

4.4.3 Analog Input Data Logger Command Set

Command Syntax	Command Name	Description	I/O Module
@AACCSDMTT	Set Memory Configuration	Set the channel storage status, standalone mode, data logger mode, storage type and sampling interval for the specified analog input data logger.	4018M
@AAD	Read Memory Configuration	Return the configuration parameters for the specified analog input data logger.	4018M
@AASO	Set Memory Operation Mode	Start/stop the recording function of the memory module.	4018M
@AAT	Read Memory Operation Mode	Read the recording status of the memory module.	4018M
@AAL	Event Record Count	Read the number of stored event records in the memory module.	4018M
@AAN	Standard Record Count	Read the number of stored standard records in the memory module.	4018M
@AARNNN	Read Record Content	Read the contents of the specified record.	4018M
@AAACSDHHHTEIII	Set Alarm Limit	Set the high/low alarm settings for the specified channel.	4018M
@AABC	Read Alarm Limit	Read the high/low alarm settings for the specified channel.	4018M

@AACCCSDMTTTT

- Name** Set Memory Configuration
- Description** Sets the channel storage status, standalone mode, data logger mode storage type and sampling interval for the specified analog input data logger.
- Syntax** @AACCCSDTTTT(cr)
@ is a delimiter character.
AA (range 00-FF) represents the 2-character hexadecimal address of an analog input data logger.
C identifies the Set Memory Configuration command.
CC (range 00-FF) represents the data storage status of each channel. The ADAM-4018M has 8 channels, bit 0 representing channel 0, and bit 7 representing channel 7. A mask bit value of '1' enables data storage in the specified channel, while a mask bit value of '0' disables data storage.

Channel 7

Channel 0

Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
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- S represents the standalone mode. In order for the ADAM-4018M to operate in the field, you must power on the memory module by setting this value to '1.' Otherwise, the data will not be recorded.
- D represents the data logging mode. '0' enables Standard Mode, where all eight channels record the normal data according to the sampling interval. '1' enables Event Mode, where all eight channels record the data if its value is over the High Alarm limit or under the Low Alarm limit. '2' enables Mixed Mode, where channels 0 - 3 act as the standard logger and the channels 4 - 7 act as the event logger.
- M represents the storage type. "0" represents writing to the end of memory. "1" represents circular memory mode.
- TTTT (range 2-65535) represents the sampling interval in seconds.
- (cr) is the terminating character, carriage return (0Dh)

@AACCCSDMTTTT

Response !AA(cr) if the configuration is successful.
 ?AA(cr) if the configuration fails.
 ! and ? are delimiter characters.
 AA (range 00-FF) represents the 2-character hexadecimal
 address of an analog input module.

Example command: @0DCFF111012C(cr)
 response: !0D(cr)

The ADAM-4018M module at address 0D is configured as
such:
All eight data storage channels enabled
Standalone mode enabled
Event logger selected
Circular memory mode
Sampling interval 300 seconds
The response indicates the command is successful.

@AAD

Name	Read Memory Configuration
Description	The command requests the configuration data from the analog input data logger at address AA.
Syntax	<p>@AAD (cr)</p> <p>@ is a delimiter character.</p> <p>AA (range 00-FF) represents the 2-character hexadecimal address of an analog input data logger.</p> <p>D identifies the Read Memory Configuration command.</p> <p>(cr) is the terminating character, carriage return (0Dh)</p>
Response	<p>!AACCSDTTTT(cr) if the command is valid.</p> <p>! is a delimiter character indicating a valid command was received.</p> <p>AA (range 00-FF) represents the 2-character hexadecimal address of an analog input data logger.</p> <p>CC (range 00-FF) represents the data storage status of each channel. The ADAM-4018M has 8 channels, bit 0 representing channel 0, and bit 7 representing channel 7. A mask bit value of '1' enables data storage in the specified channel, while a mask bit value of '0' disables data storage.</p> <p>S represents the standalone mode. In order for the ADAM-4018M to operate in the field, you must power on the memory module by setting this value to '1.' Otherwise, the data will not be recorded.</p> <p>D represents the data logging mode. '0' enables Standard Mode, where all eight channels record the normal data according to the sampling interval. '1' enables Event Mode, where all eight channels record the data if its value is over the High Alarm limit or under the Low Alarm limit. '2' enables Mixed Mode, where channels 0 - 3 act as the standard logger and the channels 4 - 7 act as the event logger.</p> <p>TTTT (range 2-65535) represents the sampling interval in seconds.</p> <p>(cr) is the terminating character, carriage return (0Dh)</p>

