QUUPPA SLIM SERIES BATTERY LIFE CURVES

Quuppa

LIFETIME CURVES DEPENDING ON TRANSMISSION RECURRENCE

MEASUREMENT CONTEXT

Lifetime measurement in this document have been performed with following :

- *Product* : Quuppa SLIM ID
- *Version* : v1.0.1
- *Transmission recurrence* in mode « Triggered » : sweeping from 100ms to 1s
- *Transmission recurrence* in mode « Default » : sweeping from 1s to 10s
- *Transmission power* : 0dBm, +4 dBm
- *Long Sleep* : Activation/Deactivation of « Long Sleep » mode
- *State duration in* mode « **Triggered** » : sweeping from 1s to 5min
- *State duration in* mode « **Default** » : sweeping from 20s to 5min
- *Response mode* : there are 3 listening parameters : « Power Save », « Balanced » and « Fast ». To be selected in modes « Triggered » et « Default ».
- *Number of events* : sweeping from 1 to 1000 moves per day
- *Test temperature* : 25°C
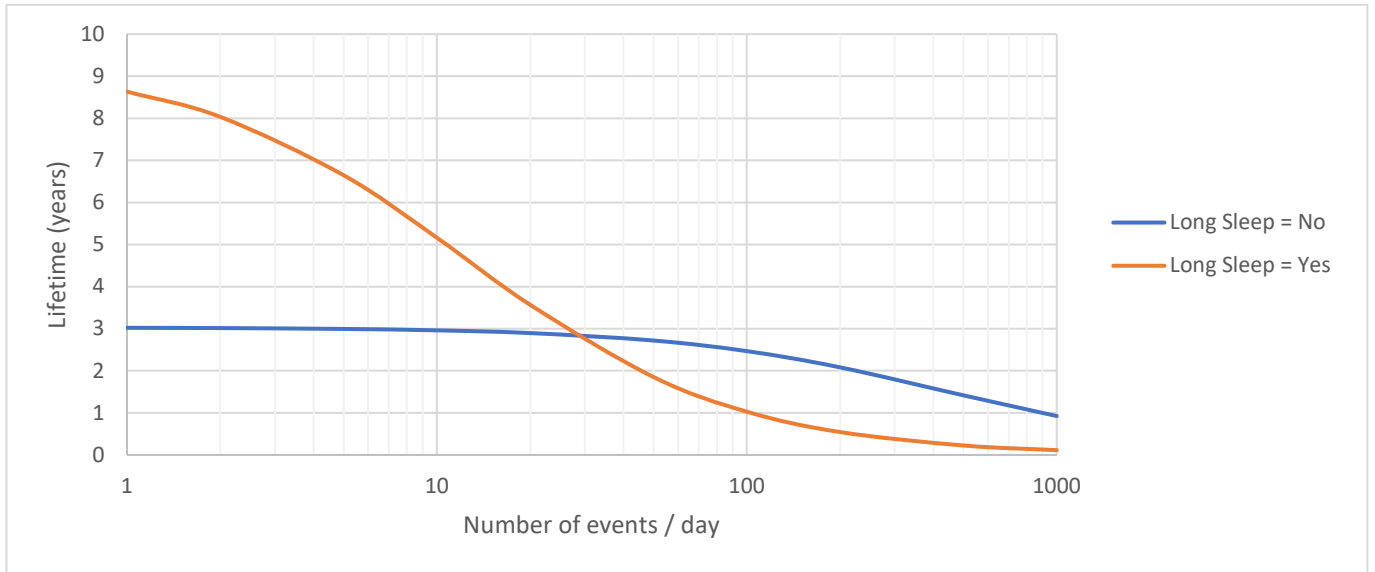- *Battery capacity* : 1 CR2016 battery with 20% derating.

The battery self-discharge, and inherent chemical lifetime, are limiting its use to 20 years, including storage.

