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GS-PCLA32

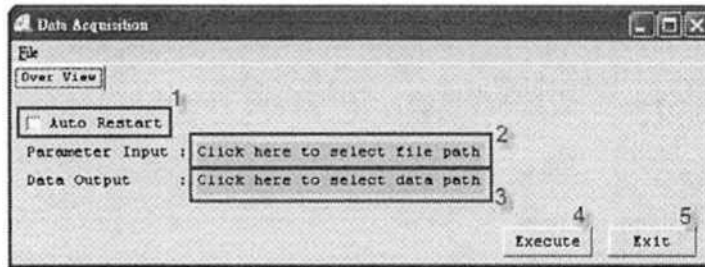## Data Logger Quick User Guide

Data Logger Quick User's Guide
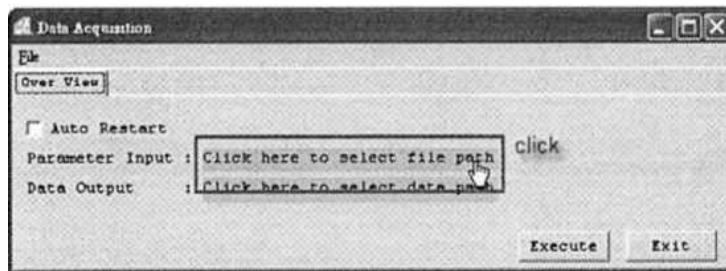
Contents

1) Program Start
Main frame: Main frame

1. Choose the program entering into monitor mode automatically or not.
2. Choose the path for parameter input.
3. Choose the path for storing data output.
4. Execute the software.
5. Exit the software.

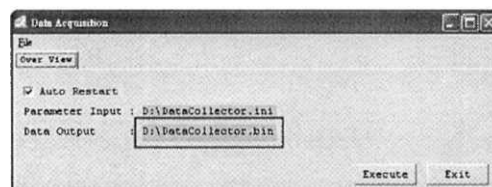## 2) Loading Parameter Inputs

Method 2.
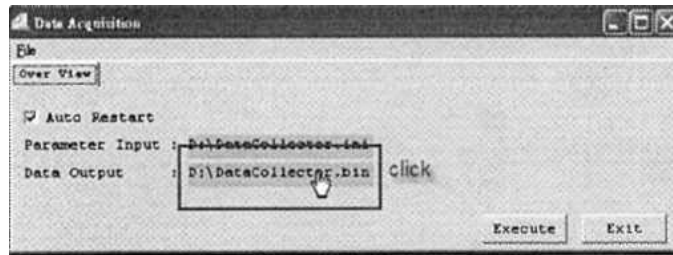Click "File" —▶ "Open", and choose the parameter input

The program will download the path of data output from the parameter file automatically.

3) Choosing Data Output Path
   Method 1. Click the frame directly to select the path for storing data output

Method 2. Click "File" —» "Save", and choose the path for storing data output.
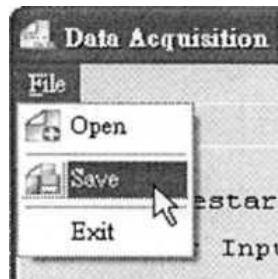
4) Program Execution
   1. After clicking "Execute", the program will enter into the monitor mode. If user clicks the "Auto Restart", the program will enter into the monitor mode once again automatically after retrieving data.

   2. After executing, the program will reside and work in the system tray.

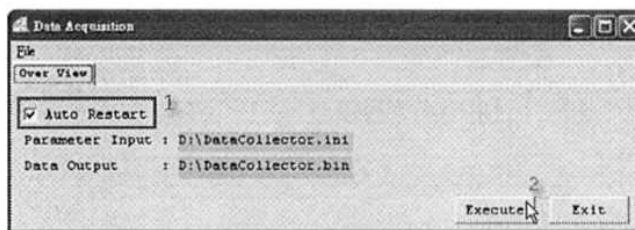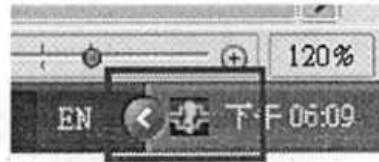3. When there is something changing within the parameter input, the program will cite the new parameter, retrieve the new data and store it in the setting file. If user doesn't click the "Auto Restart", the program will be shown with an exclamation mark and stop monitoring.

4. User could right click the mouse on the icon to open up the operation list and reenter in the monitor mode.
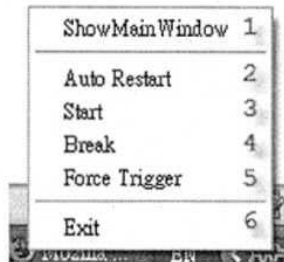
1. Show the main window.
2. Auto Restart: The program will enter in the monitor mode once again automatically after retrieving data.
3. Start: When the program retrieves data and doesn't work with the automatic monitor function, user should click this item to enter into the monitor mode.
4. Break: Force to stop retrieving data.
5. Force Trigger.
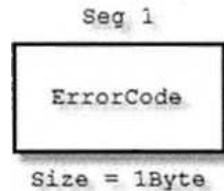6. Exit the program.

5. File format:

1 Byte	23 Bytes	4 Bytes	2 MBytes or 4MBytes		
Seg 1	Seg 2	Seg 3	Seg 4	...	
ErrorCode	DateTime	Trigger Address	Data		

Seg 1:	ErrorCode
Seg 2:	DateTime
Seg 3:	Trigger Address
Seg 4:	Data

2) Error Code

Seg 1

ErrorCode

Size = 1Byte

There is one byte ErrorCode indicator if there is any error within the file format parameter. The definition of each ErrorCode is as follows:

0x00: There is no error in the file format and it already triggered and retrieved the data correctly.

