

6.5 Analog Input Command Set

Command Syntax	Command Name	Description
\$aaSiArrff	Configuration	Sets slot index, input range, data format and integration time for a specified analog input module in a specified system.
\$aaSiB	Configuration Status	Returns the configuration parameters for a specified analog input module of a specified system.
\$aaSi5mm	Enable/Disable Channels for multiplexing	Enables/Disables multiplexing for separate channels of the specified input module
\$aaSi6	Read Channels Status	Asks a specified input module to return the status of all channels
#aaSi	All Analog Data In	Returns the input value of all channels for a specified analog input module of a specified system in engineering units only.
#aaSiCj	Specified Analog Data In	Returns the input value of a specified channel for a specified analog input module of a specified system in engineering units only
\$aaSiER	Initialize EEPROM Data	Initializes all EEPROM data in a specified analog input module to their default values.
\$aaSi	Span Calibration	Calibrates a specified analog input module to correct for gain errors
\$aaSi1	Zero Calibration	Calibrates a specified analog input module to correct for offset errors
\$aaSi3	CJC Status	Returns the value of the CJC (Cold Junction Compensation) sensor for a specified analog input module
\$aaSi9shhhh	CJC Zero Calibration	Calibrates a CJC sensor for offset errors

Note: See pages 71-89 for Analog Input Alarm Command Set.

Command Set

5017/5018 Analog Input

\$aaSiArrff	\$aaSiArrff
Name	Configuration
Description	Sets slot index, input range, data format and integration time for a specified analog input module in a specified system.
Syntax	<p>\$aaSiArrff(cr)</p> <p>\$ is a delimiter character.</p> <p>aa (range 00-FF) represents the 2-character hexadecimal address of the ADAM-5000 system you want to configure.</p> <p>Si identifies the I/O slot you want to configure.</p> <p>A is I/O module configuration command.</p> <p>rr represents the 2-character hexadecimal code of the input range. (See Appendix B)</p> <p>ff is a hexadecimal number that equals the 8-bit parameter representing data format. Bits 0 and 1 represent data format. Bit 7 represents integration time. The layout of the 8-bit parameter is shown in Figure 6-3. The other bits are not used and are set to 0.</p> <p>(cr) is the terminating character, carriage return (0Dh)</p>

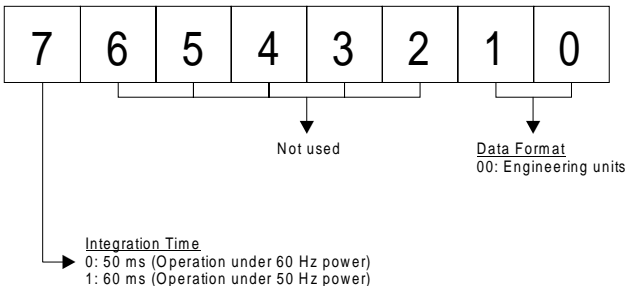


Figure 6-3 Data format for 8-bit parameters

\$aaSiArrff

\$aaSiArrff

Response **!aa(cr)** if the command is valid.

?aa(cr) if an invalid operation was entered.

There is no response if the module detects a syntax error or communication error or if the specified address does not exist.

! delimiter character indicating a valid command was received.

? delimiter character indicating the command was invalid.

aa (range 00-FF) represents the 2-character hexadecimal address of an ADAM-5000 system.

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

Example

command: **\$35S3A0000(cr)**

response: **!35(cr)**

The analog input module in slot 3 of the ADAM-5000 system at address 35h is configured to an input range $\pm 15\text{mV}$, engineering units data format, and integration time 50ms (60Hz).

The response indicates that the command has been received.

Note:

An analog input module requires a maximum of 7 seconds to perform auto calibration and ranging after it is reconfigured. During this time span, the module cannot be addressed to perform any other actions.

