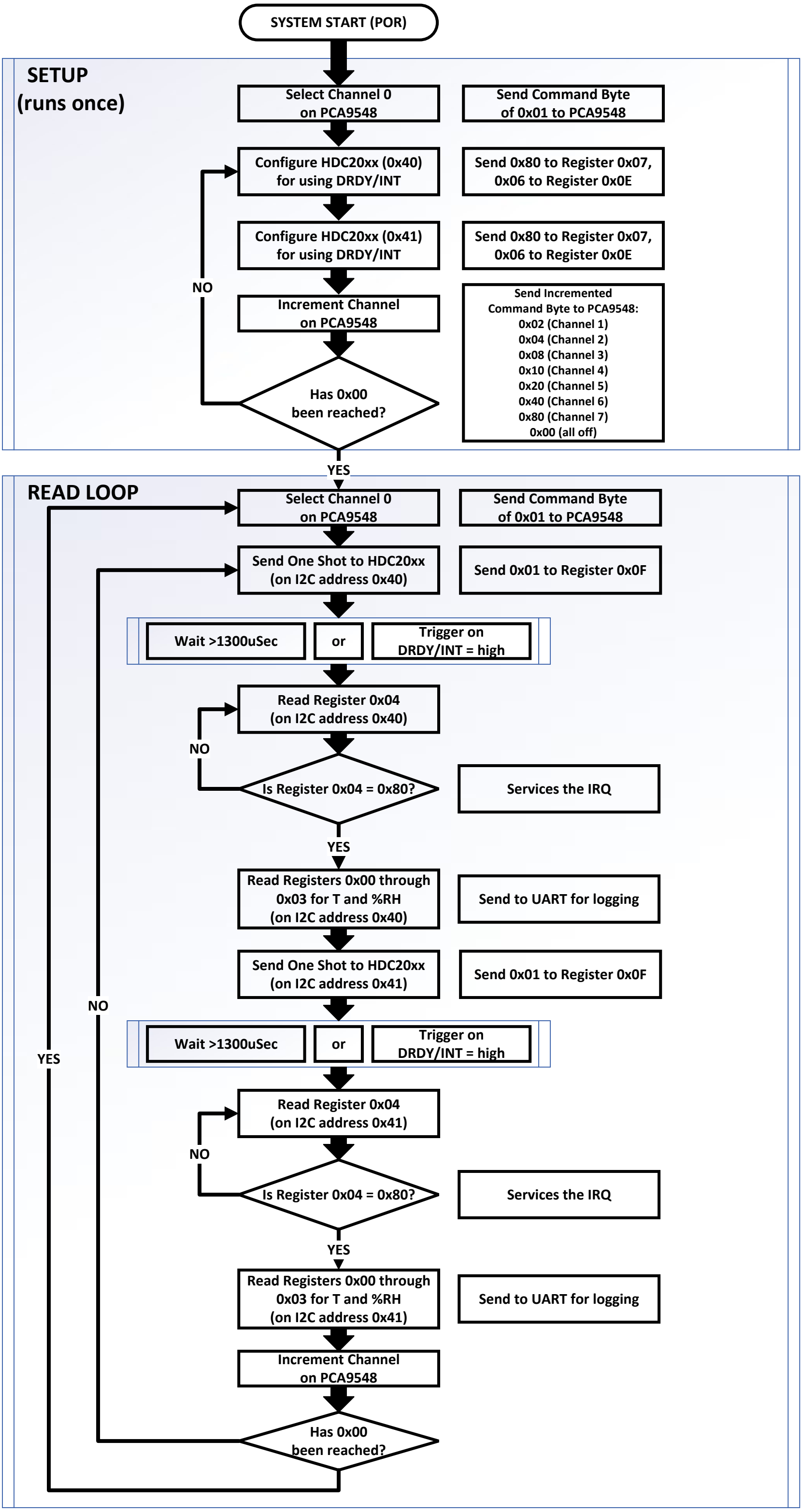
SYSTEM START (POR)
SETUP
(runs once)
Select Channel 0
on PCA9548
Send Command Byte
of 0x01 to PCA9548
Configure HDC20xx (0x40)
for using DRDY/INT
Send 0x80 to Register 0x07,
0x06 to Register 0x0E
Configure HDC20xx (0x41)
for using DRDY/INT
Send 0x80 to Register 0x07,
0x06 to Register 0x0E
NO
Increment Channel
on PCA9548
Send Incremented
Command Byte to PCA9548:
0x02 (Channel 1)
0x04 (Channel 2)
0x08 (Channel 3)
0x10 (Channel 4)
0x20 (Channel 5)
0x40 (Channel 6)
0x80 (Channel 7)
0x00 (all off)
Has 0x00
been reached?
YES
READ LOOP
Select Channel 0
on PCA9548
Send Command Byte
of 0x01 to PCA9548
Send One Shot to HDC20xx
(on I2C address 0x40)
Send 0x01 to Register 0x0F
Wait >1300uSec
or
Trigger on
DRDY/INT = high
Read Register 0x04
(on I2C address 0x40)
NO
Is Register 0x04 = 0x80?
Services the IRQ
YES
Read Registers 0x00 through
0x03 for T and %RH
(on I2C address 0x40)
Send to UART for logging
Send One Shot to HDC20xx
(on I2C address 0x41)
Send 0x01 to Register 0x0F
NO
YES
Wait >1300uSec
or
Trigger on
DRDY/INT = high
Read Register 0x04
(on I2C address 0x41)
NO
Is Register 0x04 = 0x80?
Services the IRQ
YES
Read Registers 0x00 through
0x03 for T and %RH
(on I2C address 0x41)
Send to UART for logging
Increment Channel
on PCA9548
Has 0x00
been reached?