Contents

1. Summary

These drivers can change the setting of MEMORY HiCORDER and read from MEMORY HiCORDER. These drives are divided into some VI according to function. The driver can control the settings of 8860 MEMORY HiCORDER through TCP/IP (LAN).

2. Prerequisite condition

The following is the prerequisite condition of using the driver.

- Knows “LabVIEW”.
- LabVIEW 2014 or later.

3. Notes

1. Copyrights

This driver and its related documents are copyrighted by HIOKI E.E.CORPORATION.

2. Usage conditions

This driver cannot be bundled with commercial software or publications or otherwise sold without the permission of the copyright holder.
Furthermore, this driver cannot be modified without the permission of the copyright holder.

3. Responsibility for use

This driver is freeware. The user can use it freely, but is responsible for its use.
HIOKI E.E.CORPORATION can bear no responsibility for any consequences arising from the use of this software.
These drivers can’t deal with all control commands of MEMORY HiCORDER INTERFACE.

4. How to use driver

Searches for the VI (driver) that deals with the control command of MEMORY HiCORDER from program library, Connects the VISA session opened. Selects “Set/Query”. It is necessary to select the right parameters when performing setting.

All of the drivers have 2 common inputs and 2 common outputs as the followings.

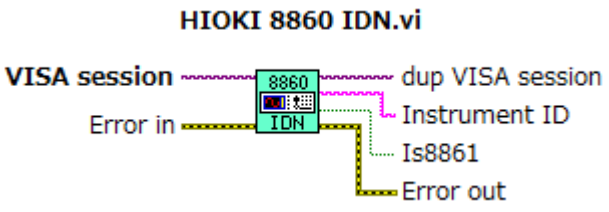
Input

VISA session	on the top-left
Error in	on the bottom-left

Output

dup VISA session	on the top-right
Error out	on the bottom-right

Example: HIOKI 8860 IDN.vi.



5. Direction for driver use

4-1. Sort of vi

The followings are about drivers in program library.

	Name	Function / Communication command
1	HIOKI 8860 IDN.vi	Queries device ID. *IDN?
2	HIOKI 8860 OPT.vi	Queries device option provision. *OPT?
3	HIOKI 8860 Reset.vi	Initializes the device. *RST
4	HIOKI 8860 OPC.vi	Sets the LSB in standard event status register (SESR) or read ASCII [1] after execution is completed. *OPC *OPC?
5	HIOKI 8860 WAI.vi	After the execution of the command is completed, subsequently performs the following command. *WAI
6	HIOKI 8860 CLS.vi	Clears the status bytes and associated queues (except for the output queue). *CLS
7	HIOKI 8860 ESE.vi	Writes or reads the standard event status enable register (SESER). *ESE *ESE?
8	HIOKI 8860 ESR.vi	Reads out and clears the contents of the standard even status register (SESR). *ESR?
9	HIOKI 8860 SRE.vi	Writes or reads the service request enable register (SRER). *SRE *SRE?
10	HIOKI 8860 STB.vi	Reads the status byte and MSS bit. *STB
11	HIOKI 8860 ESE0.vi	Writes or reads the event status enable register 0 (ESER0). :ESE0 :ESE0?
12	HIOKI 8860 ESR0.vi	Reads event status register 0 (ESR0). :ESR0?
13	HIOKI 8860 Start.vi	Performs starting. :STARt
14	HIOKI 8860 Stop.vi	Performs stopping. :STOP
15	HIOKI 8860 Abort.vi	Aborts processing. :ABORT

	Name	Function / Communication command
16	HIOKI 8860 Function	Changes or queries the function selection. :FUNCtion :FUNCtion?
17	HIOKI 8860 Conf Tdiv.vi	Sets or queries the timebase. :CONFigure:TDIV :CONFigure:TDIV?
18	HIOKI 8860 Conf Shot.vi	Sets or queries the recording length. :CONFigure:SHOT :CONFigure:SHOT?
19	HIOKI 8860 Trig Mode.vi	Sets or queries trigger mode. :TRIGger:MODE :TRIGger:MODE?
20	HIOKI 8860 Trig Pretrigger.vi	Sets or queries pre-trigger. :TRIGger:PRETrig :TRIGger:PRETrig?
21	HIOKI 8860 Trig Source.vi	Sets or queries the trigger logical operator (AND/OR). :TRIGger:SOURce :TRIGger:SOURce?
22	HIOKI 8860 Trig Kind.vi	Sets or queries the kind of trigger. :TRIGger:KIND :TRIGger:KIND?
23	HIOKI 8860 Trig Level.vi	Set or queries the trigger level of the level trigger. :TRIGger:LEVEL :TRIGger:LEVEL?
24	HIOKI 8860 Trig Slope.vi	Sets or queries the trigger direction (slope). :TRIGger:SLOPe :TRIGger:SLOPe?
25	HIOKI 8860 Trig Detecttime.vi	Queries the time point for trigger detection. :TRIGger:DETECTTime?
26	HIOKI 8860 Trig Detectdate.vi	Queries the date for trigger detection. :TRIGger:DETECTDate?
27	HIOKI 8860 Unit Range.vi	Sets or queries the measurement range of an input channel. :UNIT:RANGe :UNIT:RANGe?
28	HIOKI 8860 Unit Coupling.vi	Sets or queries input coupling for an input channel. :UNIT:COUPling :UNIT:COUPling?
29	HIOKI 8860 Unit Position.vi	Sets or queries input channel origin position. :UNIT:POSIting :UNIT:POSIting?
30	HIOKI 8860 Unit Sensor.vi	Sets or queries the type temperature sensor. :UNIT:SENSor :UNIT:SENSor?
31	HIOKI 8860 Unit Mode.vi	Sets or queries the measurement mode. :UNIT:MODE :UNIT:MODE?

	Name	Function / Communication command
32	HIOKI 8860 Disp Draw.vi	Sets or queries waveform display color. :DISPlay:DRAWing :DISPlay:DRAWing?
33	HIOKI 8860 Memo Point.vi	Sets or queries the output point in memory. :MEMory:POINt :MEMory:POINt?
34	HIOKI 8860 Memo Maxpoint.vi	Queries the number of data samples stored. :MEMory:MAXPoint?
35	HIOKI 8860 Memo Vdata.vi	Reads the physical data from the memory. :MEMory:VDATa?
36	HIOKI 8860 Memo Bdata.vi	Read the binary data (A/D) from the memory. :MEMory:BDATa?
37	HIOKI 8860 Memo Coeff.vi	Query the ratio and offset coefficients for converting stored data into physical values. :MEMory:COEFf?
38	HIOKI 8860 Analog Data.vi	Reads the physical data from the memory. :MEMory:POINt :MEMory:COEFf? :MEMory:BDATa?
39	HIOKI 8860 Memo Getreal.vi	Captures real time data. :MEMory:GETReal
38	HIOKI 8860 Memo Vreal.vi	Reads real time data. :MEMory:VREAl?