\$aaSiB**\$aaSiB****Name** Configuration Status**Description** Returns the configuration status parameters for a specified analog input module of a specified system.**Syntax** **\$aaSiB(cr)****\$** is a delimiter character.**aa** (range 00-FF) represents the 2-character hexadecimal address of the ADAM-5000 system you want to interrogate.**Si** identifies the I/O slot you want to read.**B** is configuration status command.**(cr)** is the terminating character, carriage return (0Dh)**Response** **!aarrff(cr)** if the command is valid.**?aa(cr)** if an invalid operation was entered.

There is no response if the module detects a syntax error or communication error or if the specified address does not exist.

! delimiter character indicating a valid command was received.**?** delimiter character indicating the command was invalid.**aa** (range 00-FF) represents the 2-character hexadecimal address of an ADAM-5000 system.**rr** represents the 2-character hexadecimal code of the input range.**ff** is a hexadecimal number that equals the 8-bit parameter representing data format. Bit 0 and 1 represent data format. Bit 7 represents integration time. (See Configuration Command \$aaSiArrff).

\$aaSiB

\$aaSiB

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

Example

command: **\$26S1B**

response: **!260000**

The ADAM-5018 analog input module in slot 1 of the ADAM-5000 system at address 26h responds with an input range $\pm 15\text{mV}$, engineering units data format, and integration time 50ms (60Hz).

\$aaSi5mm**\$aaSi5mm****Name** Enable/Disable Channels for multiplexing**Description** Enables/Disables multiplexing for separate channels of the specified input module**Syntax** **\$aaSi5mm(cr)**

\$ is a delimiter character.

aa (range 00-FF) represents the 2-character hexadecimal address of the ADAM-5000 system.**Si** identifies the I/O slot of the system.**5** identifies the enable/disable channels command.**mm** are two hexadecimal values. Each value is interpreted as 4 bits. The first 4-bit value represents the status of channels 4-7, the second 4 bit value represents the status of channels 0-3. A value of 0 means the channel is disabled, while a value of 1 means the channel is enabled. (See the Read Channel Status Command \$aaSi6)**Note:** *Bit 7 cannot be enabled in the ADAM-5018 since the module is physically limited to 7 channels.***(cr)** is the terminating character, carriage return (0Dh)**Response** **!aa(cr)** if the command is valid.**?aa(cr)** if an invalid operation was entered.

There is no response if the module detects a syntax error or communication error or if the specified address does not exist.

! delimiter character indicating a valid command was received.**?** delimiter character indicating the command was invalid.

\$aaSi5mm

\$aaSi5mm

aa (range 00-FF) represents the 2-character hexadecimal address of an ADAM-5000 system.

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

Example

command: **\$00S1581(cr)**

response: **!00(cr)**

The command enables/disables channels of the analog input module in slot 1 of the system at address 00h. Hexadecimal 8 equals binary 1000, which enables channel 7 and disables channels 4, 5 and 6. Hexadecimal 1 equals binary 0001, which enables channel 0 and disables channels 1, 2 and 3.

\$aaSi6**\$aaSi6****Name** Read Channels Status**Description** Asks a specified input module to return the status of all channels**Syntax** **\$aaSi6(cr)****\$** is a delimiter character.**aa** (range 00-FF) represents the 2-character hexadecimal address of the ADAM-5000 system you want to interrogate.**Si** identifies the I/O slot of the system you want to read channels status. The channel status defines whether a channel is enabled or disabled.**6** is the read channels status command.**(cr)** is the terminating character, carriage return (0Dh)**Response** **!aamm(cr)** if the command is valid.**?aa(cr)** if an invalid operation was entered.

There is no response if the module detects a syntax error or communication error or if the specified address does not exist.

! delimiter character indicating a valid command was received.**?** delimiter character indicating the command was invalid.**aa** (range 00-FF) represents the 2-character hexadecimal address of an ADAM-5000 system.**mm** are two hexadecimal values. Each value is interpreted as 4 bits. The first 4-bit value represents the status of channels 4-7, the second 4 bits represents the status of

\$aaSi6

\$aaSi6

channels 0-3. A value of 0 means the channel is disabled, while a value of 1 means the channel is enabled.

