4.2 Programmer's guide

4.2.1 USB Data output format

- The first 16 bytes contains the header, starting with the sample identification bytes ("yoho" values).As soon as the Gator is switched on, sensor data is being created and transferred over the USB 2.0 connection. At an interval rate determined by the gator sampling rate; series of data sets (of 43 byte size) are transferred.
- Bytes 17-19 contain the sensor status. This status is determined for each sample.
- Bytes 20-43 contains the Centre-of-Gravity data of the sensors found (or zeros).

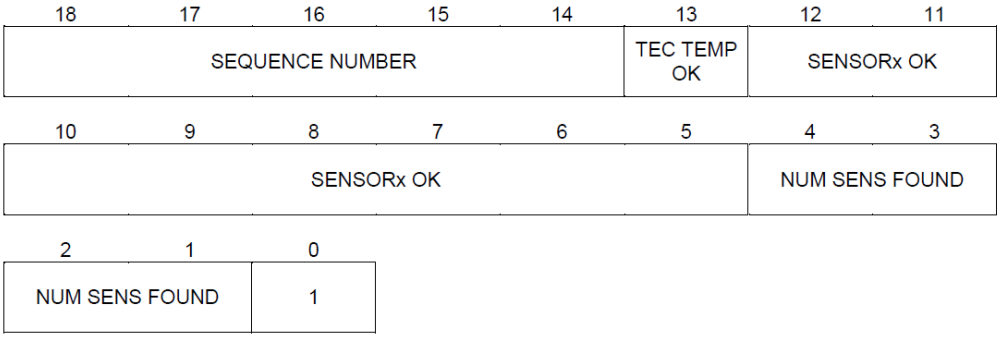
4.2.2 Header bytes

15	14	13	12	11	10	9	8
Sync (ASCII "yoho")				Version	Type	Pkt counter	
0x79	0x6f	0x68	0x6f	0x00	0x01	MSB	LSB

7	6	5	4	3	2	1	0
Time stamp (us)				Payload size			
MSB	..	..	LSB	MSB	..	..	LSB

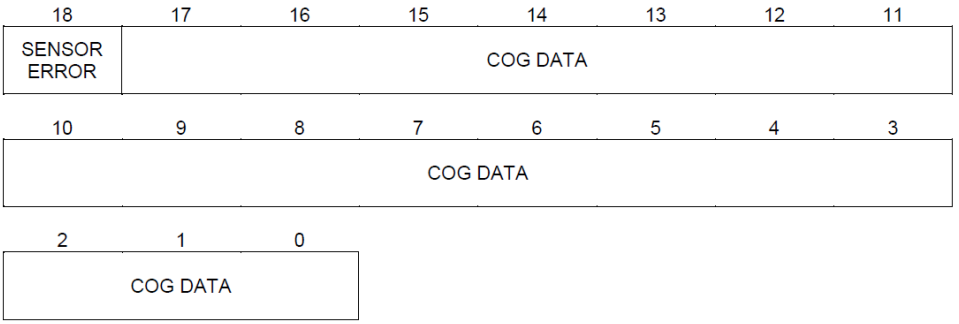
- Sync ("yoho"). These bytes indicate the start of the data stream
- Version This byte indicates the firmware version.
- Type This byte indicates the type of the Gator system.
- Pkt counter sent. These bytes indicate the amount of the packet has been
- Time stamp Gator These bytes indicate the time stamps in µs since the is switched on.
- Payload size These bytes indicate the payload size in byte.

4.2.3 Sensor status word



- Sequence number — These bits indicate the sequence number (0 – 15).
- TEC Temp ok — This bit represents the TEC temperature good flag ('1'=OK).
- Sensorx OK — These bits indicate if the sensors are working with the established parameters ('1' = OK, '0' = error or no sensor).
- Num sens found — These bits indicate the number of sensors found (0 – 8). In case too many sensors are found, the output will be 0xF.

4.2.4 Sensor data (1-8) words



- Sensor error — This bit indicates a sensor error (sensor out of range, saturated or sensors too close together). '1' = error, '0' = no error.
- CoG data — This field contains the CoG sensor output data which is calculated by the internal algorithm. If a sensor error is active, all bits are '1' and in case no sensor is found '0'.

Contact Technobis for further information or support.