

Traffic Monitoring Object Detection and Tracking Reference Design - Data Structure v0.1

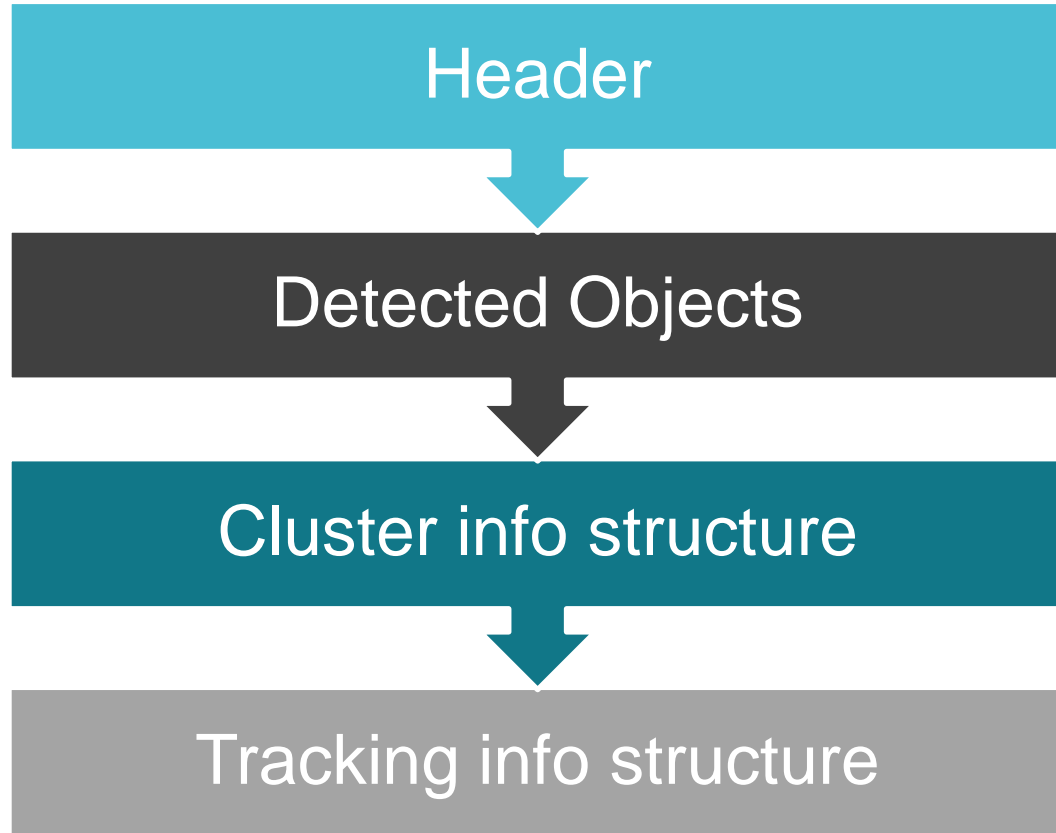
xWR16xx

SDK v1.0.x.x

TIDEP-0090

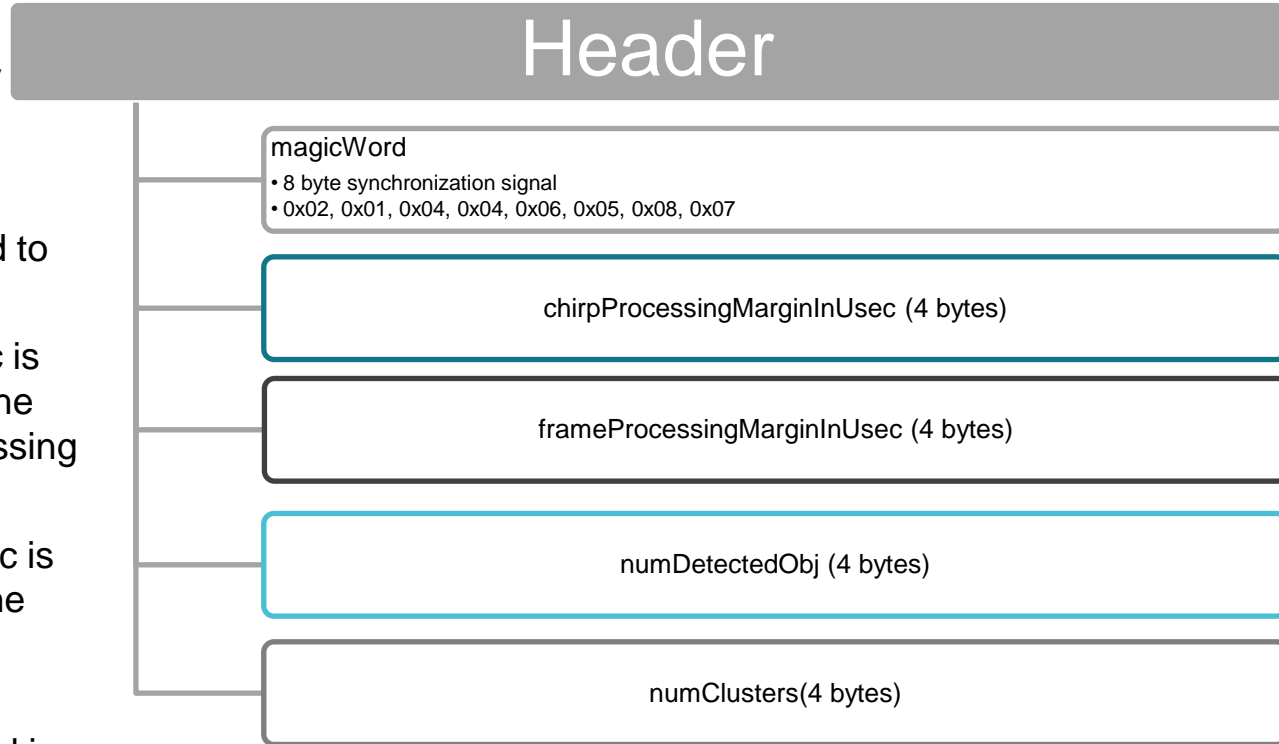
TIDEP-0090 Output Packet Structure

- Data is output through the Data UART Port
 - Baud Rate = 921600
- Data is Little Endian



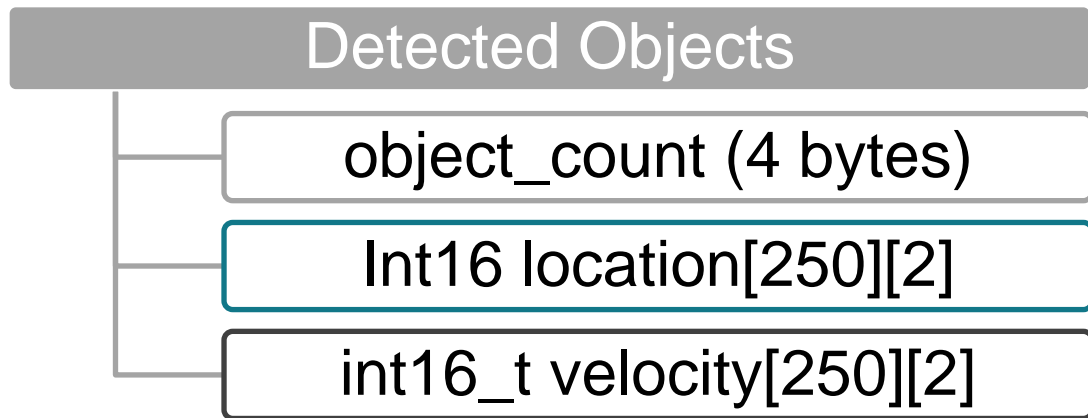
Header

- Sent at the beginning of every transmission
- Always 24 bytes
- Contains the magicWord used to signal the start of a packet
- chirpProcessingMarginInUsec is the microSec unused during the active chirp after range processing finished.
- frameProcessingMarginInUsec is the microSec unused within the frame duration after frame processing finished
- These 2 margins are explained in design document



