

## 26.6 SRAM Data Access APIs

Function	Reading SRAM backup data
<p data-bbox="111 247 1136 305">Reads the following data stored in the SRAM of a GP Series node, and saves the data into a file on the PC. Filing data are saved in binary format, and other types of data are saved in CSV format.</p> <pre data-bbox="111 336 982 394">INT WINAPI EasyBackupDataRead(LPCSTR sSaveFileName,LPCSTR sNodeName,INT iBackupDataType,INT iSaveMode);</pre>	

<p><b>Argument</b></p> <p>sSaveFileName: (In) File path of the file to save read data. (String pointer)</p> <p>sNodeName: (In) Name of read data source node (String pointer)                  Windows PC nodes cannot be specified.</p> <p>iSaveMode: (In) Saving mode                  0: New (If a file with the same name already exists, 'Pro-Server EX' deletes the file, and overwrites it.)                  1: Add (The read data is added to the end of an existing file. If there is no file to save the data, 'Pro-Server EX' creates a new file.)                  Others: Reserve</p> <p>iBackupDataType: (In) Type of data to be read</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Value</th> <th style="width: 35%;">Data source node in GP Series</th> <th style="width: 50%;">Data source node in GP3000 Series</th> </tr> </thead> <tbody> <tr> <td>0x0001</td> <td>Filing data</td> <td>Filing data</td> </tr> <tr> <td>0x0002</td> <td>Logging data</td> <td>Sampling data of sampling group No. 1</td> </tr> <tr> <td>0x0003</td> <td>Line graph data</td> <td rowspan="2">Data of all sampling groups other than sampling group No. 1</td> </tr> <tr> <td>0x0004</td> <td>Sampling data</td> </tr> <tr> <td>0x0005</td> <td>Alarm block 1</td> <td>Alarm block 1</td> </tr> <tr> <td>0x0006</td> <td>Alarm history or Alarm block 2</td> <td>Alarm block 2</td> </tr> <tr> <td>0x0007</td> <td>Alarm log or Alarm block 3</td> <td>Alarm block 3</td> </tr> <tr> <td>0x0008</td> <td>Alarm block 4</td> <td>Alarm block 4</td> </tr> <tr> <td>0x0009</td> <td>Alarm block 5</td> <td>Alarm block 5</td> </tr> <tr> <td>0x000A</td> <td>Alarm block 6</td> <td>Alarm block 6</td> </tr> <tr> <td>0x000B</td> <td>Alarm block 7</td> <td>Alarm block 7</td> </tr> <tr> <td>0x000C</td> <td>Alarm block 8</td> <td>Alarm block 8</td> </tr> <tr> <td>Others</td> <td>(Reserve)</td> <td>(Reserve)</td> </tr> </tbody> </table> <p>When the data source node is in the GP3000 Series and the data type is Alarm block 1 to 8, one alarm block stores up to three types of data (active data, history data and log data) depending on the settings of 'GP-Pro EX'. However, this API checks if the alarm block contains valid data or not according to the following order of precedence, and reads valid data if any.</p> <p>(1) Alarm history                  (2) Alarm log                  (3) Alarm active</p> <p>If there is no valid data, an error occurs.</p>	Value	Data source node in GP Series	Data source node in GP3000 Series	0x0001	Filing data	Filing data	0x0002	Logging data	Sampling data of sampling group No. 1	0x0003	Line graph data	Data of all sampling groups other than sampling group No. 1	0x0004	Sampling data	0x0005	Alarm block 1	Alarm block 1	0x0006	Alarm history or Alarm block 2	Alarm block 2	0x0007	Alarm log or Alarm block 3	Alarm block 3	0x0008	Alarm block 4	Alarm block 4	0x0009	Alarm block 5	Alarm block 5	0x000A	Alarm block 6	Alarm block 6	0x000B	Alarm block 7	Alarm block 7	0x000C	Alarm block 8	Alarm block 8	Others	(Reserve)	(Reserve)	<p><b>Return value</b></p> <p>Normal end: 0                  Abnormal end: Error code</p>
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Function	Reading extended SRAM backup data
<p>Reads the following data stored in the SRAM of a GP Series node, and saves the data into a file on the PC. Filing data are saved in binary format, and other types of data are saved in CSV format. Unlike EasyBackupDataRead(), this API enables access to extended data for the GP3000 Series.</p> <pre data-bbox="111 343 1256 401">INT WINAPI EasyBackupDataReadEx(LPCSTR sSaveFileName, LPCSTR sNodeName, INT iBackupDataType, INT iSaveMode, INT iNumber = 0 , INT iStringTable = 0x0000);</pre>	

<p><b>Argument</b></p> <p>sSaveFileName: (In) File path of the file to save read data. (String pointer)  sNodeName: (In) Name of read data source node (String pointer)  Windows PC nodes cannot be specified.</p> <p>iSaveMode: (In) Saving mode  0: New (If a file with the same name already exists, 'Pro-Server EX' deletes the file, and overwrites it.)  1: Add (The read data is added to the end of an existing file. If there is no file to save the data, 'Pro-Server EX' creates a new file.)  Others: Reserve</p> <p>iBackupDataType: (In) Type of data to be read</p>	<p><b>Return value</b></p> <p>Normal end: 0  Abnormal end: Error code</p>																																																	
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iNumber: (In) This argument is valid when sSaveFileName specifies a file of the GP3000 Series.  
 For a file of the GP Series, this argument is ignored.  
 In addition, the meaning of this argument varies depending on the value of iBackupDataType.

Value of iBackupDataType	Description										
0x0005 to 0x000C	Three types of alarm data (active, history and log) are available. Specify a target alarm type.										
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	1	Reads alarm active data.									
2	Reads alarm history data.										
3	Reads alarm log data.										
If the target data type does not exist in the alarm block specified with iBackupDataType, an error occurs.											
0x8002	Group number of sampling group to be read Any value from 1 to 64										
Others	(Reserve)										

iStringTable: (In) Reserve  
 Always specify "0".

Function	Writing SRAM backup data	
Writes specified filing data in binary format into the SRAM of a GP Series node.		
<pre>INT WINAPI EasyBackupDataWrite(LPCSTR sSourceFileName,LPCSTR sNodeName,INT iBackupDataType);</pre>		
<p><b>Argument</b></p> <p>sSourceFileName: (In) File path of binary-formatted filing data to be written (String pointer)</p> <p>sNodeName: (In) Name of entry node to write data (String pointer) Windows PC nodes or GP3000 Series nodes cannot be specified.</p> <p>BackupDataType: (In) Fixed to "1". ("1" indicates filing data.)</p>	<p><b>Return value</b></p> <p>Normal end: 0</p> <p>Abnormal end: Error code</p>	
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