The following is about other than the drivers that are in program library.

	Name	Function
1	HIOKI 8860 Initialize.vi	Opens the VISA session, Initializes the interface and model 8860-50/8861-50 MEMORY HiCORDER.
2	HIOKI 8860 Close.vi	Closes the VISA session.
3	HIOKI 8860 Ch Num.vi	Reads the model number and number of channels from unit (module) ID.
4	Wait.vi	Sets the waiting time
5	Device Read Line.vi	Read the ASCII data from the device.
6	Device Write Line.vi	Write the ASCII data to the device.
7	Device Read U16.vi	Reads the unsigned 16-bit integer from the device.
8	HIOKI 8860 DEMO.vi	Demonstration program for model 8860-50/8861-50 MEMORY HiCORDER.

5-2. The common input and common output of drivers

All of the drivers have common inputs and outputs. The following is the explanation.

5-2-1. The common input of driver.

Name	Data type	Explanation
VISA Session		VISA session
Error in		The input of error (refer to the manual of LabVIEW. default: no error.

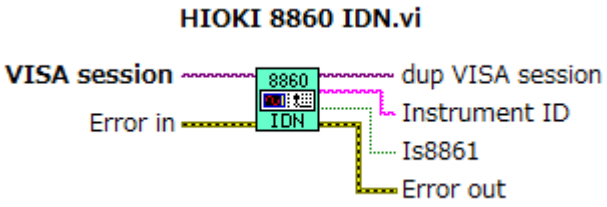
5-2-2. The common output of driver

Name	Data type	Explanation
dup VISA Session		The copy of VISA session.
Error out		The output of error (refer to the manual of LabVIEW to get details).

5-3. Details of VI

5-3-1. HIOKI 8860 IDN.vi

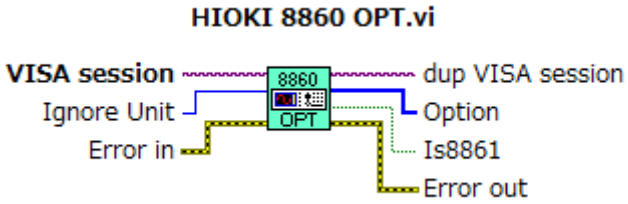
Queries device ID.



Name	Data type	Explanation
Instrument ID	abc	The results of querying the device ID. 1st field : Manufacturer's name 2nd filed : Model name 3rd filed : Serial number 4th filed : Software version
Is8861	TF	Whether the device is model 8861-50 or not. False: Model 8860-50, True: Model 8861-50

5-3-2. HIOKI 8860 OPT.vi

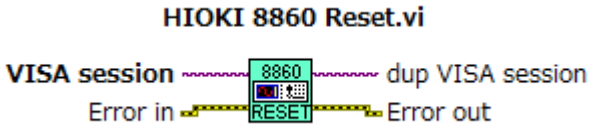
Queries device option provision.



Name	Data type	Explanation
Ignore Unit	I32	Ignore the selected unit (module). The value is the same as “Option”.
Option	I32	The result of querying the device option provision. 0: not present 1: 8936 Analog module 2: 8937 Voltage/temperature module 3: 8939 Strain module 4: 8938 FFT module 5: 8940 F/V module 6: 8947 Charge module 7: 8946 4-channel module 8: 8956 High speed module 9: 8957 High resolution module 10: 8958 Scanner module 11: 8959 DC/RMS module 12: 8960 DC strain module 13: (reserved) 14: (reserved) 15: 8961 High Voltage module
Is8861	TF	Whether the device is the model 8861-50 or not. False: 8860-50, True: 8861-50

5-3-3. HIOKI 8860 Reset.vi

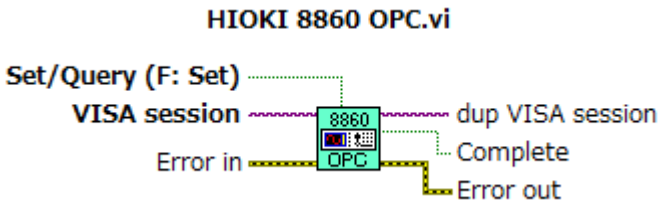
Initializes the device.



Name	Data type	Explanation
		There is no input and output except common inputs and common outputs

5-3-4. HIOKI 8860 OPC.vi

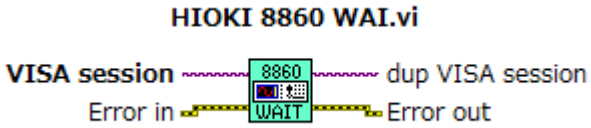
Sets the LSB in standard event status register (SESR) or read ASCII [1] after execution is completed.



Name	Data type	Explanation
Set/Query (F:Set)	TF	Selects the setting or the querying function. Valid range; False (=Set), True (=Query)
Complete	TF	The result of querying Output range: False (=All action has not been completed during execution, or, error) True (=All action has not been completed during execution)

5-3-5. HIOKI 8860 WAI.vi

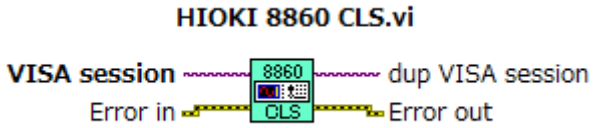
After the execution of the command is completed, subsequently performs the following command.



Name	Data type	Explanation
		There is no input and output except common inputs and common outputs

5-3-6. HIOKI 8860 CLS.vi

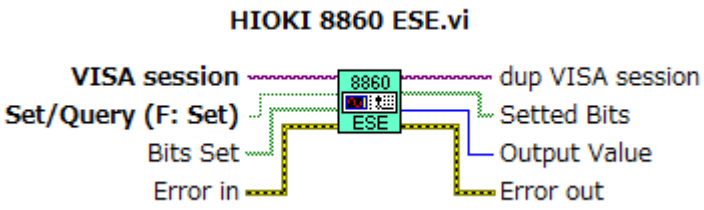
Clears the status bytes and associated queues (except for the output queue).



Name	Data type	Explanation
		There is no input and output except common inputs and common outputs

5-3-7. HIOKI 8860 ESE.vi

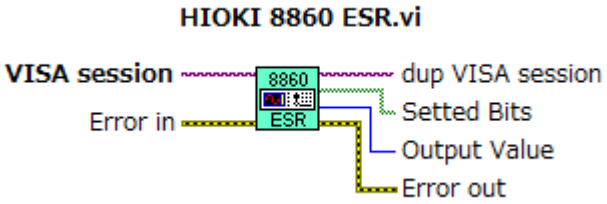
Writes or reads the standard event status enable register (SESER).



