

START

QSPI Configuration

Instruction frame with address?

No

Yes

Write the address in QSPI_IAR

Configure QSPI_IFR according to targeted memory

Wait until QSPI_SR.SYNCBSY=0, write QSPI_CR.UPDCFG, wait until QSPI_SR.SYNCBSY=0

Data Read/Write

Instruction frame with data?

No

Yes

Write QSPI_CR.STTFR

Read Frame (APBTFRYP = 1)?

No

Yes

Wait until QSPI_SR.SYNCBSY=0 then write QSPI_CR.STTFR

Wait for flag QSPI_ISR.RDRF by polling or interrupt

Last data to read?

No

Yes

Wait until QSPI_SR.SYNCBSY=0 then write QSPI_CR.LASTXFER

Wait until QSPI_SR.SYNCBSY=0 then read QSPI_RDR

Wait QSPI_SR.SYNCBSY=0 then Read QSPI_RDR

Wait for flag QSPI_ISR.TDRE by polling or interrupt

Write QSPI_TDR

Last data to write?

No

Yes

Wait for flag QSPI_ISR.TXEMPTY by polling or interrupt

Wait until QSPI_SR.SYNCBSY=0 then write QSPI_CR.LASTXFER

End of Frame

Wait for flag QSPI_ISR.CSRA to rise by polling or interrupt

END