GSS 100c

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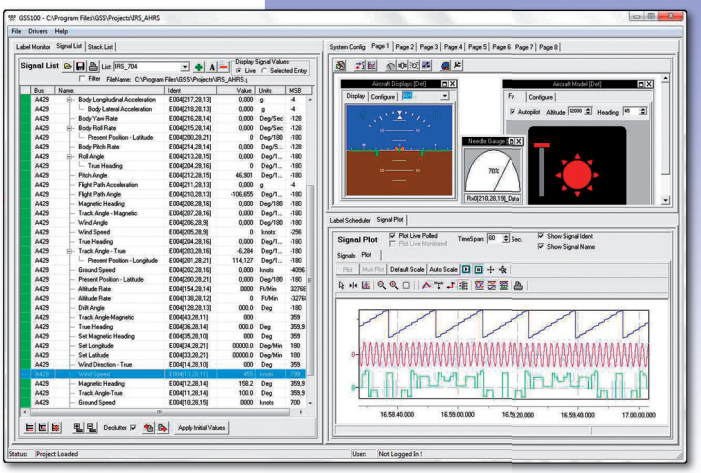


Comprehensive ARINC 429 Bus Analyser & Stimulator

Features

- official ARINC 429-15 BNR/BCD Label database included
- freely configurable application dependent format definitions
- multiple Tx/Rx channels supported
- 100% functional concurrency in any direction Tx and Rx
- static and dynamic transmit signals (Labels) settings
- graphical control and monitor widgets: slider, rotary knob, attitude indicator etc.
- real-time recording with 1 µsec time-stamping
- raw data and engineering data monitoring
- multi-signal graphical real-time plotting

General Overview

GSS100c is an extremely comprehensive and powerful tool to analyse and troubleshoot any kind of ARINC 429 communication. It allows the user to very easily setup scenarios and Tx/Rx configurations of ARINC 429 labels in either binary or hex notation, or using the integrated Label database for engineering interpretation in either direction. The scenarios and configurations are stored in "Projects" that can be recalled at any time. The entire suite of functional entities of GSS100c operate concurrently – e.g. recording of data in parallel with real-time stimulation and monitoring whilst using avionics instrument widgets is a standard situation within GSS100c.

GSS100c is the all-in-one tool for any ARINC 429 testing or monitoring application.

Supported Hardware

A wide range of the mbs ARINC 429 family of hardware is already supported by the GSS100c application, including the **Æ-429-ET/EC** Gigabit Ethernet Interface and the **Æ-429-USB** USB 2.0 device.

The GSS100c can also be used concurrently to support Mil-Std-1553 databus testing using hardware from our partners GSS Avionics, and there are future plans to support the new **Æ-CAN429-USB**, that combines ARINC 429 with CAN/ARINC 825 bus.

Analysis of ARINC 429, Mil-Std-1553 and CAN with one integrated software tool eliminates the necessity for synchronizing and merging different utilities and equipment when it comes to multi-bus analysing requirements.

GSS100c – the Tools

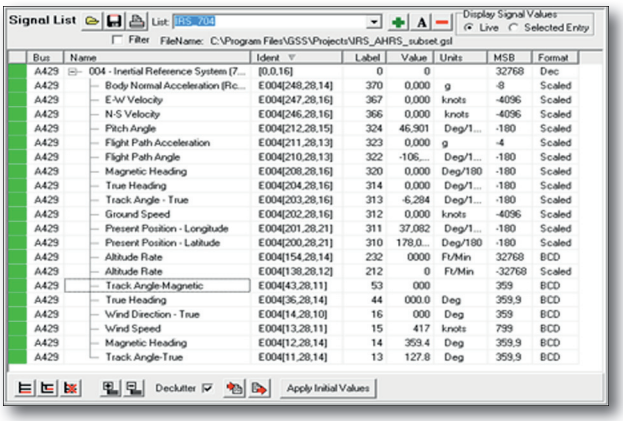
GSS100c is a collection of various independent but closely cross-linked tool-objects. One common characteristic of all tools is the capability for on-line configuration/selection of display columns, making it very easy to select only the relevant information/data to display for a specific task.

Config-Tool

With the Config-Tool the overall physical and logical configuration parameters of the available ARINC 429 resources (Tx- and Rx-channels) are set. Each channel is individually assigned its bus-speed (HS or LS) and the associated equipment ID that allows for engineering interpretation of binary data.