Name	Data type	Explanation
Set/Query (F:Set)	TF	Selects the setting or the querying function. Valid range; False (=Set), True (=Query)
Bits Set	TF	The array of bit for setting Valid range: False (=0), True (=1)
Set Bits	TF	The result (bit array) of querying the SESER Output range: False (=0) True (=1)
Output Value	I32	The result (value) of querying the SESER Output range: 0 to 255

5-3-8. HIOKI 8860 ESR.vi

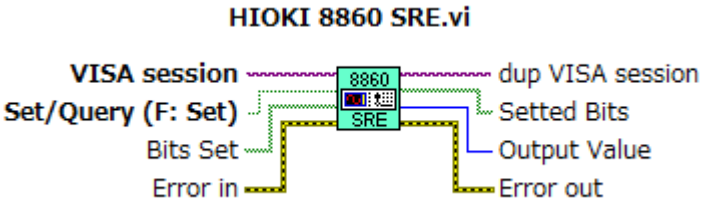
Reads out and clears the contents of the standard even status register (SESR).



Name	Data type	Explanation
Set Bits	TF	The result (bit array) of querying the SESR Output range: False (=0) True (=1)
Output Value	I32	The result (value) of querying the SESR Output range: 0 to 255

5-3-9. HIOKI 8860 SRE.vi

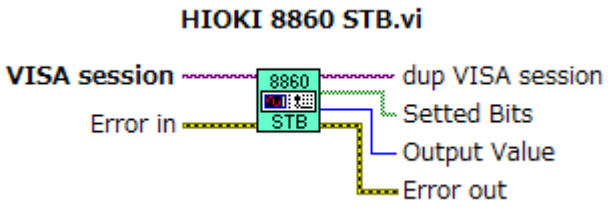
Writes or reads the service request enable register (SRER).



Name	Data type	Explanation
Set Bits	TF	The result (bit array) of querying the SESR Output range: False (=0) True (=1)
Bits Set	TF	The array of bit for setting Valid range: False(=0), True(=1)
Setted Bits	TF	The result(bit array) of querying the SRER Output range: False(=0) True(=1)
Output Value	I32	The result (value) of querying the SESR Output range: 0 to 255

5-3-10. HIOKI 8860 STB.vi

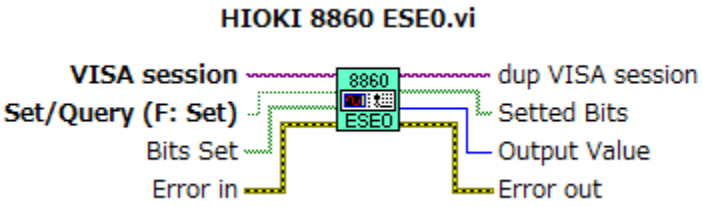
Reads the status byte and MSS bit.



Name	Data type	Explanation
Set Bits	TF	The result (bit array) of querying the status byte and MSS. Output range: False (=0) True (=1)
Output Value	I32	The result (value) of querying the status byte and MSS. Output range: 0 to 255

5-3-11. HIOKI 8860 ESE0.vi

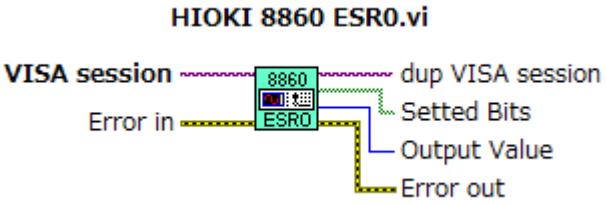
Writes or reads the event status enable register 0 (ESER0).



Name	Data type	Explanation
Set/Query (F:Set)	TF	Selects the setting or the querying function. Valid range; False (=Set), True (=Query)
Bits Set	TF	The array of bit for setting. Valid range: False (=0:default), True (=1)
Set Bits	TF	The result (bit array) of querying the ESER0 Output range: False (=0) True (=1)
Output Value	I32	The result (value) of querying the ESER0 Output range: 0 to 255

5-3-12. HIOKI 8860 ESR0.vi

Reads event status register 0 (ESR0).



Name	Data type	Explanation
Setted Bits	TF	The result (bit array) of querying the ESR0 Output range: False (=0) True (=1)
Output Value	I32	The result (value) of querying the ESR0 Output range: 0 to 255

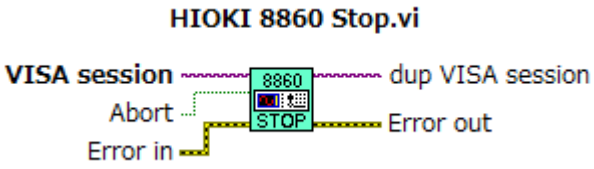
5-3-13. HIOKI 8860 Start.vi

Performs starting.

Name	Data type	Explanation
		There is no input and output except common inputs and common outputs

5-3-14. HIOKI 8860 Stop.vi

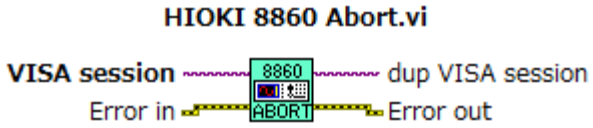
Performs stopping.



Name	Data type	Explanation
Abort	TF	Select whether abort action or not. False: default, True: execute abortion

5-3-15. HIOKI 8860 Abort.vi

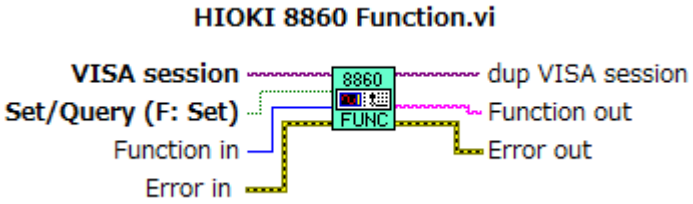
Aborts processing.



Name	Data type	Explanation
		There is no input and output except common inputs and common outputs

5-3-16. HIOKI 8860 Function.vi

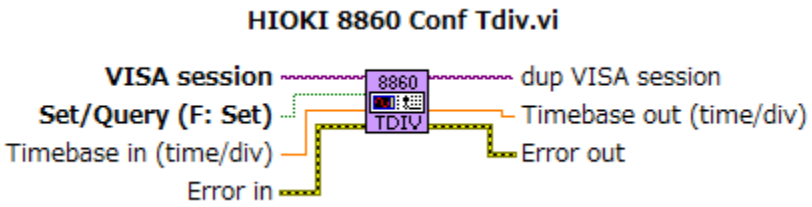
Change or queried the function selection.



Name	Data type	Explanation
Set/Query (F:Set)	TF	Selects the setting or the querying function. Valid range; False(=Set), True(=Query)
Function in		Selects the function to change Valid range: 0(=MEM:default), 1(=REC), 2(=FFT), 3(=REAL), 4(=R_M)
Function out	abc	The result of querying the function selection Output: MEM : Memory Recorder Function REC : Recorder Function FFT : FFT Function REAL : Realtime Recording Function. R_M : Fecorder & Memory Function

5-3-17. HIOKI 8860 Conf Tdiv.vi

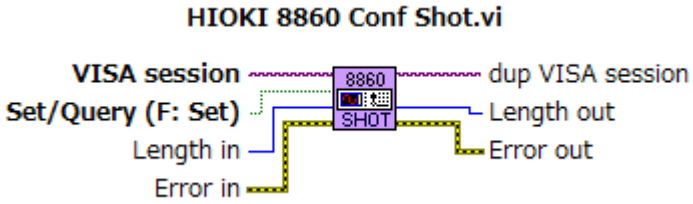
Sets or queries the timebase.



