Definition of Graupners HoTT- SUMD- Signal

Why SUMD?

The “gr 16” receiver supports two different sum signals, “SUMO”- and “SUMD”- Signal.

The SUMO- Signal is an analog sum signal and is equal to a Puls position modulation whereas

the SUMD- Signal is a digital sum signal.

So the big advantage of SUMD is, that it is easy decodeable.

Definition:

HoTT SUMD is implemented by a 115200 bit/s serial data stream. The data stream is generated by HoTT receivers. The transmitter generates a data frame at a data rate of 100Hz (10ms). Each data frame consists of a header followed by a data section representing the channel data and is concluded by a CRC checksum.

Time Requirements:

The serial connection needs to be set to 115200 Bit/s, 8 Databits, no Paritybit, 1 Stopbit. Each data frame is sent as a consistent data burst leaving minimal gaps less than 50µs between transmitted data bytes.

Structure of a HoTT- SUMD frame:

A single SUMD data frame comprises of three consecutive sections. SUMD\_Header, SUMD\_Data, SUMD\_CRC.

The SUMD\_Data section contains the channel data in sequential order. The number of channels to be transmitted can be up to 32. Each channel data is represented by a 16 bit word.

SUMD\_Header section description:

***Byte Byte\_Name Byte\_Value***

Byte 0 Vendor\_ID 0xA8

Byte 1 Status 0x01 or 0x81

Byte 2 Number of channels

SUMD\_Data section description:

Byte n\*2+1 High Byte of channel n

Byte n\*2+2 Low Byte of channel n

SUMD\_CRC section description:

Byte (N\_Channels+1 )\*2+1 High Byte of CRC

Byte (N\_Channels+1 )\*2+2 Low Byte of CRCderived

Channel data interpretation:

Each channel data is represented by a unsigned 16 Bit Word. The data range is derived from the pulse length for standard servos.