Label Scheduler Tool

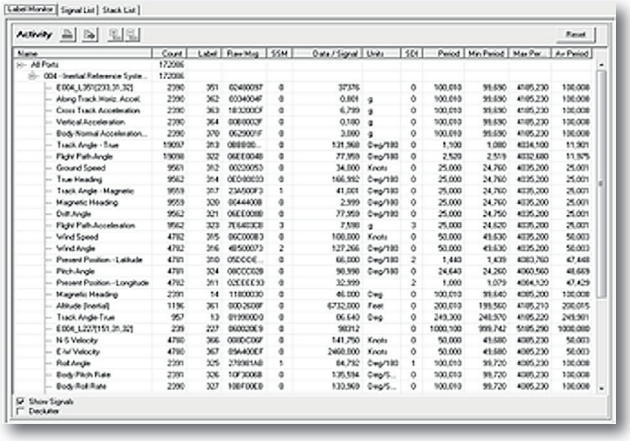
The Label Scheduler Tool is used to setup and execute a cyclic schedule of label Transmissions individually for each Tx-channel.



Signal List-Tool

One of the most powerful aspects of GSS100s is the use of Signals. Signals are engineering parameters e.g Altitude, Airspeed and Valve on/off. The Signal List-Tool interprets raw binary ARINC 429 data into engineering units. The integral ARINC 429-15 Signal List provides the entire set of original BNR and BCD labels as defined in the official ARINC 429 specification. The list is organized with the EQID, identifying a specific LRU/LRM, at the top level. Below the EQID the assigned labels are listed, each of which incorporating one or more signals (parameters). Any individual signal is described by type (BNR, BCD, enumeration,…), significant bits, range and units. Predefined ARINC 429 Labels can be modified and extended or application specific new Labels are created, offering the maximum of flexibility that ARINC 429 allows theoretically.

A Signal List can be used to monitor an Rx-channel, or stimulate a Tx-channel. All that is needed is to associate each channel with the required Equipment ID using the Config Tool. As well as displaying the Live values of Signals, it is also possible to use this tool to display the values of Signals at any point in a recording. Signal Lists can also be used to select individual Labels/Signals to be included in the so-called Watched List which is used to display recorded data within the Stack List-Tool.



Label Monitor-Tool

The Label Monitor Tool is used to monitor the activity across all receive channels. It can display either raw Labels, or it can use the Signal definitions from the Signal List tool to display the names and engineering values. As well as diplaying the number of times each label is observed, this tool also displays detailed timing information for each Label.

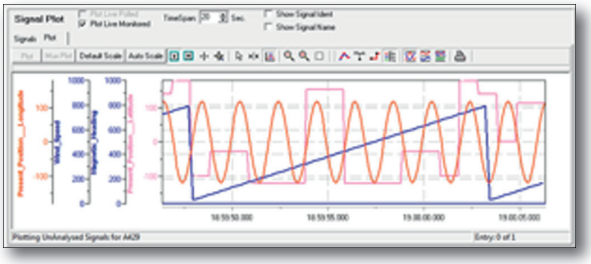
Stack List-Tool

ARINC 429 data is recorded from selected Rx-channels and stored in a Stack List file. The Stack List-Tool is the utility to analyse and explore Stack List files.

This tool allows you to see the Labels from all channels together in one chronological list. The list can be easily searched and filtered to enable you to concentrate on the labels important to you. As mentiond previously, it is possible to select signals from the Signal List Tool to be displayed as columns adjacent to each entry. The resulting data can be exported for further analysis.

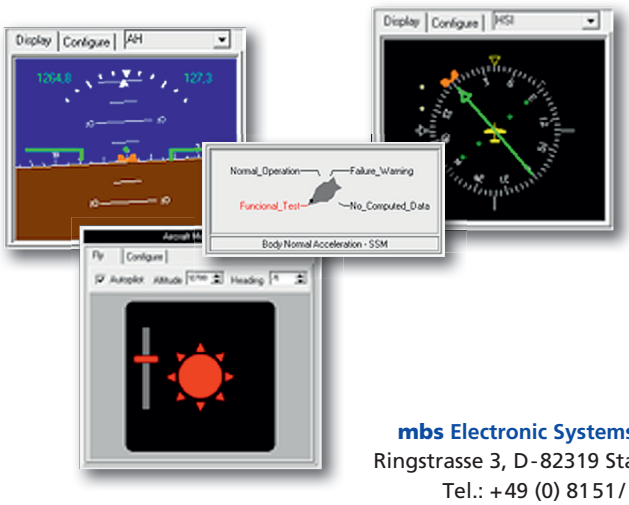
Signal Plot-Tool

From a Signal List individual parameters can be dragged & dropped into the Signal Plot-Tool where they can be plotted in realtime. Multi signal plotting and numerous setting possibilities like scaling, timing analysis using markers,
graphics options and much more allows for extreme flexibility and extravagance when graphical plotting is required.



Widget Pages-Tool

A total of 8 individual pages can be used to create setups with graphical monitoring and transmit stimulation control views using a selection out of an avionics instruments collection.



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