Name	Data type	Explanation
Set/Query (F:Set)	TF	Selects the setting or the querying function. Valid range; False (=Set), True (=Query)
Timebase in (time/div)	DBL	Sets the numerical value of the axis range (units: s) If an attempt is made to set the time axis range to a non-permitted value, and there is a range above that value, that range will be selected.
Timebase out (time/div)	DBL	The result of querying the time axis range (units: s)

5-3-18. HIOKI 8860 Conf Shot.vi

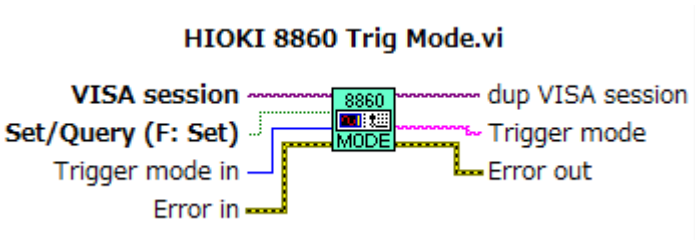
Sets or queries the recording length.



Name	Data type	Explanation
Set/Query (F:Set)	TF	Selects the setting or the querying function. Valid range; False (=Set), True (=Query)
Length in	U32	Sets the numerical value of the recording length (units: div)
Length out	U32	The result of querying the numerical value of the recording length (units: div)

5-3-19. HIOKI 8860 Trig Mode.vi

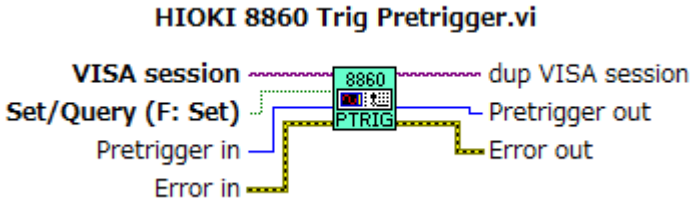
Sets or queries trigger mode.



Name	Data type	Explanation
Set/Query (F:Set)	TF	Selects the setting or the querying function Valid range; False (=Set), True (=Query)
Pretrigger in		Specifies the trigger mode Valid range: 0 (=SINGLE: default), 1 (=REPEAT)
Pretrigger out	abc	The result of querying the trigger mode

5-3-20. HIOKI 8860 Trig Pretrigger.vi

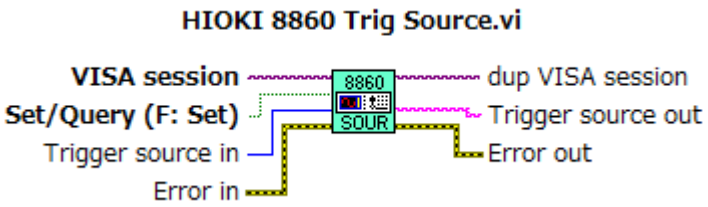
Sets or queries pre-trigger.



Name	Data type	Explanation
Set/Query (F:Set)	TF	Selects the setting or the querying function Valid range; False (=Set), True (=Query)
Pretrigger in	I32	Specifies the pre-trigger value (%s) Valid range: -100 to 100 (default: 0)
Pretrigger out	I32	The result of querying the pre-trigger (units: %)

5-3-21. HIOKI 8860 Trig Source.vi

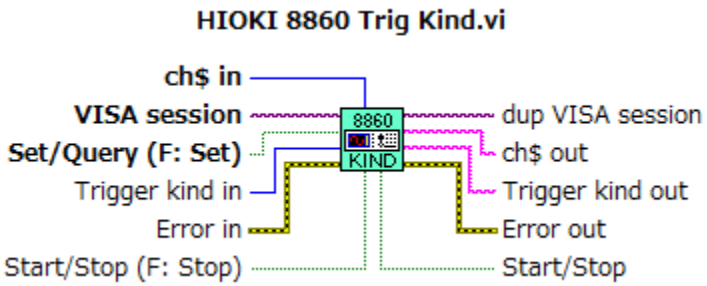
Sets or queries the trigger logical operator (AND/OR)



Name	Data type	Explanation
Set/Query (F:Set)	TF	Selects the setting or the querying function Valid range; False (=Set), True (=Query)
Trigger source in		Specifies the trigger logical operator (AND/OR) Valid range: 0 (=OR : default), 1 (=AND)
Trigger source out	abc	The result of querying the trigger logical operator

5-3-22 HIOKI 8860 Trig Kind.vi

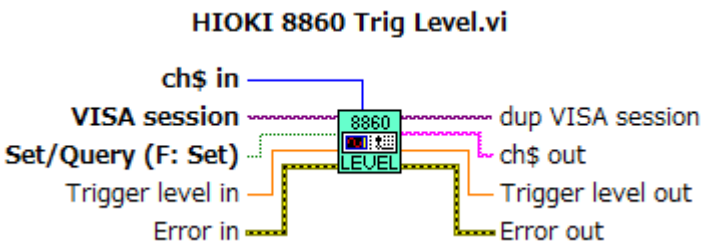
Sets or queries the kind of trigger.



Name	Data type	Explanation
Set/Query (F:Set)	TF	Selects the setting or the querying function Valid range; False (=Set: default), True (=Query)
ch$ in	U16	Specifies the channel Valid range: 0 (= CH1-1), 1 (= CH1-2), … 15 (= CH1-16) 16 (= CH2-1), 17(=CH2-2), … 31 (= CH2-16) … 127 (= CH8-16)
Trigger kind in		Specifies the kind of trigger Valid range: 0 (= OFF:default), 1 (= LEVEL), 2 (= IN), 3 (= OUT), 4 (=DROP)
ch$ out	abc	Specified channel
Trigger kind out	abc	The result of querying the kind of trigger

5-3-23 HIOKI 8860 Trig Level.vi

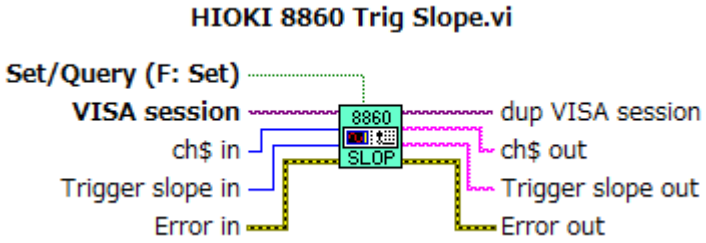
Set or queries the trigger level of the level trigger.