@AASO

Name	Set Memory Operation Mode
Description	Sets the operation mode of the analog input data logger at address AA to Start or Stop.
Syntax	<p>@AASO(cr)</p> <p>@ is a delimiter character.</p> <p>AA (range 00-FF) represents the 2-character hexadecimal address of an analog input data logger.</p> <p>S identifies the Set Memory Operation Mode command.</p> <p>O represents the operation mode: '1' enables the recording of data. '0' disables the recording of data.</p> <p>(cr) is the terminating character, carriage return (0Dh).</p>
Response	<p>!AA(cr) if the command is valid.</p> <p>?AA(cr) if an invalid parameter was entered. There is no response if the module detects a syntax error or communication error or if the specified address does not exist.</p> <p>! is a delimiter character indicating a valid command was received.</p> <p>? is a delimiter character indicating the command was invalid.</p> <p>AA (range 00-FF) represents the 2-character hexadecimal address of an analog input data logger.</p> <p>(cr) is the terminating character, carriage return (0Dh).</p>
Example	<p>command: @03S1(cr)</p> <p>response: !03(cr)</p> <p>The command enables the analog input data logger at address 03 to record data.</p> <p>The response indicates that the command was received.</p>

@AAT

Name	Read Memory Operation Mode
Description	Request the memory operation status of the analog input data logger at address AA.
Syntax	<p>@AAT (cr)</p> <p>@ is a delimiter character.</p> <p>AA (range 00-FF) represents the 2-character hexadecimal address of an analog input data logger.</p> <p>T identifies the Read Memory Operation Mode command.</p> <p>(cr) is the terminating character, carriage return (0Dh).</p>
Response	<p>!AAO(cr) if the command is valid.</p> <p>! is a delimiter character indicating a valid command was received.</p> <p>AA (range 00-FF) represents the 2-character hexadecimal address of an analog input module.</p> <p>O represents the operation mode: '1' enables the recording of data. '0' disables the recording of data.</p> <p>(cr) is the terminating character, carriage return (0Dh).</p>
Example	<p>command: @F3T(cr)</p> <p>response: !F31(cr)</p> <p>The command requests the memory operation status of the analog input data logger at address F3.</p> <p>The response indicates that data recording is enabled.</p>

@AAL

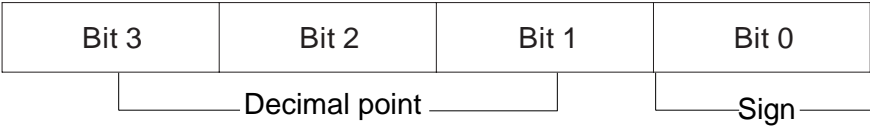
Name	Event Record Count
Description	Request the number of event records stored in the analog input data logger at address AA.
Syntax	<p>@AAL (cr)</p> <p>@ is a delimiter character.</p> <p>AA (range 00-FF) represents the 2-character hexadecimal address of an analog input data logger.</p> <p>L identifies the Event Record Count command.</p> <p>(cr) is the terminating character, carriage return (0Dh).</p>
Response	<p>!AAHHHH(cr) if the command is valid.</p> <p>! is a delimiter character indicating a valid command was received.</p> <p>AA (range 00-FF) represents the 2-character hexadecimal address of an analog input module.</p> <p>HHHH represents the 4-character hexadecimal number of event records stored in the analog input data logger at address AA.</p> <p>(cr) is the terminating character, carriage return (0Dh).</p>
Example	<p>command: @F3L(cr)</p> <p>response: !F30096(cr)</p> <p>The command requests the number of event records stored in the analog input data logger at address F3.</p> <p>The module currently has 150 event records.</p>

@AAN

Name	Standard Record Count
Description	Request the number of standard records stored in the analog input data logger at address AA.
Syntax	<p>@AAN(cr)</p> <p>@ is a delimiter character</p> <p>AA (range 00-FF) represents the 2-character hexadecimal address of an analog input data logger.</p> <p>N identifies the Standard Record Count command.</p> <p>(cr) is the terminating character, carriage return (0Dh).</p>
Response	<p>!AAHHHH(cr) if the command is valid.</p> <p>! is a delimiter character indicating a valid command was received.</p> <p>AA (range 00-FF) represents the 2-character hexadecimal address of an analog input module.</p> <p>HHHH represents the 4-character hexadecimal number of data records stored in the analog input data logger at address AA.</p> <p>(cr) is the terminating character, carriage return (0Dh).</p>
Example	<p>command: @A3N(cr)</p> <p>response: !A30320(cr)</p> <p>The command requests the number of data records stored in the analog input data logger at address A3.</p> <p>The module currently has 800 data records.</p>

