

SB3 - Logic Analyser Datasheet

Jon Sowman
Selwyn College

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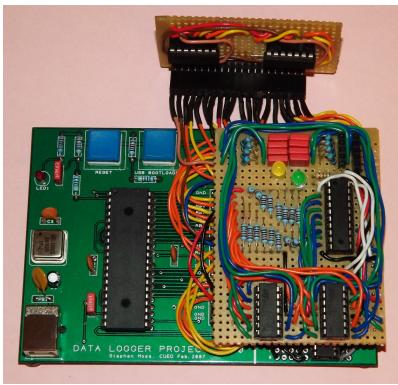


Figure 1: Logic Analyser

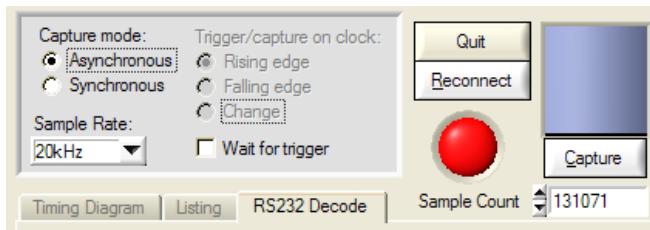


Figure 2: Analyser configuration

1 Specification

- High speed sampling up to 250kHz with input overvoltage protection.
- Asynchronous and synchronous sampling in both triggered and non-triggered modes.
- Compact and low cost
- Bus powered, no external power supply required
- Inbuilt hysteresis via Schmitt triggers on all input channels.
- Fully featured user interface allowing configuration of the analyser and displaying of the results

2 Usage

2.1 Setting Up

Plug the logic analyser into a spare USB port on your computer and open the `LogicAnalyser.exe` software on your computer. The central indicator should turn green indicating that the analyser has been detected and communications are in progress. Disconnecting the analyser will result in this indicator turning red (see figure 2). If this happens, reconnect the analyser and click the **Reconnect** button.

2.2 Configuration

The analyser is capable of operating in three modes:

- Asynchronous non-triggered - takes the required number of captures at the required sample rate as soon as the **Capture** button is pressed.
- Asynchronous triggered - wait for the corresponding trigger on channel 0 and then starts sampling at the required sample rate up to the sample number.
- Synchronous - take samples on the rising, falling or changing edge of channel 0, as configured in the UI panel.

For all modes, the maximum number of samples can be set in the **Sample Count** text entry field, up to a maximum of 131,071.

Press the **Capture** button to configure the analyser and arm it. Capture will begin immediately in non-triggered modes or as soon as a trigger is received in triggered modes. The analyser must not be disconnected from the computer during the sampling procedure.

2.3 Analysis

During sampling the blue progress bar will fill up, representing the progress of the analyser. When the progress bar reached the top, capture is complete and the data will automatically start being transferred to the PC for display and analysis.

Once the blue progress bar reaches the bottom, transfer of data from the analyser to the PC is complete. At this point you may select one of the tabs in the display section to view the data, for example the timing diagram shown in figure 3.

To choose which section of the data is displayed, use the two sliders underneath the display area. The left sets the window size and the right sets the position of the window within the captured data.

You may turn off display of any or all channels using the checkboxes at the bottom of the display area. In addition you may use the **Display All** or **Display None** buttons to display all or no channels respectively.

To decode RS232, choose the **RS232 Decode** tab followed by the channel you wish to decode and its baud rate. Press the **Decode** button to commence RS232 decoding of the channel.

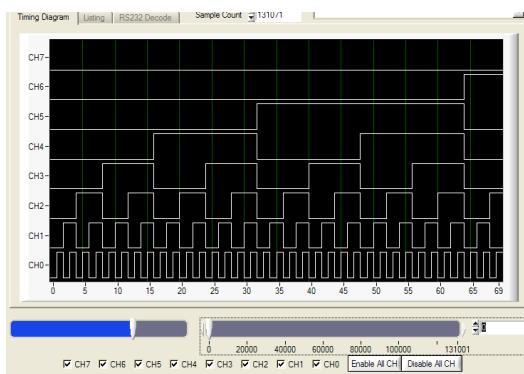


Figure 3: Analyser data display