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

Example

command: **\$02S16(cr)**

response: **!02FF(cr)**

The command asks the analog input module in slot 1 of the system at address 02h to send the status of its input channels. The analog input module responds that all its multiplex channels are enable (FF equals 1111 and 1111).

#aaSi**#aaSi****Name** All Analog Data In**Description** Returns the input value of all channels for a specified analog input module of a specified system in engineering unit only.**Syntax** **#aaSi(cr)**

is a delimiter character.

aa (range 00-FF) represents the 2-character hexadecimal address of the ADAM-5000 system you want to interrogate.**Si** is the I/O slot of ADAM-5000 system you want to read.**(cr)** is the terminating character, carriage return (0Dh)**Response** **>(data)(data)(data)(data)(data)(data)(data)(data)(cr)** if the command is valid.**?aa(cr)** if an invalid operation was entered.

There is no response if the module detects a syntax error or communication error or if the specified address does not exist.

> is a delimiter character indicating a valid command was received.**?** delimiter character indicating the command was invalid.**(data)** is the input value in engineering units of a channel in the interrogated module of the specified system. The (data) from all channels is shown in sequence from 7 to 0. If (data) = " ", it means the channel is invalid.**(cr)** is the terminating character, carriage return (0Dh)

#aaSi

#aaSi

Example

command: **#12S1(cr)**

response: **+1.4567 +1.4852 +1.4675 +1.4325 +1.4889
+1.4235 +1.4787 +1.4625(cr)**

The command requests the analog input module in slot 1 of the ADAM-5000 system at address 12h to return the input values of all channels.

The analog input module responds that input values of all channels are in sequence from 7 to 0: +1.4567, +1.4852, +1.4675, +1.4325, +1.4889, +1.4235, +1.4787 and +1.4625.

#aaSiCj**#aaSiCj****Name** Specified Analog Data In**Description** Returns the input value of a specified channels for a specified analog input module of a specified system in engineering unit only.**Syntax** **#aaSiCj(cr)**

is a delimiter character.

aa (range 00-FF) represents the 2-character hexadecimal address of the ADAM-5000 system you want to interrogate.**Si** identifies the I/O slot you want to interrogate.**Cj** identifies the channel you want to read.**(cr)** is the terminating character, carriage return (0Dh)**Response** **>(data)** if the command is valid.**?aa(cr)** if an invalid operation was entered.

There is no response if the module detects a syntax error or communication error or if the specified address does not exist.

> is a delimiter character indicating a valid command was received.**?** delimiter character indicating the command was invalid.**(data)** is the input value in engineering units of the specified channel for a specified analog input module of the specified system. If (data) = “ ”, it means the channel is invalid.**(cr)** is the terminating character, carriage return (0Dh)

#aaSiCj

#aaSiCj

Example

command: **#22S2C2(cr)**

response: **>+1.4567**

The command requests the analog input module in slot 2 of the ADAM-5000 system at address 22h to return the input value of channel 2.

The analog input module responds that the input value of channel 2 is +1.4567.

\$aaSiER**\$aaSiER****Name** Initialize EEPROM data

Description Initializes all EEPROM data in a specified analog input module to their default values. This command is sent following a failed attempt to calibrate a module (the module shows no effect from an attempted calibration). Following initialization, the problem module should readily accept calibration.

Syntax **\$aaSiER(cr)**

\$ is a delimiter character.

aa (range 00-FF) represents the 2-character hexadecimal address of the ADAM-5000 system.

Si identifies the I/O slot for which you wish to initialize all EEPROM data.

ER is Initialize all EEPROM data command.

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

Response **!aa(cr)** if the command is valid.

?aa(cr) if an invalid operation was entered.

There is no response if the module detects a syntax error or communication error or if the specified address does not exist.

! delimiter character indicating a valid command was received.

? delimiter character indicating the command was invalid.

aa (range 00-FF) represents the 2-character hexadecimal address of an ADAM-5000 system.

