附注:将采集到的数据导出用于生成报告

Signal Tap Analyzer 支持将采集到的数据以 CSV 的形式导出,具体做法如下:

① 修改信号的显示方式,为了将多位的信号以十进制数的形式导出,需要将多位信号的显示格式修改为 "Unsigned Decimal"或"Signed Decimal in Tow's Compliment",如图 15 所示。这里的选择有符号数还是无符号数要根据设计中信号的具体情况来确定。

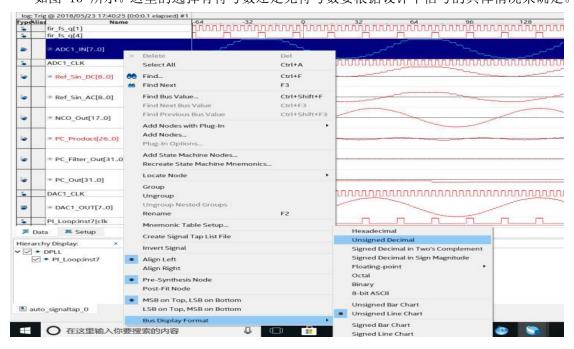


图 15

② 选择 File 菜单下的 Export...项,会弹出图 16 所示的对话框。图 16 对话框中,第一项是导出文件的文件名和路径。第二项是指定要导出的文件格式,这里应选择 csv 形式。第三项是采样时使用的采样时钟信号,这个是不可更改的。第四项采样时钟的周期,这个需要手动填入。这个周期就是采样时钟的周期,若采样时钟是 20MHz,那么这个周期就是 50ns。可认点击 0K 按钮,即可导出 csv 文件。

| Export | | × | | | | | | | |
|------------------|---|------|--|--|--|--|--|--|--|
| Specify settings | for exporting Signal Tap waveform d | ata | | | | | | | |
| File name: | ile name: stp1 | | | | | | | | |
| Export format: | Comma Separated Values - (*.csv) CLK_20MHz | | | | | | | | |
| Clock signal: | | | | | | | | | |
| Clock period: | 1 | s • | | | | | | | |
| | OK Cancel | Help | | | | | | | |

