

# SP Series Addition Function Descriptions



## spGetDevIsNew

short spGetDevIsNew

```
(  
    Short sChannel =    0//The channel ID or USB port number  
)
```

This function checks to see if the connected device is a newer version of the device.

New versions add new features that are not supported in older versions, so use this function to ensure that new API functions only apply to the new version.

## RETURN

A value of 0 indicates an old version of the device, and a value of 1 indicates a new version of the device.

## spSetIntMode

short spSetIntMode

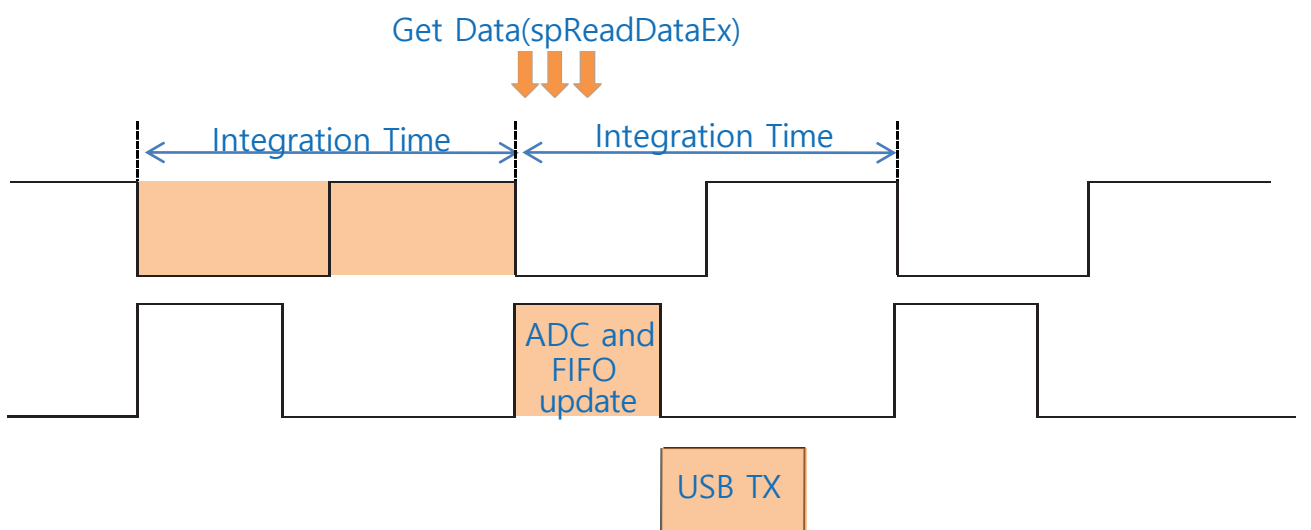
```
(  
    short ReadMode = SP_INTMODE_SWTRIGGER  
    const double dIntTime  
    short sChannel =    0//The channel ID or USB port number  
)
```

This function sets the behavior in Internal Trigger Mode and only works with the new versions of the Spectrometer, SP245, SP642.

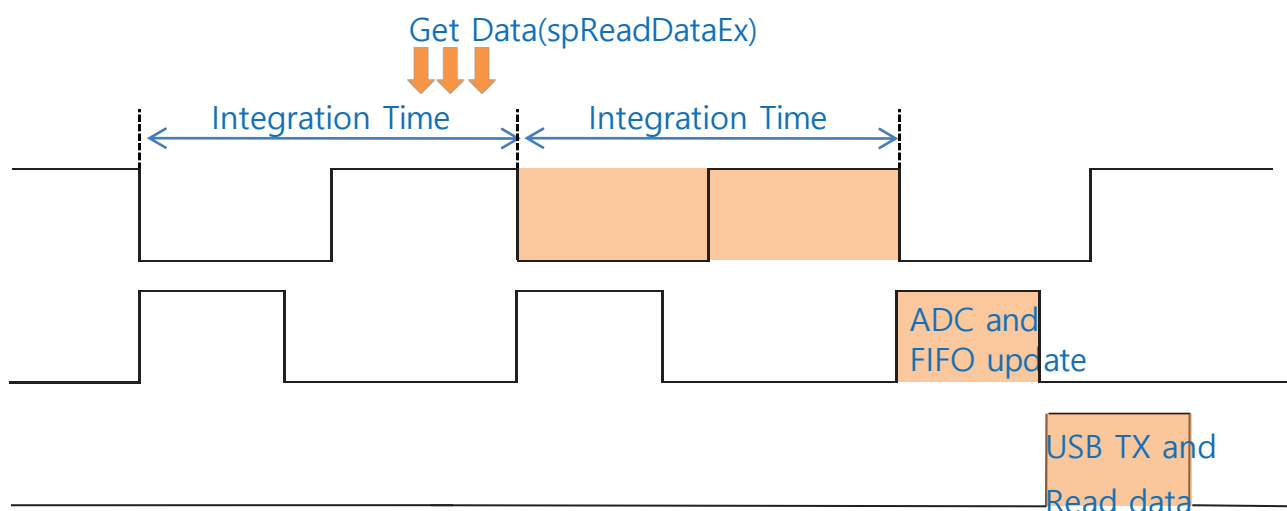
There are three modes of operation: Software Trigger, Free run Previous, and Free run Next. The SP642 supports all modes of operation, while the SP245 does not support Free run Next mode. If you set the SP245 to Free run Next mode, it will automatically set to Free run Previous mode inside the function.