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

\$aaSiØ	\$aaSi0
Name	Span Calibration
Description	Calibrates a specified analog input module to correct for gain errors
Syntax	<p>\$aaSiØ(cr)</p> <p>\$ is a delimiter character.</p> <p>aa (range 00-FF) represents the 2-character hexadecimal address of the ADAM-5000 system which is to be calibrated.</p> <p>Si identifies the I/O slot which is to be calibrated.</p> <p>Ø represents the span calibration command.</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 operation was entered.</p> <p>There is no response if the module detects a syntax error or communication error or if the specified address does not exist.</p> <p>! delimiter character indicating a valid command was received.</p> <p>? delimiter character indicating the command was invalid.</p> <p>aa (range 00-FF) represents the 2-character hexadecimal address of an ADAM-5000 system.</p> <p>(cr) is the terminating character, carriage return (0Dh)</p>
Note:	<p><i>In order to successfully calibrate an analog input module's input range, a proper calibration input signal should be connected to the analog input module before and during the calibration process. (See also Chapter 4, Section 4.5 on Calibration)</i></p>

\$aaSi1**\$aaSi1****Name** Zero Calibration**Description** Calibrates a specified analog input module to correct for offset errors**Syntax** **\$aaSi1(cr)**

\$ is a delimiter character.

aa (range 00-FF) represents the 2-character hexadecimal address of the ADAM-5000 system which is to be calibrated.**Si** identifies the I/O slot which is to be calibrated.**1** represents the zero calibration command.**(cr)** is the terminating character, carriage return (0Dh)**Response** **!aa(cr)** if the command is valid.**?aa(cr)** if an invalid operation was entered.

There is no response if the module detects a syntax error or communication error or if the specified address does not exist.

! delimiter character indicating a valid command was received.**?** delimiter character indicating the command was invalid.**aa** (range 00-FF) represents the 2-character hexadecimal address of an ADAM-5000 system.**(cr)** is the terminating character, carriage return (0Dh)

Note: *In order to successfully calibrate an analog input module's input range, a proper calibration input signal should be connected to the analog input module before and during the calibration process. (See also Chapter 4, Section 4.5 on Calibration)*

\$aaSi3	\$aaSi3
Name	CJC Status Command (ADAM-5018 only)
Description	Returns the value of the CJC (Cold Junction Compensation) sensor for a specified analog input module
Syntax	<p>\$aaSi3(cr)</p> <p>\$ is a delimiter character.</p> <p>aa (range 00-FF) represents the 2-character hexadecimal address of the ADAM-5000 system.</p> <p>Si identifies the I/O slot which contains the CJC Status you wish to retrieve.</p> <p>3 is CJC Status command.</p> <p>(cr) is the terminating character, carriage return (0Dh)</p>
Response	<p>>(data)(cr) if the command is valid.</p> <p>?aa(cr) if an invalid operation was entered.</p> <p>There is no response if the module detects a syntax error or communication error or if the specified address does not exist.</p> <p>>delimiter character indicating a valid command was received.</p> <p>? delimiter character indicating the command was invalid.</p> <p>aa (range 00-FF) represents the 2-character hexadecimal address of an ADAM-5000 system.</p> <p>(data) is the value that is retrieved by the module by reading its CJC sensor. The data format, in degrees Celsius, consists of a “+” or “-” sign followed by five decimal digits and a fixed decimal point. The resolution of the data is 0.1°C.</p> <p>(cr) is the terminating character, carriage return (0Dh)</p>

\$aaSi3**\$aaSi3****Example**command: **\$09S13(cr)**response: **>+0036.8(cr)**

The command requests the analog input module in slot 1 of the ADAM-5000 system at address 09h to read its CJC sensor and return the data. The analog input module responds with 36.8°C.