Following curves are calculated for usage of geopositioning, in a transmit-on-movement mode. Possible downlink commands, OTA programming, etc… are not included in this calculation.
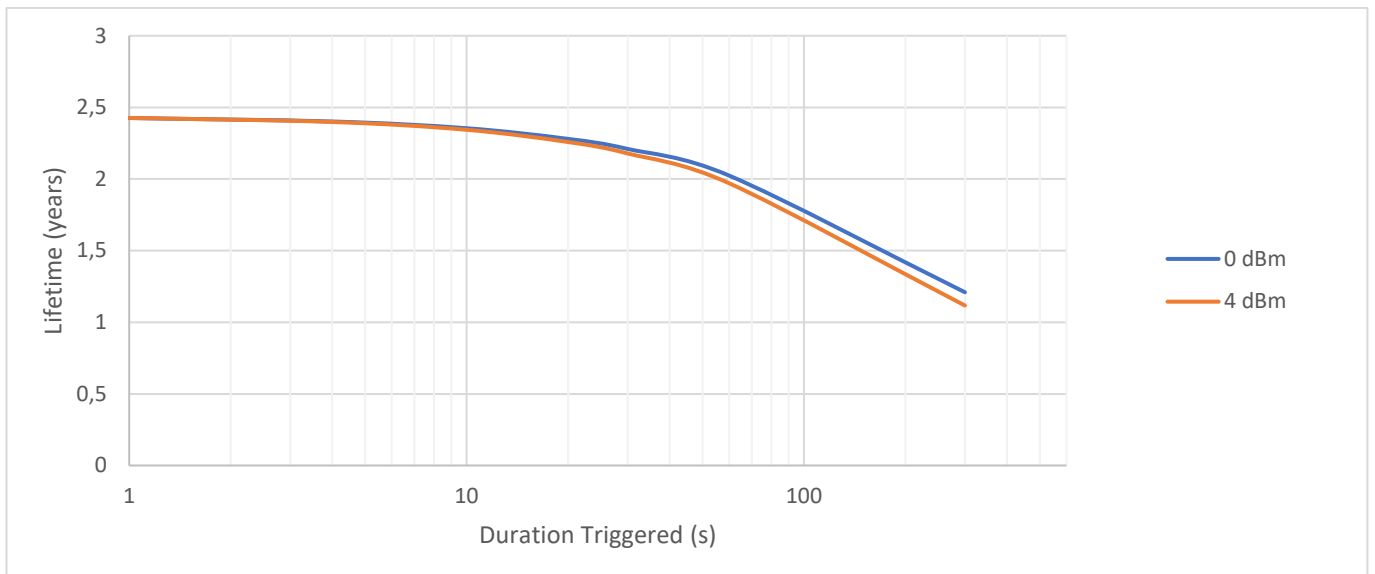
QUUPPA FORMAT

- Lifetime with default parameters, depending on « Long Sleep » activation and number of events per day:

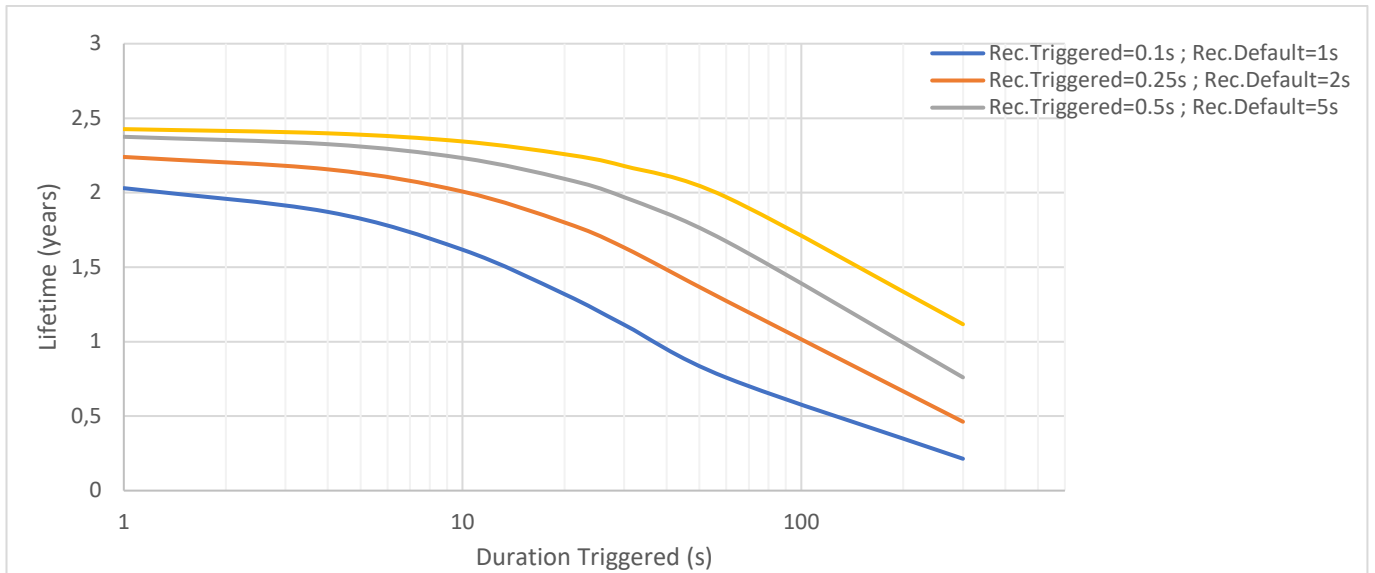| Parameter	Rec. Triggered	Rec. Default	Power	Resp. Triggered	Resp. Default	Duration Triggered	Duration Default
Fixed value	1s	10s	+4 dBm	Power Save	Power Save	20s	60s

- Lifetime depending on state duration « triggered » and transmit power:

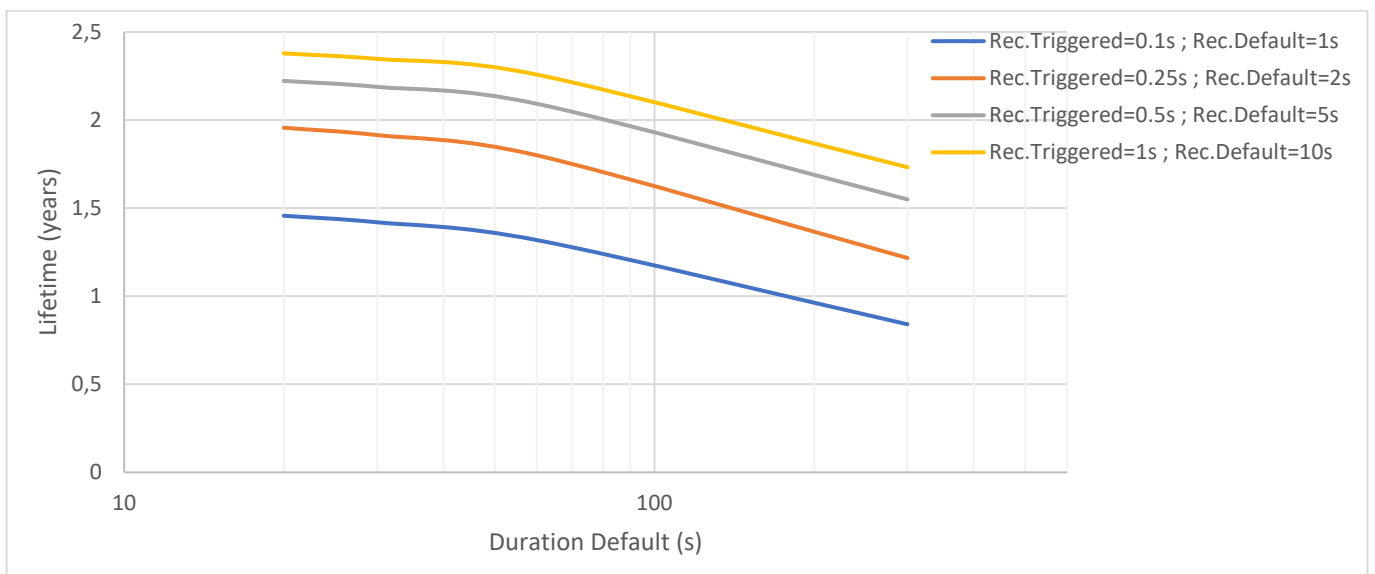| Parameter	Rec. Triggered	Rec. Default	Resp. Triggered	Resp. Default	Long Sleep	Duration Default	Nb evt/day
Fixed value	1s	10s	Power Save	Power Save	Non	60s	150