Name	Data type	Explanation
Set/Query (F:Set)	TF	Selects the setting or the querying function Valid range; False (=Set), True (=Query)
ch$ in	U16	Specifies the channel Valid range: 0 (= CH1-1), 1 (= CH1-2), … 15 (= CH1-16) 16 (= CH2-1), 17(=CH2-2), … 31 (= CH2-16) … 127 (= CH8-16)
Trigger level in	DBL	Sets the trigger level (units: V)
ch$ out	abc	Specified channel
Trigger level out	DBL	The result of querying the trigger level (units: V)

5-3-24 HIOKI 8860 Trig Slope.vi

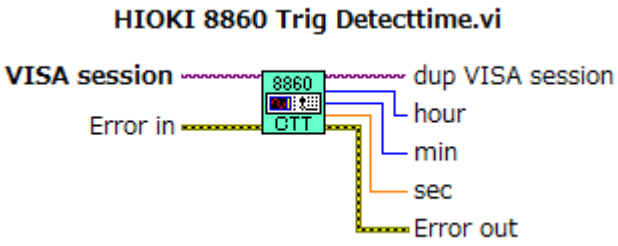
Sets or queries the trigger direction (slope).



Name	Data type	Explanation
Set/Query (F:Set)	TF	Selects the setting or the querying function Valid range; False (=Set), True (=Query)
ch$ in	U16	Specifies the channel Valid range: 0 (= CH1-1), 1 (= CH1-2), … 15 (= CH1-16) 16 (= CH2-1), 17(=CH2-2), … 31 (= CH2-16) … 127 (= CH8-16)
Trigger slope in		Specifies the kind of trigger slope Valid range: 0 (=UP: default), 1 (= DOWN) , 2 (=UP/DOWN)
ch$ out	abc	Specified channel
Trigger slope out	abc	The result of querying the kind of trigger slope

5-3-25. HIOKI 8860 Trig Detecttime.vi

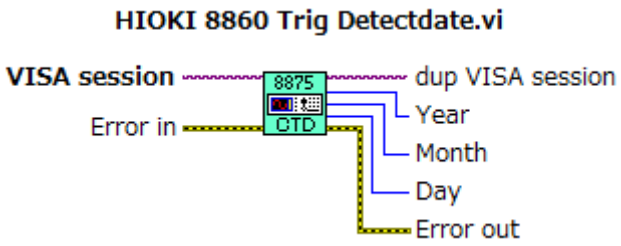
Queries the time point for trigger detection.



Name	Data type	Explanation
hour	I32	The result of querying the time(hour) for trigger detection
min	I32	The result of querying the time(minute) for trigger detection
sec	DBL	The result of querying the time(second) for trigger detection

5-3-26. HIOKI 8860 Trig Detectdate.vi

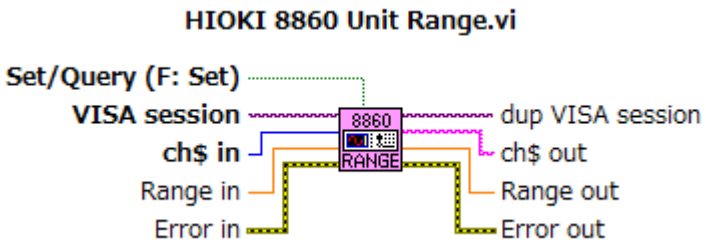
Queries the date for trigger detection.



Name	Data type	Explanation
Year	I32	The result of querying the date(year) for trigger detection
Month	I32	The result of querying the date(month) for trigger detection
Day	I32	The result of querying the date(day) for trigger detection

5-3-27. HIOKI 8860 Units: Range.vi

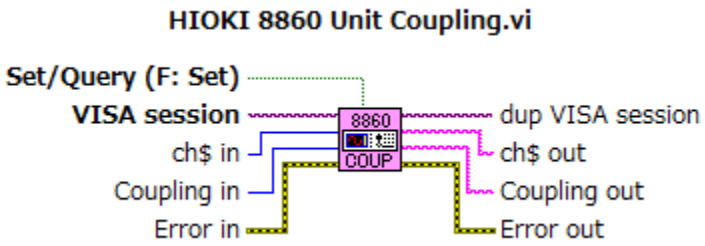
Sets or queries the measurement range of an input channel.



Name	Data type	Explanation
Set/Query (F:Set)	TF	Selects the setting or the querying function Valid range; False (=Set), True (=Query)
ch$ in	U16	Specifies the channel Valid range: 0 (= CH1-1), 1 (= CH1-2), … 15 (= CH1-16) 16 (= CH2-1), 17(=CH2-2), … 31 (= CH2-16) … 127 (= CH8-16)
Range in	DBL	Specifies the measurement range
ch$ out	abc	Specified channel
Range out	DBL	The result of querying the measurement range

5-3-28. HIOKI 8860 Units: Coupling.vi

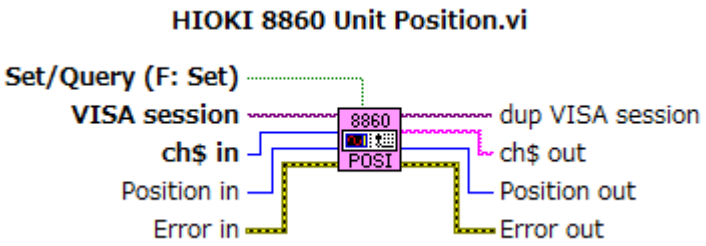
Sets or queries input coupling for an input channel.



Name	Data type	Explanation
Set/Query (F:Set)	TF	Selects the setting or the querying function Valid range; False (=Set), True (=Query)
ch$ in	U16	Specifies the channel Valid range: 0 (= CH1-1), 1 (= CH1-2), … 15 (= CH1-16) 16 (= CH2-1), 17(=CH2-2), … 31 (= CH2-16) … 127 (= CH8-16)
Coupling in		Specifies the kind of input coupling Valid range: 0 (= DC:default), 1 (= AC), 2 (= GND)
ch$ out	abc	Specified channel
Coupling out	abc	The result of querying the kind of coupling

5-3-29. HIOKI 8860 Units: Position.vi

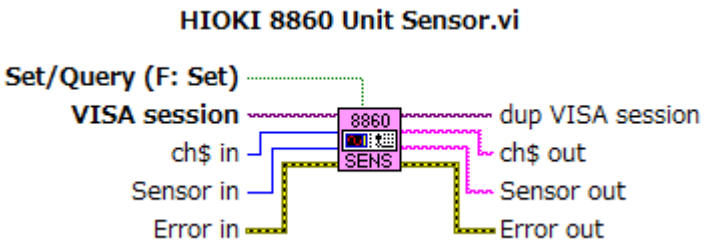
Sets or queries input channel origin position.



