







MASTER KL27
Start Condition and address written
State 0x80

Interrupt
State 0xa0
Send 0x01

Interrupt
State 0xa0
Control 0xf0
Further message to send so start repeated start – control 0xe0

Clear pending start/stop interrupts
Enable Start interrupt but don't sent the address yet

Interrupt
Start Condition
FLT = 0x30
Status = 0x22

Now send Slave read address and disable further start/stop interrupts

Interrupt
State 0xa4
Control 0xf0
(Next read)
Control changed to 0xe0

If the repeated start is commanded and the slave address written the double-buffered part will send the previous byte (0x01 in this example) instead of the slave read address (0xd1). Therefore it is necessary to wait until the repeated start has been sent (using start condition interrupt) before writing the slave address

SLAVE KL25

Interrupt
Addressed
Status = 0xe0
Status = 0xa0 (after clear)
Dummy read returns 0xd0

Interrupt
Status = 0xa0
Read returns 0x01

Interrupt
Addressed
Status = 0xe4
Status = 0xa4 (after clear)

MASTER KL25
Start Condition and address written
State 0x80

Double-buffered slave needs To handle the Start condition interrupt

Interrupt
State 0xa0
Send 0x01

Interrupt
State 0xa0
Control 0xf0
Further message to send so start repeated start and address

Double-buffered slave needs To handle the Repeated Start condition interrupt

Interrupt
State 0xa4
Control 0xf0
(Next read)
Control changed to 0xe0

SLAVE KL27
Interrupt
Start Condition
FLT = 0x30
Status = 0x22

Interrupt
Addressed
Status = 0xe0
Status = 0xa0 (after clear)
Dummy read returns 0xd0

Interrupt
Status = 0xa0
Read returns 0x01

Interrupt
Start Condition
FLT = 0x30
Status = 0x22

Interrupt
Addressed
Status = 0xe4
Status = 0xa4 (after clear)