**RETURN** : SP\_ERRPR\_NOTSUPPORT\_DEV(-7) : Timing chart for each mode of the device that does not support the operation mode of the function.

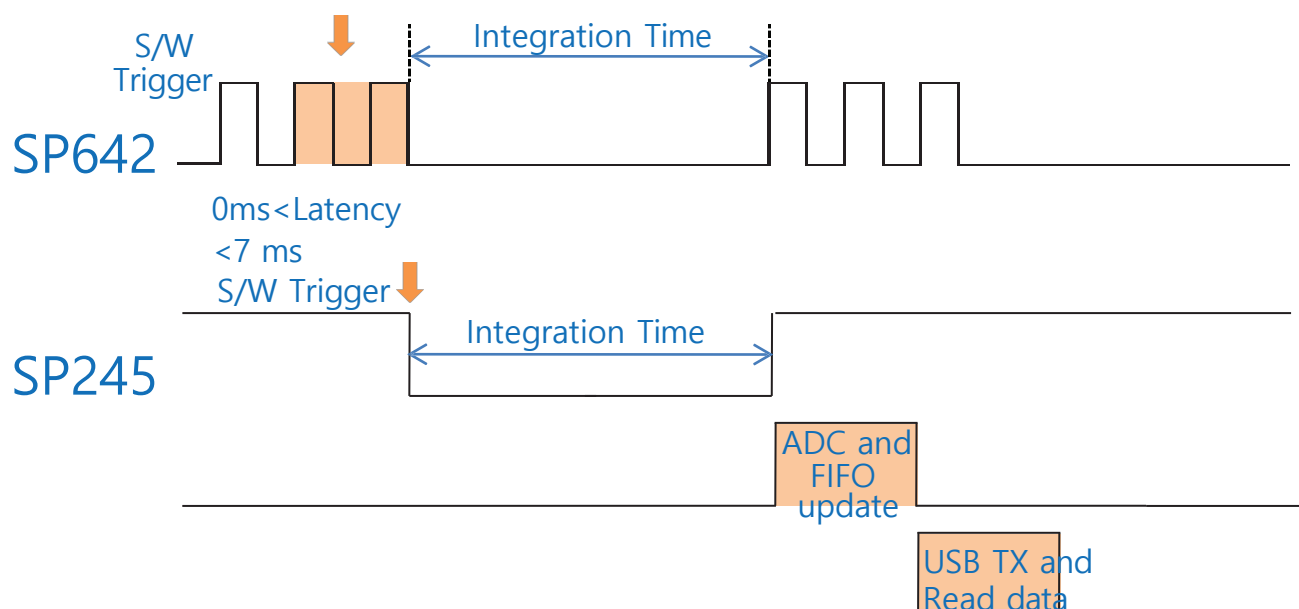
1. Free run Previous(SP\_INTMODE\_FREERUN\_PREV = 1)



## 2. Free run Next(SP\_INTMODE\_FREERUN\_NEXT = 2)



## 3. Software Trigger(SP\_INTMODE\_SWTRIGGER = 0)



## 4. SP245, SP642 Comparison Table

		SP245	SP642
Trigger Mode	Free run Prev	O	O
	Free run Next		
	S/W Trigger	O	O
Minimum Integration Time		Free run Mode : 7ms S/WTrigger Mode : 1ms	All modes : 7ms
ADC and FIFO update		5 ms	6 ms
USB Tx Time		Within 3ms	Within 3ms

## **spSetExtEdgeMode**

short spSetExtEdgeMode

```
(  
    short ExtTriggerMode = SP_EXTEDGE_FALLING,  
    short sChannel =      0//The channel ID or USB port number  
)
```

This function sets the interrupt method in Hardware Triggering Mode.

Uses SP\_EXTEDGE\_FALLING=0 (falling edge) and SP\_EXTEDGE\_RISING=1 (rising edge) methods, and the default is SP\_EXTEDGE\_FALLING.

RETURN: An error when less than 0.