List of commands (public functions) of the SI1145_WE library

Function	Parameters	what it does
void Init( )	none	initiates the SI1145 with some default register values
void resetSI1145( )	none	reset of the device
void setI2CAddress(*address*)	7 Bit I2C Address	changes the I2C address from default (0x60)
void enableMeasurements(*type, mode*)	type: PS_TYPE, ALS_TYPE, PSALS_TYPE, ALSUV_TYPE, PSALSUV_TYPE mode: FORCE, AUTO, PAUSE	configures channel list, starts / pauses measurement(s)
void startSingleMeasurement( )	none	starts a single measurement (forced mode) of the types which have been enabled (enableMesurements)
void enableInterrupt(*type*)	PS_INT, ALS_INT, PSALS_INT	enables interrupts; interrupt occurs when measurement is completed
void disableAllInterrupts( )	none	disables all interrupts
void setMeasurementRate(*rate*)	0….65535	SI1145 wakes up periodically - a rate of x means that every x wake up a measurement is done
void setLEDCurrent(*level*)	1….15	sets the current for the IR LED; see datasheet page 5 for translation of level into mA
void selectPsDiode(*diode*)	SMALL_DIODE, LARGE_DIODE	selection of the photodiode for proximity measurements
void selectIrDiode(*diode*)	SMALL_DIODE, LARGE_DIODE	selection of the photodiode for infrared light measurements
void enableHighResolutionPs( ) void disableHighResolutionPs( )	none	The A/D converter has 17 bit. If enabled, the 16 LSBs are used. Default: disabled - 16 MSBs are used.
void enableHighResolutionVis( ) void disableHighResolutionVis( )	none	The A/D converter has 17 bit. If enabled, the 16 LSBs are used. Default: disabled - 16 MSBs are used.
void enableHighResolutionIr( ) void disableHighResolutionIr( )	none	The A/D converter has 17 bit. If enabled, the 16 LSBs are used. Default: disabled - 16 MSBs are used.
void setPsAdcGain(*factor*)	0 … 5	increases the LED pulse width by 2^factor, default is 0
void enableHighSignalPsRange( ) void disableHighSignalPsRange( )	none	PS gain is divided by 14.5; used to prevent ADC overflow e.g. for measurements in direct sunlight
void enableHighSignalVisRange( ) void disableHighSignalVisRange( )	none	ALS VIS/IR gain is divided by 14.5; used to prevent ADC overflow e.g. for measurements in direct sunlight
void setAlsVisAdcGain(*factor*)	0 … 7	increases the integration time (measurement time) for ALS Vis by 2^factor
void setAlsIrAdcGain(*factor*)	0 … 7	increases the integration time (measurement time) for ALS IR by 2^factor
uint16_t getAlsVisData( )	none	returns the 16 bit measurement data for ALS VIS
uint16_t getAlsIrData( )	none	returns the 16 bit measurement data for ALS IR
uint16_t getPsData( )	none	returns the 16 bit measurement data for PS
float getUvIndex( )	none	returns the UV - Index
uint8_t getFailureMode( )	none	returns the content of the response register
void clearFailure( )	none	clears response register
void clearAllInterrupts( )	none	clears all interrupts
void clearAlsInterrupt( )	none	clears ALS (VIS/IR) interrupts
void clearPsInterrupt( )	none	clears PS interrupts
byte clearCmdInterrupt( )	none	clears Interrupts triggered by Commands
uint8_t getInterruptStatus( );	none	returns the content of the interrupt status register

ALS = ambient light
IR = infrared
PS = proximity
VIS = visual