\$aaSi9shhhh

\$aaSi9shhhh

Name	CJC Zero Calibration (ADAM-5018 only)
Description	Calibrates an analog input module to adjust for offset errors of its CJC (Cold Junction Compensation) sensor
Syntax	<p>\$aaSi9shhhh(cr)</p> <p>\$ is a delimiter character.</p> <p>aa (range 00-FF) represents the 2-character hexadecimal address of the ADAM-5000 system.</p> <p>Si identifies the I/O slot which contains the CJC Status you wish to retrieve.</p> <p>9 is CJC Status command.</p> <p>s sign, + or -, indicates whether to increase or decrease the CJC offset value.</p> <p>hhhh is a four character hexadecimal “count” value. Each count equals approximately 0.009°C. The value can range from 0000 to FFFF.</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 operation was entered.</p> <p>There is no response if the module detects a syntax error or communication error or if the specified address does not exist.</p> <p>! delimiter character indicating a valid command was received.</p> <p>? delimiter character indicating the command was invalid.</p> <p>aa (range 00-FF) represents the 2-character hexadecimal address of an ADAM-5000 system.</p> <p>(cr) is the terminating character, carriage return (0Dh)</p>

\$aaSi9shhhh**\$aaSi9shhhh****Example**command: **\$07S29+0042(cr)**response: **!07(cr)**

The command increases the CJC offset value of the analog input module in slot 2 of the system at address 07h with 66 counts (42 hex) which equals about 0.6°C.

Note:

An analog input module requires a maximum of 2 seconds to perform auto calibration and ranging after it receives a CJC Calibration command. During this interval, the module cannot be addressed to perform any other actions.

6.6 ADAM-5017H Analog Input Command Set

Command Syntax	Command Name	Description	Remarks
\$aaSiCjArrFF	Set Input Range	Sets input range for a specified channel of an analog input module in a specified system	See page 6-59
\$aaSiCjB	Read Input Range	Returns the input range for a specified channel of a specified analog input module in a specified system	See page 6-61
\$aaSiAFFff	Set Data Format	Sets data format in engineering units or two's complement for a specified analog input module in a specified system	See page 6-63
\$aaSiB	Read Data Format	Returns the data format for a specified analog input module in a specified system	See page 6-65
\$aaSi5mm	Enable/Disable Channels for Multiplexing	Enables/Disables multiplexing for separate channels of the specified input module	Same as ADAM-5017 See page 6-42
\$aaSi6	Read Channels Status	Asks the specified input module to return the status of all channels	Same as ADAM-5017 See page 6-44

Command Syntax	Command Name	Description	Remarks
#aaSi	All Analog Data In	Returns the input value of all channels for a specified analog input module of a specified system in currently configured data format	See page 6-67
#aaSiCj	Specified Analog Data In	Returns the input value of a specified channel of a specified analog input module of a specified system in currently configured data format	See page 6-69
\$aaSiER	Initialize EEPROM Data	Initializes all EEPROM data in a specified analog input module to their default values.	Same as ADAM-5017 See page 6-50
\$aaSi0	Span Calibration	Calibrates a specified analog input module to correct for gain errors	Same as ADAM-5017 See page 6-51
\$aaSi1	Zero Calibration	Calibrates a specified analog input module to correct for offset errors	Same as ADAM-5017 See page 6-52

Note: *The ADAM-5017H module also has "Alarm Setting" functions. The alarm command set for the ADAM-5017H is the same as that for the ADAM-5013, ADAM-5017, and ADAM-5018. Please refer to pages 6-71 to 6-89 for this set of commands.*

\$aaSiCjArrFF

\$aaSiCjArrFF

Name Set Input Range

Description Sets the input range for a specified channel of a specified analog input module in a specified system.

Syntax **\$aaSiCjArrFF**

\$ is a delimiter character.

aa (range 00-FF) represents the 2-character hexadecimal address of the ADAM-5000 system you want to configure.

SiCj identifies the slot i (i:0 to 3) of the ADAM-5000 system and the channel j (j:0 to 7) of the ADAM-5017H whose range you want to set.

A represents the set input range command.

rr represents the 2-character hexadecimal code of the input range. (See Appendix B)

Note: *Each channel in a ADAM-5017H module may be set to a different range, but the data formats of all channels in this module must be the same.*

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

Response !aa(cr) if the command is valid.

?aa(cr) if an invalid operation was entered.

There is no response if the module detects a syntax error or communication error or if the specified address does not exist.

! delimiter character indicating a valid command was received.

? delimiter character indicating the command was invalid.

aa (range 00-FF) represents the 2-character hexadecimal

\$aaSiCjArrFF**\$aaSiCjArrFF**

address of an ADAM-5000 system.