- Lifetime depending on state duration « Triggered » and transmit recurrences in « Triggered / Default » :

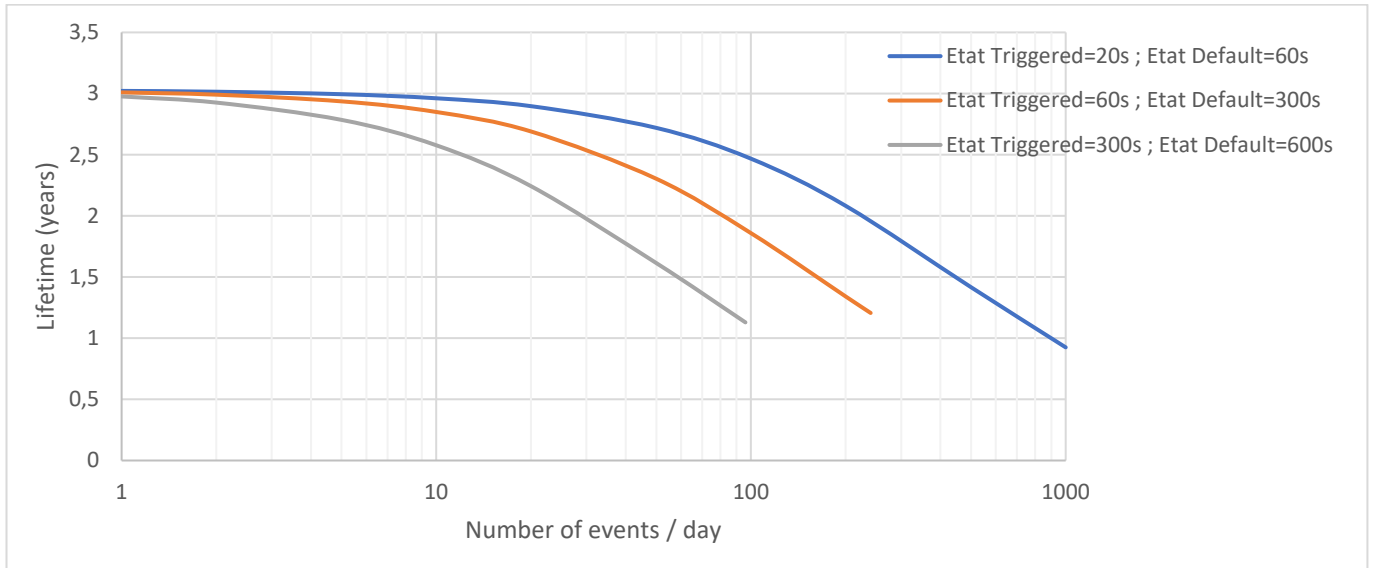| Parameter	Power	Resp. Triggered	Resp. Default	Long Sleep	Duration Default	Nb evt/day
Fixed value	+4 dBm	Power Save	Power Save	No	60s	150

- Lifetime depending on state duration « Default » and transmit recurrences in « Triggered / Default » :

Parameter	Power	Resp. Triggered	Resp. Default	Long Sleep	Duration Triggered	Nb evt/day
Fixed value	+4 dBm	Power Save	Power Save	No	20s	150

- Lifetime depending on states duration « Triggered / Default » and number of events per day:

Parameter	Power	Recur. Triggered	Recur. Default	Resp. Triggered	Resp. Default	Long Sleep
Fixed value	+4 dBm	1s	10s	Power Save	Power Save	No

- Lifetime depending on « Response Mode » :

Parameter	Power	Recur. Triggered	Recur. Default	Long Sleep	Duration Triggered	Duration Default
Fixed value	+4 dBm	0.5s	1s	No	20s	60s