GPS-AG50 CAN Output Description

The document describes the messages that are output by the GPS AG-50 module on its CAN bus.

The CAN IDs assume that the module is using its default setting for CAN base ID.

All multi-byte values are, of course, in big-endian format.

CAN ID 680h - GPS position

Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8
GPS latitude in ten-thousands of a minute of arc as a signed 32-bit value. Positive values are north of the equator, negatives are south.				GPS longitude in ten-thousands of a minute of arc as a signed 32-bit value. Positive values are east of the Greenwich Meridian, negatives are west			

CAN ID 681h - GPS course, speed and altitude

Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6
Course in hundredths of a degree as an unsigned 16-bit value A value of 0 indicates due North		Speed in centimetres per second as an unsigned 16-bit value.		Altitude in metres as a signed 16-bit value. Negative values indicate a position below mean sea level	

CAN ID 682h - GPS time and date

Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8
Day of month as an unsigned 8-bit value	Month of year as an unsigned 8-bit value	Year of century as an unsigned 8-bit value	Hour of day as an unsigned 8-bit value.	Minute of hour as an unsigned 8-bit value.	Second of minute as an unsigned 8-bit value.	Thousandths of a second as an unsigned 16-bit value	

CAN ID 683h - Accelerometer

Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8
Latitudinal acceleration in thousandths of a G as a signed 16-bit value. Positive values represent acceleration to the left (as when turning to the right), negative to the right (as when turning to the left).		Longitudinal acceleration in thousandths of a G as a signed 16-bit value. Positive values represent increasing forward speed, negatives decreasing.		Vertical acceleration in thousandths of a G as a signed 16-bit value. Positive values represent upwards acceleration, negative downwards.		Accelerometer temperature in tenths of a degree C as a signed 16-bit value	

CAN ID 684h - Gyroscope

Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8
Roll in tenths of a degree per second as a signed 16-bit integer. Positive values indicate roll toward the right, negative to the left.		Pitch in tenths of a degree per second as a signed 16-bit integer. Positive values indicate upward pitch, negative downward.		Yaw in tenths of a degree per second as a signed 16-bit integer. Positive values indicate yaw to the right, negative to the left.		Gyroscope temperature in tenths of a degree C as a signed 16-bit value	

CAN ID 685h - GPS Status information

Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6
Horizontal dilution of precision in tenths of a metre.		Fix quality indicator (0=fix unavailable, 1=valid fix in SPS mode, 2=valid fix in differential GPS mode)	Number of satellites in view	GPS mode letter (N=data not valid A=autonomous mode, D=differential mode, E=estimated mode)	GPS status letter (A=data valid, V=receiver warning)

CAN ID 690h to 697h - Satellite statistics frames (version 2.91 only)

Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8
Satellite ID or 0 if no data present	Elevation in degrees	Azimuth in degrees divided by 2	C/N_0 in dB or FFh if satellite not tracked	Satellite ID or 0 if no data present	Elevation in degrees	Azimuth in degrees divided by 2	C/N_0 in dB or FFh if satellite not tracked

CAN ID 688h - Satellite statistics frames (versions 2.92 to 2.94)

Byte 1	Byte 2Byte b	Byte 3	Byte 4
Satellite ID	Elevation in degrees	Azimuth in degrees divided by 2	C/N_0 in dB or FFh if satellite not tracked

CAN ID 688h - Satellite statistics frames (version 2.95)

Byte 1	Byte 2Byte b	Byte 3	Byte 4
Bit 7: satellite in use Bits 6-0: satellite ID	Elevation in degrees	Azimuth in degrees divided by 2	C/N_0 in dB or FFh if satellite not tracked