Name	Data type	Explanation
Set/Query (F:Set)	TF	Selects the setting or the querying function Valid range; False (=Set), True (=Query)
ch$ in	U16	Specifies the channel Valid range: 0 (= CH1-1), 1 (= CH1-2), … 15 (= CH1-16) 16 (= CH2-1), 17(=CH2-2), … 31 (= CH2-16) … 127 (= CH8-16)
Position in	I32	Specifies the input channel origin position (%)
ch$ out	abc	Specified channel
Position out	I32	The result of querying the input channel origin position (%)

5-3-30. HIOKI 8860 Units: Sensor.vi

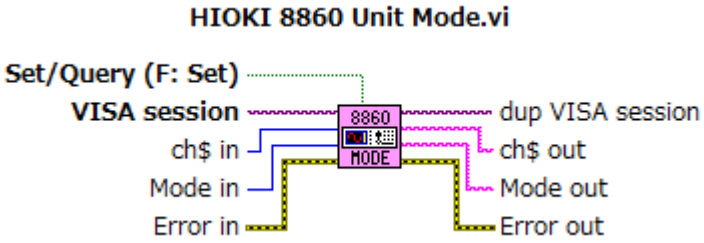
Sets or queries the type of the temperature sensor.



Name	Data type	Explanation
Set/Query (F:Set)	TF	Selects the setting or the querying function Valid range; False (=Set), True (=Query)
ch$ in	U16	Specifies the channel Valid range: 0 (= CH1-1), 1 (= CH1-2), … 15 (= CH1-16) 16 (= CH2-1), 17(=CH2-2), … 31 (= CH2-16) … 127 (= CH8-16)
Sensor in		Specifies the type of sensor Valid range: 0 (= K:default), 1 (= J), 2 (= E), 3 (= T), 4 (= N), 5 (= R) 6 (= S), 7 (= B), 8 (= W)
ch$ out	abc	Specified channel
Sensor out	abc	The result of querying the type of sensor

5-3-31. HIOKI 8860 Unit Mode.vi

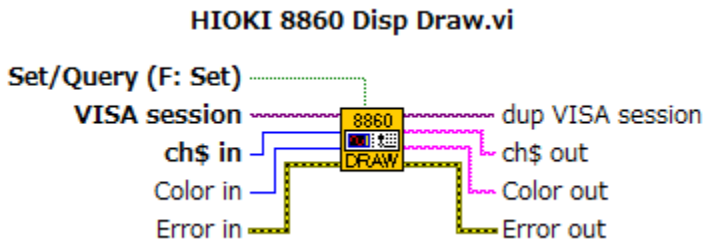
Sets or queries measurement mode of the unit (module).



Name	Data type	Explanation
Set/Query (F:Set)	TF	Selects the setting or the querying function Valid range; False (=Set), True (=Query)
ch$ in	U16	Specifies the channel Valid range: 0 (= CH1-1), 1 (= CH1-2), … 15 (= CH1-16) 16 (= CH2-1), 17(=CH2-2), … 31 (= CH2-16) … 127 (= CH8-16)
Mode in		Specifies the waveform display color Valid range: 0 (= VOLT), 1 (= TEMP), 2 (= FREQ), 3 (= RPM), 4 (= POWER), 5 (= COUNT), 6 (=DUTY), 7 (=CURRENT) 8 (= CHARGE), 9 (= PREAMP), 10 (= DC), 11 (=RMS) 12 (= STRAIN)
ch$ out	abc	Specified channel
Mode out	abc	The result of querying the kind of mode

5-3-32. HIOKI 8860 Disp Draw.vi

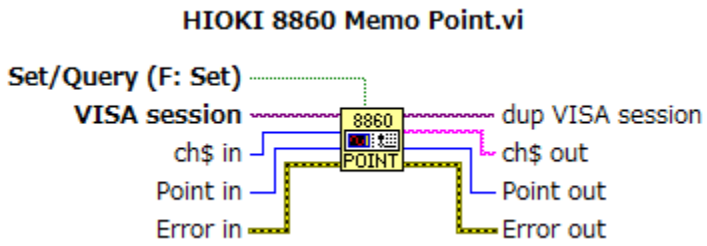
Sets or queries waveform display color.



Name	Data type	Explanation
ch$ in	U16	Specifies the channel Valid range: 0 (= CH1-1), 1 (= CH1-2), … 15 (= CH1-16) 16 (= CH2-1), 17(=CH2-2), … 31 (= CH2-16) … 127 (= CH8-16)
Set/Query (F:Set)	TF	Selects the setting or the querying function Valid range; False (=Set), True (=Query)
Color in		Specifies the waveform display color Valid range: 0 (= OFF:default), 1 (= C1), 2 (= C2)… 36(= C36)
ch$ out	abc	Specified channel
Color out	abc	The result of querying the waveform display color

5-3-33. HIOKI 8860 Memo Point.vi

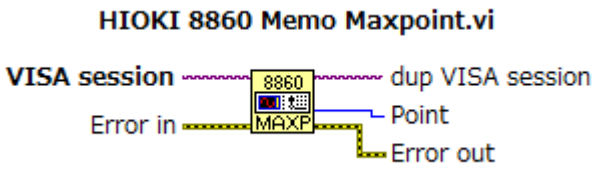
Sets the output point in memory.



Name	Data type	Explanation
Set/Query (F:Set)	TF	Selects the setting or the querying function Valid range; False (=Set), True (=Query)
ch$ in	U16	Specifies the channel Valid range: 0 (= CH1-1), 1 (= CH1-2), … 15 (= CH1-16) 16 (= CH2-1), 17(=CH2-2), … 31 (= CH2-16) … 127 (= CH8-16)
Point in	U32	Specifies the number of points in memory for output. (can be set only to a value less than that returned by the HIOKI 8860 Memo Maxpoint.vi)
ch$	abc	Specified channel
Point	U32	The result of querying the point in memory for output.

5-3-34. HIOKI 8860 Memo Maxpoint.vi

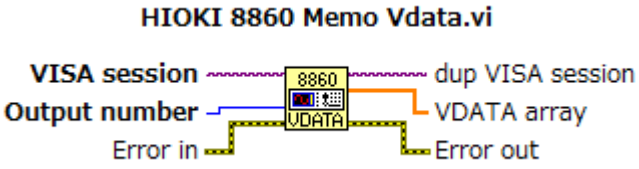
Queries the number of data samples stored.



Name	Data type	Explanation
Point	U32	The result of querying the number of data samples stored

5-3-35. HIOKI 8860 Memo Vdata.vi

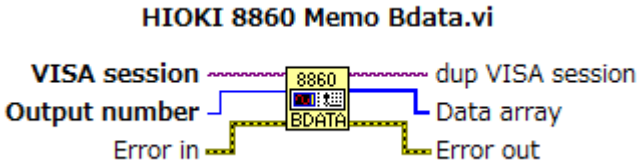
Reads the stored data from memory as a physical value.



Name	Data type	Explanation
Output number	U32	The number of data to output
VDATA array	DBL	The output of stored data (Refer to MEMORY HiCORDER manual)

5-3-36. HIOKI 8860 Memo Bdata.vi

Read the binary data (A/D) from the memory.

