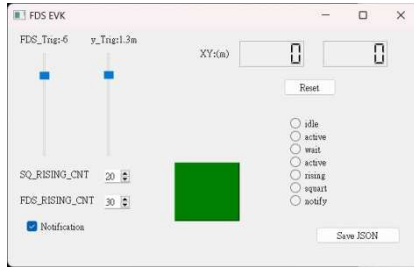
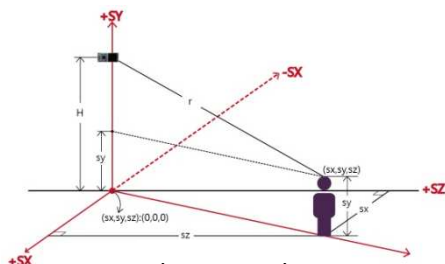


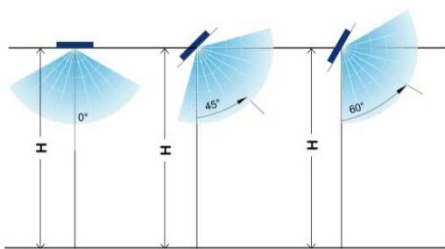
## mmWave\_PCT\_FDS\_Document



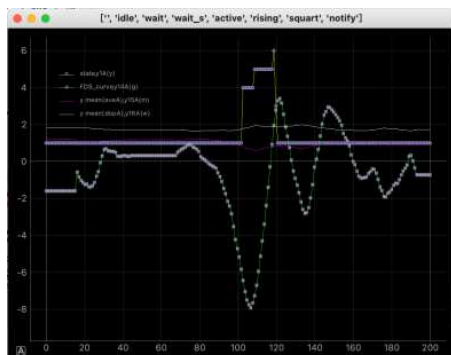
(Picture 1)



(Picture 2)



(Picture 3)



(Graph 4)

### 1. Physical Setup

Install mmWave at 2.4m height, with 45 degree angle (see Picture 3).

### 2. Event Trigger Explanation for Single Person Detection (per Picture 1)

2.1 When FDS\_Trig is lower than -6 (an adjustable value), starts the Event Trigger CNT(counter).

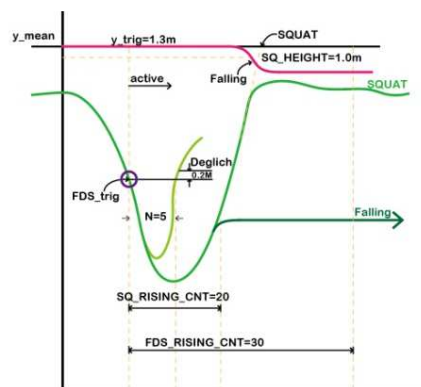
2.2 When y\_Trig is at 1.3m (and adjustable value) for floor to human height (as in SY of Picture 2); and when SQ\_HEIGHT value is lower than the fixed 1.0m (see Picture 5), then entering Fall Detection checking state.

2.3 Concurrently will check for "Squat" state with SQ\_RISING\_CNT=20 (approx. 2 sec.; and adjustable value), at the same time also check if meeting "Fall" state with FDS\_RISING\_CNT=30 (approx. 3 sec.; and adjustable value) as in Dark-Green Falling line (in Graph 5).

Note: As seen from Graph 5, SQ\_RISING\_CNT & FDS\_RISING\_CNT started counting at the same time.

2.3.1 When SQ\_RISING\_CNT is at CNT=20 (approx. 2sec.), and if at this point the Person stands up, then the Event will be detected as a Squat Event (not Fall Down).

2.3.2 when SQ\_RISING\_CNT is at CNT=20 (approx. 2sec.), and the Person is still not standing, while FDS\_RISING\_CNT reached CNT=30 (approx. 3sec.), then the Event will be detected as "Fall Down" Event.



(Graph 5)