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

Example

command: **\$35S3C1A0bFF(cr)**

response: **!35(cr)**

Channel 1 of the ADAM-5017H module in slot 3 of the ADAM-5000 system at address 35h is set to the input range 0-20 mA, engineering unit data format. The response indicates that the command has been received as a valid command.

\$aaSiCjB	\$aaSiCjB
Name	Read Input Range
Description	Returns the input range in engineering units for a specified channel of a specified analog input module in a specified system.
Syntax	<p>\$aaSiCjB</p> <p>\$ is a delimiter character.</p> <p>aa (range 00-FF) represents the 2-character hexadecimal address of the ADAM-5000 system you want to interrogate.</p> <p>SiCj identifies the slot i (i:0 to 3) of the ADAM-5000 system and the channel j (j:0 to 7) of the ADAM-5017H module you want to interrogate.</p> <p>B represents the read input range command.</p> <p>(cr) is the terminating character, carriage return (0Dh).</p>
Response	<p>!aarr00(cr) if the command is valid.</p> <p>?aa(cr) if an invalid operation was entered.</p> <p>There is no response if the module detects a syntax error or communication error or if the specified address does not exist.</p> <p>! delimiter character indicating a valid command was received.</p> <p>? delimiter character indicating the command was invalid.</p> <p>aa (range 00-FF) represents the 2-character hexadecimal address of an ADAM-5000 system.</p> <p>rr represents the 2-character hexadecimal code of the input range. (See Appendix B)</p> <p>(cr) is the terminating character, carriage return (0Dh).</p>

\$aaSiCjB**\$aaSiCjB****Example**command: **\$35S3C1B(cr)**response: **!350b00(cr)**

Channel 1 of the ADAM-5017H module in slot 3 of the ADAM-5000 system at address 35h responds with an input range 0-20 mA, engineering unit data format.

\$aaSiAFFf

\$aaSiAFFf

Name	Set Data Format
Description	Sets the data format in engineering units or in two's complement format for a specified analog input module in a specified system.
Syntax	<p>\$aaSiAFFf</p> <p>\$ is a delimiter character.</p> <p>aa (range 00-FF) represents the 2-character hexadecimal address of the ADAM-5000 system you want to configure.</p> <p>Si identifies the I/O slot of the ADAM-5000 system containing the ADAM-5017H module you want to configure.</p> <p>AFF represents the set data format command.</p> <p>ff represents the 2-character hexadecimal code of the data format. 00 is for engineering unit format. 02 is for two's complement format.</p>
Note:	<p><i>Each channel in an ADAM-5017H module may be set to a different range, but the data formats of all channels in this module must be the same.</i></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 operation was entered.</p> <p>There is no response if the module detects a syntax error or communication error or if the specified address does not exist.</p> <p>! delimiter character indicating a valid command was received.</p> <p>? delimiter character indicating the command was</p>

\$aaSiAFFff**\$aaSiAFFff**

invalid.

aa (range 00-FF) represents the 2-character hexadecimal address of an ADAM-5000 system.

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

Example

command: **\$35S3AFF00(cr)**

response: **!35(cr)**

The data format of the ADAM-5017H module in slot 3 of the ADAM-5000 system at address 35h is configured for engineering unit format. The response indicates that the command has been received as a valid command.

\$aaSiB

\$aaSiB

Name Read Data Format

Description Returns the data format for a specified analog input module in a specified system.

Syntax **\$aaSiB**

\$ is a delimiter character.

aa (range 00-FF) represents the 2-character hexadecimal address of the ADAM-5000 system you want to interrogate.

Si identifies the I/O slot of the ADAM-5000 system containing the ADAM-5017 H module you want to interrogate.

B represents the read data format command.

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

Response **!aaFFff(cr)** if the command is valid.

?aa(cr) if an invalid operation was entered.

There is no response if the module detects a syntax error or communication error or if the specified address does not exist.

! delimiter character indicating a valid command was received.