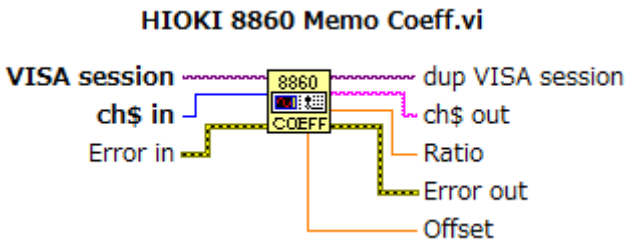


Name	Data type	Explanation
Output number	U32	The number of data to output
DATA array	U16	The output of stored data (Refer to MEMORY HiCORDER manual)

The equation used to convert the data into physical values is:
(Physical value) = ratio * (Data) + offset
Refer to 5-3-37 about the ratio and offset.

5-3-37. HIOKI 8860 Memo Coeff.vi

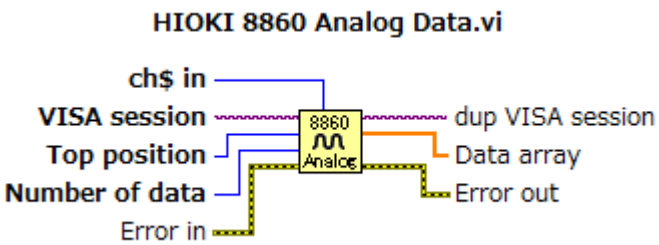
Query the ratio and offset coefficients for converting stored data into physical values



Name	Data type	Explanation
ch$ in	U16	Specifies the channel Valid range: 0 (= CH1-1), 1 (= CH1-2), … 15 (= CH1-16) 16 (= CH2-1), 17(=CH2-2), … 31 (= CH2-16) … 127 (= CH8-16)
ch$ out	abc	Specified channel
Ratio	DBL	Ratio
Offset	DBL	Offset

5-3-38. HIOKI 8860 Analog Data.vi

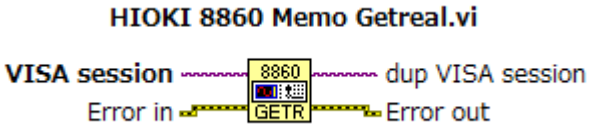
Reads the stored data from memory as a physical value.



Name	Data type	Explanation
ch$ in	U16	Specifies the channel Valid range: 0 (= CH1-1), 1 (= CH1-2), … 15 (= CH1-16) 16 (= CH2-1), 17(=CH2-2), … 31 (= CH2-16) … 127 (= CH8-16)
Top position	U32	Specifies the number of points in memory for output. (can be set only to a value less than that returned by the HIOKI 8860 Memo Maxpoint.vi)
Number of data	U32	The number of data to output
Data array	DBL	The output of stored data (Refer to MEMORY HiCORDER manual)

5-3-39. HIOKI 8860 Memo Getreal.vi

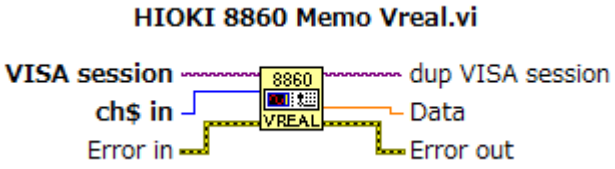
Captures real time data.



Name	Data type	Explanation
		There is no input and output except common inputs and common outputs

5-3-40. HIOKI 8860 Memo Vreal.vi

Reads real time data.

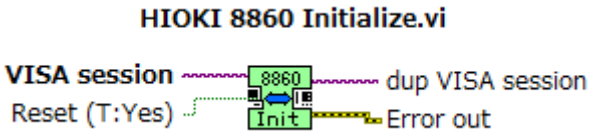


Name	Data type	Explanation
ch$ set	U16	Specifies the channel Valid range: 0 (= CH1-1), 1 (= CH1-2), … 15 (= CH1-16) 16 (= CH2-1), 17(=CH2-2), … 31 (= CH2-16) … 127 (= CH8-16)
Data	DBL	The output of real time data When the [Captures real time data.] command is not executed before this command, the returned value is not fixed.

5-4. The VI (except program library)

5-4-1. HIOKI 8860 Initialize.vi

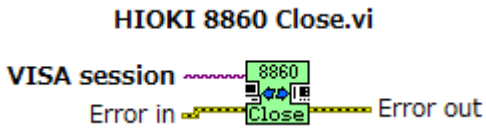
Opens the VISA session, initializes the interface or the MEMORY HiCORDER.



Name	Data type	Explanation
VISA session	I/O	Specifies the resource name of device:. The form: TCPIP[number]:ip address:port number:SOCKET
Reset	TF	Resets the device. Valid range: False, True (default).
dup VISA session	I/O	The parameter is the same as the ones of the VI which is in the program library.
Error out		The parameter is the same as the ones of the VI which is in the program library.

5-4-2. HIOKI 8860 Close.vi

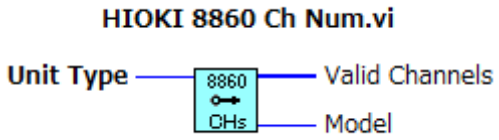
Closes the VISA session.



Name	Explanation
dup VISA session error in error out	The inputs and output are the same as the ones of the VI which is in the program library.

5-4-3. HIOKI 8860 Ch Num.vi

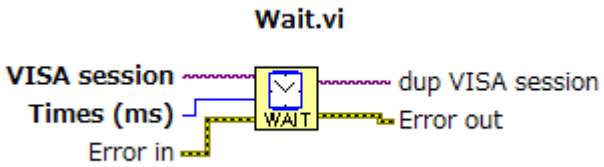
Reads the model number and number of channels from unit (module) ID.



Name	Data type	Explanation
Unit Type	U32	Unit (module) ID 0: not present 1: 8936 Analog module 2: 8937 Voltage/temperature module 3: 8939 Strain module 4: 8938 FFT module 5: 8940 F/V module 6: 8947 Charge module 7: 8946 4-channel module 8: 8956 High speed module 9: 8957 High resolution module 10: 8958 Scanner module 11: 8959 DC/RMS module 12: 8960 DC strain module 13: (reserved) 14: (reserved) 15: 8961 High Voltage module
Vaid Channels	U32	Valid channels. 0: invalid (default) others (= valid)
Model	U32	Model number of the unit (module)

5-4-4. Wait.vi

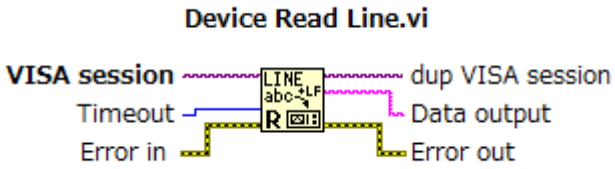
Sets the waiting time.



