

A1. Serial peripheral interface (SPI)

Serial transmission system

B. Synchronous communication used in embedded systems

Serial transmission system using master-slave architecture
C. SCLK - Serial clock - determines when a data byte is received
Master out - Slave in - data out goes from master
Master in - Slave out - data out goes from slave

A2. a. Inverting amplifier / SS - Slave select - indicates data sent

b. $-R_F/R_I$
c. $-24 \times 10^{-3} / 6 \times 10^{-3}$
 $= -4$

d. $0.2 \times -4 = -0.8 \text{ V p-p}$

e. The pulse would be the in verse of ψ bar was inverted

B. a. non inverting amplifier

b. $1 + R_F/R_I$
c. $1 + 24 \times 10^3 / 6 \times 10^3$
 $= 5$

d. $0.11 \times 5 = 0.55 \text{ V p-p}$

e. The pulse would stay the same only amplitude would change

A3. a. RS232

b. Pair to point serial connection

c. It is used to guide / communicate with

Other devices with the same connection such as a modem drive or camera, PC etc.