图 16

导出的数据格式

| Croups | | | | | | | | | | | | | |
|----------|----------|-------------|-------------|----------|----------|----------|------------|----------|----------|----------|----------|---------------|---------|
| | Groups: | ADC1 INI | ADC1 INI | ADC1_IN[| ADC1 INF | ADC1 INF | ADC1 INI | ADC1 INI | ADC1 INI | unsigned | decimal | | |
| ŕ | AC1 OU | DAC1 OI | DAC1 OL | DAC1_IN[| DAC1 OL | DAC1 OL | DAC1 OL | DAC1 OL | DAC1 OL | unsigned | decimal | | |
| | | | | SIN_OUT[| | | | | | | | SIN OUT | SIN OUT |
| | | | | ADD_RST | | | | | | | | | |
| Ĺ | | | | | | | | | | | | | |
| Г | ata: | | | | | | | | | | | | |
| ti | me unit: | fir fs a[4] | ADC1_IN[| ADC1_IN[| ADC1 IN[| ADC1 IN[| ADC1_IN[| ADC1_IN[| ADC1 IN | ADC1_IN[| ADC1 IN[| DAC1 OU | DAC1_OL |
| J | 0 | X | X | X = L | X | X | X | Χ | X | Χ | X | Χ | X |
| | 1 5 | 0 | 103 کے | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 输 199 | 1 |
| | 序 2 | 0 | 输 103 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 押 199 | 1 |
| | 号 3 | 0 | ∧ 87 | 0 | 1 | 0 | 1 | 0 | | 1 | 1 | | 1 |
| | 4 | 0 | 己 87 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 解 199 | 1 |
| | 5 | 0 | 调 87 | | 1 | 0 | 1 | 0 | | 1 | 1 | ∤⊞ 199 | 1 |
| L | 6 | 0 | | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | | 1 |
| | 7 | 0 | 信 73 | | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 信 199 | 1 |
| H | 8 | 0 | 号 73 | | 1 | 0 | 0 | 1 | 0 | 0 | 1 | _ | 1 |
| L | 9 | 0 | 73 | | 1 | 0 | 0 | 1 | 0 | 0 | 1 | | 1 |
| | 10 | 0 | 73 | | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 199 199 | 1 |
| H | 11 12 | 0 | 61 61 | 0 | 0 | 1 | <u>1</u> 1 | 1 | 1 | 0 | 1 | 199 | 1 |
| H | 13 | 1 | 61 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 199 | 1 |
| | 14 | 1 | 61 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 191 | 1 |
| \vdash | 15 | 1 | 54 | | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 191 | 1 |
| | 16 | 1 | 54 | | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 191 | 1 |
| | 17 | 0 | 54 | - | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 191 | 1 |
| r | 18 | 0 | 54 | | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 191 | 1 |
| ı | 19 | 0 | 48 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 191 | 1 |
| | 20 | 0 | 48 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 191 | 1 |
| | 21 | 0 | 48 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 191 | 1 |
| | 22 | 0 | 48 | | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 191 | 1 |
| | 23 | 0 | 45 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 191 | 1 |
| L | 24 | 0 | 45 | | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 191 | 1 |
| | 25 | 0 | 45 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 191 | 1 |
| | 26 27 | 0 | 45 44 | 0 | 0 | 1 | 0 | 1 | 1 1 | 0 | 1 0 | 191 191 | 1 |
| | 28 | 0 | 44 | | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 191 | 1 |
| | 29 | 0 | 44 | - | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 191 | 1 |
| | 30 | 0 | 44 | | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 191 | 1 |
| | 31 | 0 | 43 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 191 | 1 |
| | 32 | 0 | 43 | | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 191 | 1 |
| | 33 | 1 | 43 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 194 | 1 |
| | 34 | 1 | 43 | | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 194 | 1 |
| | 35 | 1 | 45 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 194 | 1 |
| | 36 | 1 | 45 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 194 | 1 |
| | 37 | 0 | 45 | | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 194 | 1 |
| L | 38 | 0 | 45 | | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 194 | 1 |
| H | 39 | 0 | 48 | | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 194 | 1 |
| H | 40 41 | 0 | 48 48 | | 0 | 1 | 1 | 0 | | 0 | 0 | 194 194 | 1 |
| \vdash | 41 | 0 | 48 | | 0 | 1 | 1 | 0 | | 0 | 0 | | 1 |
| H | 43 | 0 | 53 | | 0 | 1 | 1 | 0 | | 0 | 1 | 194 | 1 |
| H | 44 | 0 | 53 | | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 194 | 1 |
| L | 45 | 0 | 53 | 0 | 0 | 1 | 1 | 0 | | 0 | 1 | 194 | 1 |
| T | 46 | 0 | 53 | | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 194 | 1 |
| | 47 | 0 | 61 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 194 | 1 |
| | 48 | 0 | 61 | | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 194 | 1 |
| L | 49 | 0 | 61 | | 0 | 1 | 1 | 1 | | 0 | | 194 | |
| L | 50 | 0 | 61 | | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 194 | |
| L | 51 | 0 | 69 | | 1 | 0 | 0 | 0 | | 0 | | | |
| H | 52 | 0 | 69 | | 1 | 0 | 0 | 0 | | 0 | 1 | 194 | |
| H | 53 54 | 1 | 69 69 | | 1 | 0 | 0 | 0 | | 0 | 1 | 207 207 | 1 |
| H | 55 | 1 | 69 79 | | 1 | 0 | 0 | 1 | 1 | 1 | 1 1 | 207 | 1 |
| H | 56 | 1 | | | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 207 | 1 |
| H | 57 | 0 | | | 1 | 0 | 0 | 1 | | 1 | 1 | 207 | 1 |
| | 58 | 0 | 79 | | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 207 | 1 |
| H | 59 | 0 | 90 | | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 207 | 1 |
| H | 60 | 0 | 90 | | 1 | 0 | 1 | 1 | | 1 | 0 | 207 | 1 |
| H | 61 | 0 | 90 | | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 207 | 1 |
| L | 62 | 0 | 90 | | 1 | 0 | 1 | 1 | | 1 | 0 | | 1 |
| ٢ | 63 | 0 | 105 | | 1 | 1 | 0 | 1 | | 0 | 1 | | 1 |