Name	Data type	Explanation
Times (ms)	U16	Specifies the waiting time (units: ms)

5-4-5. Device Read Line.vi

Read the ASCII data from the device.

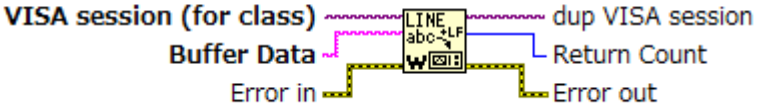


Name	Data type	Explanation
Timeout	U32	Receiving time out (ms) (default: 50000)
Data output	abc	Received data

5-4-6. Write the ASCII data to the device

Write the ASCII data to the device.

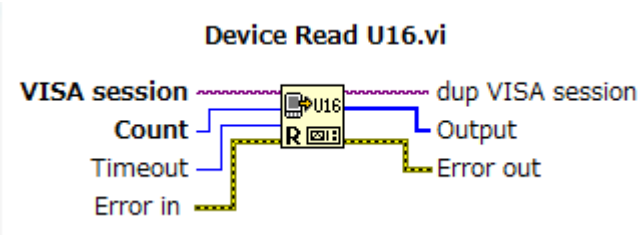
Device Write Line.vi



Name	Data type	Explanation
Buffer Data	abc	Data to be sent
Return Count	U32	Number of bytes to be sent

5-4-7. Device Read Line.vi

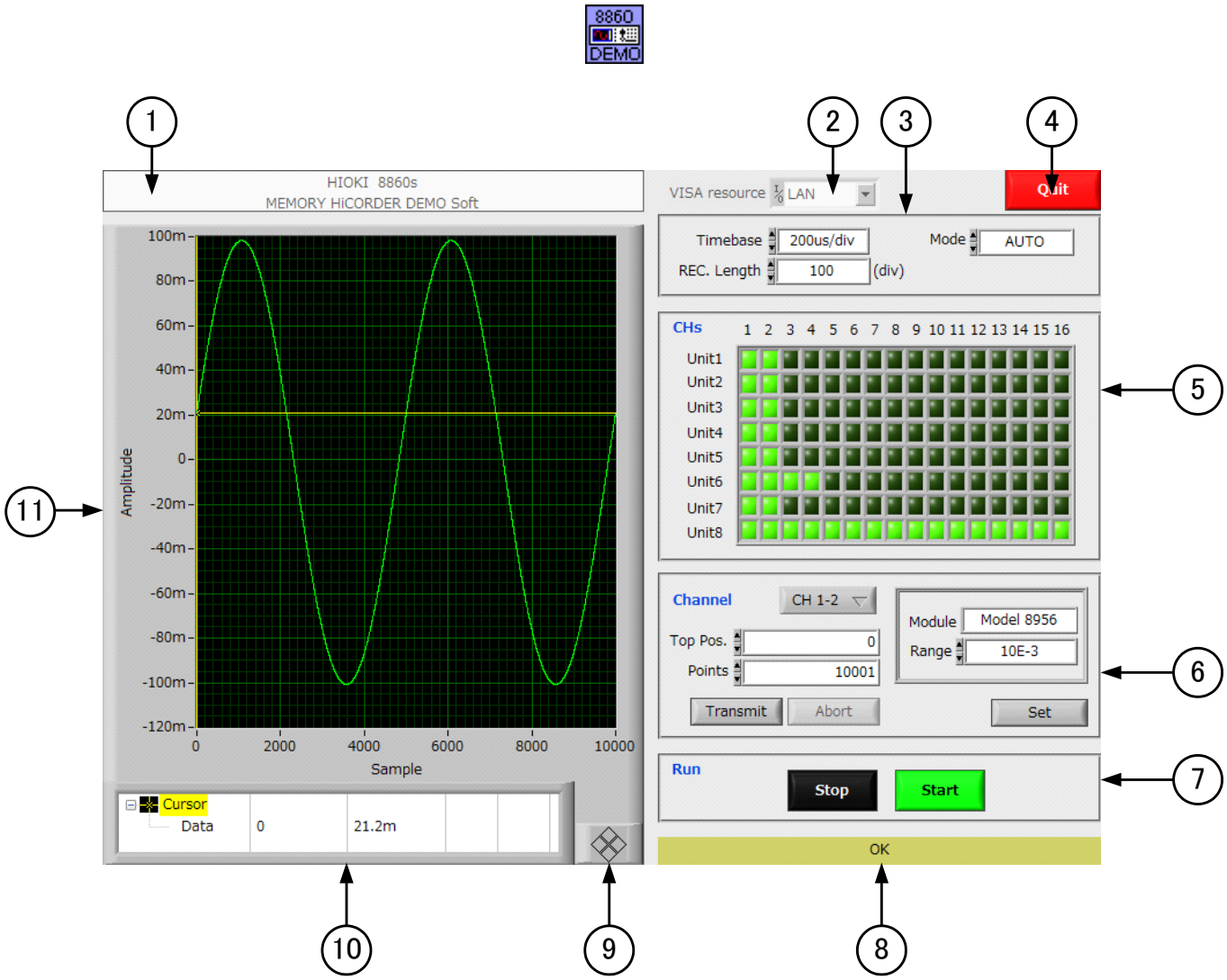
Reads the unsigned 16-bit integer from the device.



Name	Data type	Explanation
Count	U32	Number of request data count
Timeout	U32	Receiving time out (ms) (default: 50000)
Data output	U16	Received data arraay

5-4-8. HIOKI 8860 DEMO.vi

This is a demonstration program for model 8860-50/8861-50 MEMORY HiCORDER.



No	Function
1	Title.
2	Selects the TCPIP(LAN) interface
3	Timebase : Shows and sets the time axis ranges. REC Length : Shows and sets recording length. Mode : Shows and sets the trigger mode.
4	Exits this program
5	Shows the available channels of the device.
6	Sets and queries items for the channel. Channel : Specified the channel. Module : Shows the type of unit. Range : Shows and specifies measurement range. Top Pos. : Specifies the data output position. Points : Specifies the number of the waveform data. Set : Confirm and send the setting of the measurement range. Transmit : Execute transmitting data. Abort : Abort transmitting data.
7	Start : Performs starting. Stop : Performs stopping.
8	Shows the performing condition of this program.
9	Control the cursor. (standard function of LabVIEW)
10	Measurement value (standard function of LabVIEW)
11	Waveform

Note:

- Closes the other applications before running HIOKI 8860 DEMO.vi.
- The maximum transmitting points of data is set to 10001.
- The minimum transmitting points of data is 1.
- All the button are invalid except for Abort button, when the No8 shows “Transmitting”.
- All the button are invalid except for Stop button and Quit button, when the No8shows “Storing”.
- It can be aborted if the “Ctrl” and the “.” keys are pressed at the same time.
- It is necessary to close LabVIEW if the HIOKI 8860 DEMO.vi is aborted or the VISA of LabVIEW is in error, before running the HIOKI 8860 DEMO.vi again.