_Write\_Array(uint16\_t, uint8\_t\*, uint8\_t): void
- + vpc3\_Write\_Byte(uint16\_t, uint8\_t): void

# MCU\_Layer -> SPI and PORT

## Port

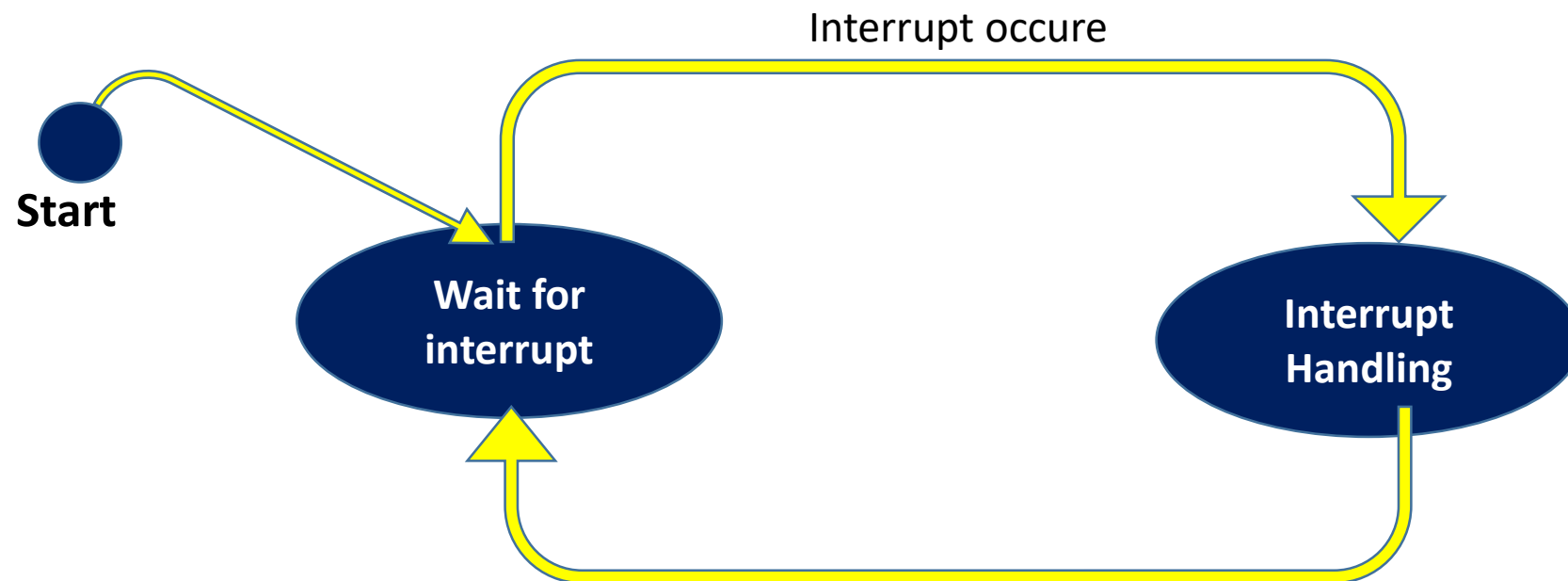
- + Config\_Interrupt\_PIN(PORT\_Type\*, GPIO\_Type\*, uint32\_t): void
- + Config\_Reset\_PIN(PORT\_Type\*, GPIO\_Type\*, uint32\_t): void
- + Config\_Reset\_PIN\_Default(): void
- + GPIO\_Clear(GPIO\_Type\*, uint32\_t): void
- + GPIO\_Set(GPIO\_Type\*, uint32\_t): void
- + PIN\_Config(): void

## SPI

- SPI x: SPI\_Type\*

- + PIN\_Config(): void
- + SPI\_Config(SPI\_Type\*): void
- + SPI\_Receive(uint8\_t\*, uint8\_t): void
- + SPI\_Transfer\_Recieve(uint8\_t\*, uint8\_t\*, uint8\_t): void
- + SPI\_Transmit(uint8\_t\*, uint8\_t): void

## Interrupt manager



# رفتار کتابخانه