0x10: There is an error in the setting of Sample Rate. The program will change the sample rate to the default value (250MHz) to retrieve automatically.

0x20: There is an error in the setting of Storage Depth. The program will change the storage depth to the default mode automatically.

0x30: There is an error in the setting of Post Trigger. The program will change as non-post trigger automatically.

0x40: There is an error in the setting of Trigger Pattern. The program will change the trigger pattern to the default mode (all with Don't Care) to retrieve automatically.

0x50: There is an error in the Continue Trigger setting. The program will change as in the non-continue trigger mode automatically.

0x60: There is an error in the voltage setting. The program will change to use TTL level retrieving automatically.

OxFO: User sets the forced trigger

OxFF: There are more than one error in the setting

3) DateTime

There are 23 bytes for the Datetime with partition symbols, and will store the data in ASCII format. The components include year(four number code), month(two number code), date(two number code), hour (two number code in 24 hour format), minute(two number code), second(two number code) and millisecond(three number code). The user should use "/" between the year, month and date, ":" between the hour, minute and second, and "." between second and millisecond to partition.

For example: "13:30:59 pm, Jan. 1st, 2011" will be shown as "2011/01/01/13:30:59.000"

4) Trigger Address
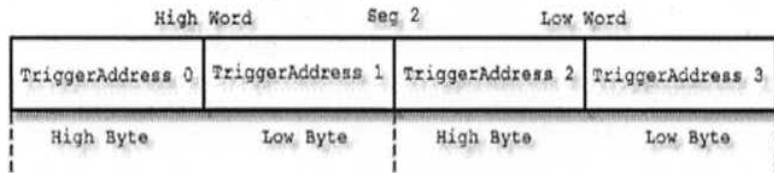
The data in the Trigger Address represents the two word trigger position in memory. The Low Word will be put behind the High Word, and the Low Byte will be put behind the High Byte.

For example: When the Trigger Address = 0x12345678
High Word: 0x1234, Low Word: 0x567
High Byte of High Word: 0x12, Low Byte of High Word: 0x34
High Byte of Low Word: 0x56, Low Byte of Low Word: 0x78

The real address of the Trigger Address sending back to bin is:

Trigger Address =
 Trigger AddressO * 0x1000000 (high byte of high word) + Trigger Addressl * 0x10000 (low byte of high word) + Trigger Address 2 * 0x100 (high byte of low word) + Trigger Address3 (low byte of low word) + 5 (The offset of the beginning address within bin)
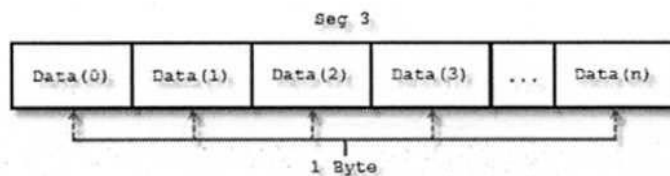
5) Data (Unit: Byte)

The data will be permuted by 4 byte(32 bits) steadily.
Under the rule of permutation, the connected data from the same channel
(T1 and T2) will be apart by 4 Bytes as DATA (a + 1) will be the next data after
DATA (a).

As each byte represents the 8 channels of data, it will follow the sequence from MSB to LSB.

In the previous figure:
b7 of the DATA (a) is channel 7, bO is channel 0, b7 of the DATA(b) is channel 15, bO is
channel 8
All data will be circulated by 32bits (4Bytes).
If the logic analyzer is 16 channels, the data of the two bytes from channel 16 to channel 31 will
be kept in location OxFF.

For example:

Address	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+a	+b	+c	+d	+e	+f	Dump
0000000000000000	00	32	30	30	39	2f	30	31	2f	30	36	2f	31	35	3a	30	.2009/01/06/15:0
0000000000000010	38	3a	31	34	2e	35	33	31	00	00	00	10	01	08	00	00	8:14.531........
0000000000000020	01	ff	ff	ff	01	ff	ff	ff	01	ff	ff	ff	00	ff	ff	ff	.ÿÿÿ.ÿÿÿ.ÿÿÿ.ÿÿÿ
0000000000000030	00	ff	ff	ff	00	ff	ff	ff	00	ff	ff	ff	00	ff	ff	ff	.ÿÿÿ.ÿÿÿ.ÿÿÿ.ÿÿÿ
0000000000000040	00	ff	ff	ff	00	ff	ff	ff	00	ff	ff	ff	00	ff	ff	ff	.ÿÿÿ.ÿÿÿ.ÿÿÿ.ÿÿÿ

Byte +0: ErrorCode, there is no error in the parameter setting.
Byte +1 ~ Byte +17: DateTime, Storing the year, month, date, hour, minute,
second and millisecond by ASCII.
Byte +18- Byte +1B: Trigger Address.
Byte +18 & Byte +19: High Word
Byte +1A & Byte +1B: Low Word
After combining the 4 bytes, user will get the result 0x00000010, and it is also the Trigger
address.
If Byte +0 is set to be the beginning address, it be required to add 0x1C (the beginning offset of
data) for the real trigger address.

Byte +1C to below: Data, each 4 byte is one set.
Byte +1C, Byte +1D, Byte +1E, Byte +1F: The data of T1 from Channel 31
to Channel 0.
Byte +20, Byte +21, Byte +22, Byte +23: The data of T2 from Channel 31 to Channel 0.

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