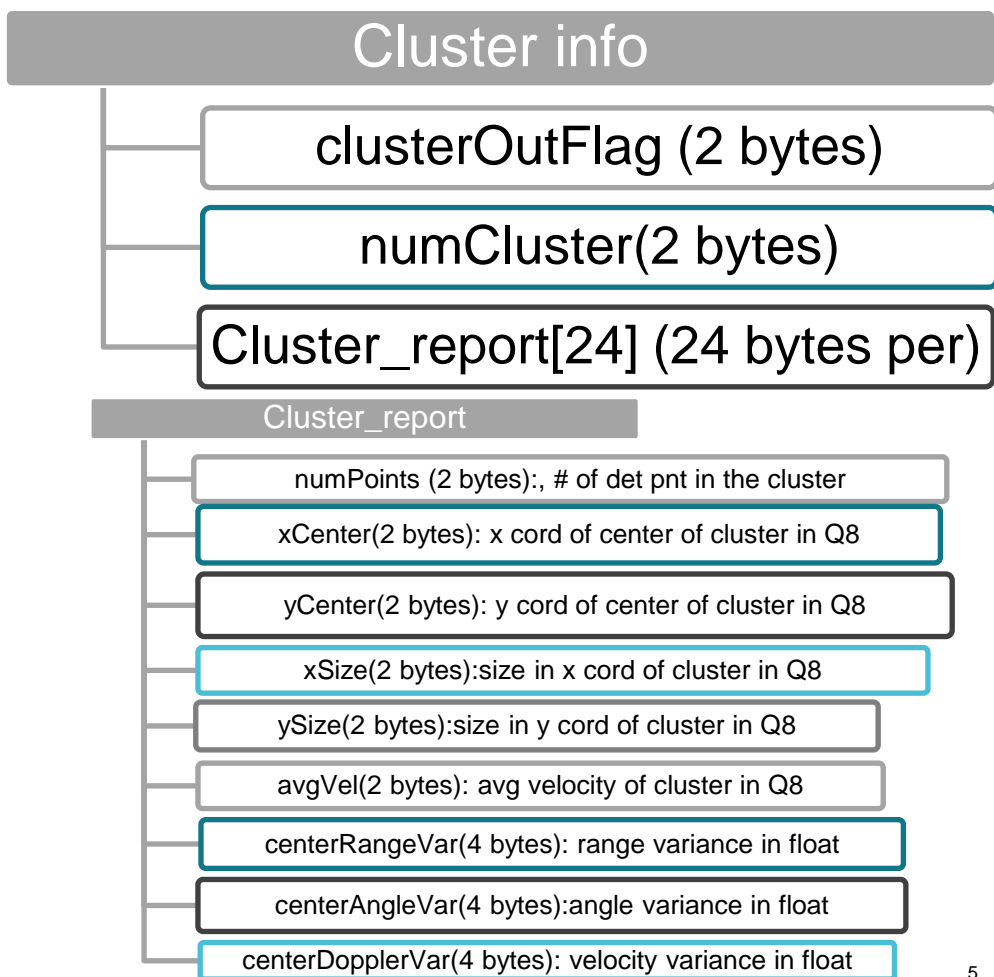
Detected Objects

- Contains [x,y] coordinate of the detected targets, and [vx, vy] information for the detected target, with fixed Q format of 8 (meaning output are multiplied by 256 before sending out)
- Size for 250 detected targets per frame. DSP will fill the structure with information of detected targets, the rest of memory will not be used.



Cluster Information

- Contains information for clustering output
- clusterOutFlag indicates whether cluster information is in the output
- Cluster_report contains information for each detected cluster



Tracking Information

- Contains information for tracking output
- trackingOutFlag indicates whether tracking information is in the output
- Tracker_report contains information for each tracker

