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# SAILMON

PRELIMINARY

SAILMON SYSTEM

EXTERNAL CHANNELS MANUAL

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## Overview

Sailmon provides an interface to send data to it, and display it on the various displays. This function is called external channels. Sailmon supports to receive up to 256 external channels. The external channels are available inside Sailmon, and the description text can be changed from the user to fit the interface.

## SENDING EXTERNAL CHANNELS TO SAILMON

The data from the external channels must be send to the following network interface:

Receiver IP Address: 172.16.1.1 (static address of the server)

Protocoll: UDP only

Destination Port: 7100

The data are available on all instruments if you send it to the server only. Don't broadcast the data! **(Avoid broadcasts to reduce network load)**

**Due to internal calculations and calculation power limitations, make sure the following is not exceeded:**

- ➔ Any particular data value send 10Hz max.
- ➔ Max 250 data values/s send to Sailmon in total

Exceeding the above might result in slower system response and excess heating of the server instrument.

The channel names, units and formats are assigned inside a Sailmon menu. The user selectable channel names are static and cannot be changed on a regular basis. (No alternating channel text)

UDP packets are parsed on a packet basis, packet data must not be started in one packet and continued in the next packet.

Large packets, containing multiple or all channels are preferred to save network overhead and parsing effort.(recommended, not obligatory)

Channel data will be displayed on the Sailmon instruments and automatically aligned to fully take use of the available space. Sending data is possible in 32bit float and 32bit integer format (see below)

External Channel Data show up in Sailmon as "External Channels". The user can assign a unit the each channel, so the display shows the correct unit afterwards.

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## UDP Packet Format

Packets have to start with 32bit magic cookie 0x21431902, followed by the total number of channels, followed by random number of channel data containing

- Channel id: 1byte channel identifier: 0-255, external Channel number
- Channel Type: 1 Byte: 0x00: 32 bit signed integer; 0x01: 32bit float;
- Channel data: 32bit field for integer and float type, random size field for text
- followed by next channel Id, type and data etc.

Description	Value	Size
<b>Magic Cookie</b>	0x21431902	4 Byte
<b>Total Channels</b>	Total # of channels in this message	1 Byte
<b>Channel ID</b>	ID of Channel, 0-255	1 Byte
<b>Channel Type</b>	Type: 0x00 = 32bit integer, 0x1 = 32bit float,	1 Byte
<b>Channel Data</b>	32bit Float or 32bit int according to the type field	4 Bytes
<b>Repeating:</b>	Channel ID; Channel Type;Channel Data	