? delimiter character indicating the command was invalid.

aa (range 00-FF) represents the 2-character hexadecimal address of an ADAM-5000 system.

ff represents the 2-character hexadecimal code of the data format. 00 is for engineering unit format. 02 is for two's complement format.

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

\$aaSiB

\$aaSiB

Example command: **\$35S3B(cr)**
 response: **!35FF00(cr)**

The ADAM-5017H module in slot 3 of the ADAM-5000 system at address 35h responds that it is configured for engineering unit data format.

#aaSi	#aaSi
Name	All Analog Data In
Description	Returns the input value of all channels for a specified analog input module of a specified system in engineering units or two's complement data format
Syntax	<p>#aaSi</p> <p># is a delimiter character.</p> <p>aa (range 00-FF) represents the 2-character hexadecimal address of the ADAM-5000 system you want to interrogate.</p> <p>Si identifies the I/O slot (i:0 to 3) of ADAM-5000 system you want to read.</p> <p>(cr) is the terminating character, carriage return (0Dh).</p>
Response	<p>!(data)(data)(data)(data)(data)(data)(data)(data)(cr) if the command is valid. (Engineering Unit Data Format)</p> <p>!(dddd)(dddd)(dddd)(dddd)(dddd)(dddd)(dddd)(dddd)(cr) if the command is valid. (Two's Complement Data Format)</p> <p>?aa(cr) if an invalid operation was entered.</p> <p>There is no response if the module detects a syntax error or communication error or if the specified address does not exist.</p> <p>! delimiter character indicating a valid command was received.</p> <p>? delimiter character indicating the command was invalid.</p> <p>(data) is the input value in engineering units of the interrogated module of the specified system. The (data) from all channels is shown in sequence from 7 to 0. If (data)=" ", it means the channel is invalid.</p> <p>(dddd) is the input value in two's complement format of</p>

#aaSi**#aaSi**

the interrogated module of the specified system. The (dddd) from all channels is shown in sequence from 7 to 0. If (dddd)=" ", it means the channel is invalid.

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

Example

command: **#35S3(cr)**

response: **+6.000 +7.000 +8.125 +4.250 +10.000
+8.500 +7.675 +5.445 (cr)**

The command requests the ADAM-5017H module in slot 3 of the ADAM-5000 system at address 35h to return the input values of all channels.

The analog input module responds with the input values of all channels, in sequence from 0 to 7: **+6.000, +7.000, +8.125, +4.250, +10.000, +8.500, +7.675, +5.445.**

#aaSiCj

#aaSiCj

Name	Specified Analog Data In
Description	Returns the input value of a specified channel of a specified analog input module in a specified ADAM-5000 system in engineering units or two's complement data format
Syntax	<p>#aaSiCj(cr)</p> <p># is a delimiter character.</p> <p>aa (range 00-FF) represents the 2-character hexadecimal address of the ADAM-5000 system you want to configure.</p> <p>Si identifies the I/O slot (i:0 to 3) of ADAM-5000 system you want to read.</p> <p>Cj identifies the channel you want to read.</p> <p>(cr) is the terminating character, carriage return (0Dh).</p>
Response	<p>!(data)(cr) if the command is valid. (Engineering Unit Data Format)</p> <p>!(dddd)(cr) if the command is valid. (Two's Complement Data Format)</p> <p>?aa(cr) if an invalid operation was entered.</p> <p>There is no response if the module detects a syntax error or communication error or if the specified address does not exist.</p> <p>! delimiter character indicating a valid command was received.</p> <p>? delimiter character indicating the command was invalid.</p> <p>(data) is the input value in engineering units of the specified channel of the specified analog input module.</p>

#aaSiCj**#aaSiCj**

If (data)=" ", it means the channel is invalid.

(dddd) is the input value in two's complement format of the specified channel of the specified module. If (dddd)=" ", it means the channel is invalid.

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

Example

command: **#35S3C2(cr)**

response: **+9.750 (cr)**

The command requests the ADAM-5017H module in slot 3 of the ADAM-5000 system at address 35h to return the input value of channel 2.

The analog input module responds that the input value of channel 2 is **+9.750**.