@AARNNNN

Name	Read Record Content
Description	Request the content of record NNNN stored in the analog input data logger at address AA.
Syntax	<p>@AARNNNN (cr)</p> <p>@ is a delimiter character.</p> <p>AA (range 00-FF) represents the 2-character hexadecimal address of an analog input data logger.</p> <p>R identifies the Read Record Content command.</p> <p>NNNN represents the 4-character decimal number of stored record index. Its value is from 0 to (total record number - 1).</p> <p>(cr) is the terminating character, carriage return (0Dh).</p> <p>NOTE:</p> <p>NNNN is from 0 to 9999 for Standard Mode.</p> <p>NNNN is from 0 to 4599 for Event Mode.</p> <p>NNNN is from 0 to 7299 for Mixed Mode. (0-4999 are data records, 5000-7299 are event records)</p>
Response	<p>!AACDHHHH(cr) if the returned data are data records.</p> <p>!AACDHHHHHTTTTTTTT(cr) if the returned data are event records.</p> <p>! is a delimiter character indicating a valid command was received.</p> <p>AA (range 00-FF) represents the 2-character hexadecimal address of an analog input module.</p> <p>C represents the channel index. Its value is from 0 to 7.</p> <p>D represents the 4-bit binary number. Bit 0 represents the sign of the number HHHH. '0' means positive. '1' means negative. Bits 1-3 represents the decimal point of the number HHHH.</p>



@AARNNNN

HHHH represents the 4-character hexadecimal number of returned record stored in the analog input data logger at address AA.

TTTTTTTT represents elapsed time.

(cr) is the terminating character, carriage return (0Dh).

Example

command: @F3R1000(cr)

response: !F30799AA00001000(cr)

The command requests the analog input data logger at address F3 to return its contents in the 1001st record.

The returned content is valid. The event data number is - 39.338 for channel 0 in the 4096 seconds from the start of the module.

@AAACSDHHHTEIII

Name	Set Alarm Limit
Description	Set high/low alarm limits for the channel C in the analog input data logger at address AA
Syntax	<p>@AAACSDHHHTEIII(cr)</p> <p>@ is a delimiter character</p> <p>AA (range 00-FF) represents the 2-character hexadecimal address of an analog input data logger.</p> <p>A identifies the Set Alarm Limit command.</p> <p>C represents the channel index. Its value is from 0 to 7.</p> <p>S represents the sign of the high alarm limit. '0' is for positive. And '1' is for negative.</p> <p>D represents the decimal point of the high alarm limit. Its value is from 0 to 5.</p> <p>HHHH represents the 4-character hexadecimal number of high alarm limit.</p> <p>T represents the sign of the low alarm limit. '0' is for positive. And '1' is for negative.</p> <p>E represents the decimal point of the low alarm limit. Its value is from 0 to 5.</p> <p>IIII represents the 4-character hexadecimal number of low alarm limit.</p> <p>(cr) is the terminating character, carriage return (0Dh).</p>
Response	<p>!AA(cr) if the command is valid.</p> <p>?AA(cr) if an invalid parameter was entered. There is no response if the module detects a syntax error or communication error or if the specified address does not exist.</p> <p>! is a delimiter character indicating a valid command was received.</p> <p>? is a delimiter character indicating the command was invalid.</p> <p>AA (range 00-FF) represents the 2-character hexadecimal address of an analog input data logger.</p> <p>(cr) is the terminating character, carriage return (0Dh).</p>

@AAACSDHHHTEIII

Example command: @EFA0020400020100(cr)

 response: !EF(cr)

The command sets channel 0 of the analog input data logger at address EF as such:

high alarm limit = 10.24

low alarm limit = 2.56

The response indicates the command was received.

@AABC

Name	Read Alarm Limit
Description	Request the alarm limits for the specified channel in the analog input data logger at address AA.
Syntax	<p>@AABC(cr)</p> <p>@ is a delimiter character.</p> <p>AA (range 00-FF) represents the 2-character hexadecimal address of an analog input data logger.</p> <p>B identifies the Read Alarm Limit command.</p> <p>C represents the channel index. Its value is from 0 to 7.</p> <p>(cr) is the terminating character, carriage return (0Dh).</p>
Response	<p>!AASDHHHTEIII</p> <p>! is a delimiter character indicating a valid command was received.</p> <p>AA (range 00-FF) represents the 2-character hexadecimal address of an analog input data logger.</p> <p>S represents the sign of the high alarm limit. '0' is for positive. And '1' is for negative.</p> <p>D represents the decimal point of the high alarm limit. Its value is from 0 to 5.</p> <p>HHHH represents the 4-character hexadecimal number of high alarm limit.</p> <p>T represents the sign of the low alarm limit. '0' is for positive. And '1' is for negative.</p> <p>E represents the decimal point of the low alarm limit. Its value is from 0 to 5.</p> <p>IIII represents the 4-character hexadecimal number of low alarm limit.</p> <p>(cr) is the terminating character, carriage return (0Dh)</p>

