CAA06M Cable and Antenna Analyzer Programming Manual

This document (Document No. 22146075. Rev.2.0) provides instructions for using the commands of VIAVI CAA06M. Topics covered in this document include the following:

Notice

Every effort was made to ensure that the information in this manual was accurate at the time of printing. However, information is subject to change without notice, and VIAVI reserves the right to provide an addendum to this manual with information not available at the time that this manual was created.

Purpose and scope

The purpose of this guide is to help you successfully use the commands of VIAVI Cable and Antenna Analyzer. This guide includes a list of commands to properly use the product and describes communication methods.

Assumptions

This guide is intended for novice, intermediate, and experienced users who want to use the CAA06M commands effectively and efficiently. We are assuming that you have basic computer and mouse experience and are familiar with basic telecommunication concepts and terminology.

Technical assistance

If you require technical assistance, call 1-844-GO-VIAVI or send an email to TAC@viavisolutions.com. For the latest TAC information, go to http://www.viavisolutions.com/en/services-and-support/support/technical-assistance.

Connection via the Ethernet interface

The CAA06M can be controlled and programmed remotely through the Ethernet interface.

The link to the PC can be direct, using an Ethernet crossover cable to link the CAA06M to the PC, or via a network.

Direct connection

1 Connect directly the CAA06M to the PC with an Ethernet cable, using the RJ45 port on each equipment.

2 Make sure the network configuration onto the PC is set to the **Dynamic** mode:

    a Click on Start > Control Panel.

    b Double click on **Network Connection**.

    c Double click on Local Area Connection.

    d In the dialog box, click on **Properties**.

    e Check the parameter **Internet Protocol (TCP/IP)** is selected and click once on it (underlined in blue).

    f Click on Properties button.

    g On the tab **General**, check the parameter **Obtain an IP address automatically** is selected; if not, click to select it.

    h Click on **OK** and close all the dialog boxes opened onto the PC.

3 On the CAA06M, go to **System** > **Network**, select **Static** in the IPv4 box.

4 Note the IP address and wait for about ten seconds while the connection is established.

Connection via a local network

1 On the PC, find the IP address and the mask of the PC's sub-network:

    • With Windows 98 or Millennium: Select Start > Execute, then enter `winipcfg` and click on **OK**.

    • With Windows NT, 2000, XP, Vista, 7 or 10: Select **Start** > **Programs** > **Accessories** > **Dos Prompt**, type `ipconfig`", then **Enter**.

2 Note the IP address and the mask of the PC's sub-network.

3 Plug the RJ 45 port or the CAA06M into a hub or Ethernet switch with a straight-through Ethernet cable.

4 On the CAA06M:

    a Go to **System** > **Network**, select **Static** in the IPv4 box, then enter the **IP address**, **IP mask** of the PC and **IP gateway** previously noted (step 2).

    b Go to **System** > **Network**, select **DHCP** in the IPv4 box. In this case, the IP

address is automatically displayed but cannot be altered.

5 Wait for about ten seconds while the connection is established.

6 On the PC, make sure that the connection is operational by selecting **Start** > **Execute…** and typing `ping`.

Connection via USB TMC

The USB Test & Measurement Class(USB TMC) is a standard for programmatic control of USB-based test instruments that defines protocols used to send and receive messages. If you want to use the USB TMC protocol to communicate with the instrument remotely, you can only connect via USB without any additional settings.

Protocol used

The protocol used is TCP/IP. Only one port may be used as a function of the type of command. The 5600 port is the port to use initially, in order to access all the commands of the menu.

SCPI command structure

Format of commands

The commands are of type SCPI. They have a hierarchical structure with a «root» level and one or more sub-levels known as «nodes».
A command will be composed of a concatenation of «nodes».

Example: REALtime:FREQuency:SPAN:ZERO

- REALtime is the root

- :FREQuency is the 2nd level node

- :SPAN is the 3rd level node

- :Zero is parameter of the 3rd level node

Syntax of commands

The string of the commands includes upper letters and/or lower letters. Only the upper case letters are essential and the lower case letters may be omitted to shorten the commands. However, parameter should be fully named without omission.

The successive nodes of a command must be separated by a colon (:).

Example of commands:

- Complete form: INTERference:TRAce:CLEAr:ALL

- Shortened form: INTER:TRA:CLEA:ALL

Parameters

The table below shows type and unit of the values used in this programming manual.

Mark	Valid Unit	Description	Example
<real>	(dBm)	real number	10 dBm, -10.00 dBm
<integer>	-	integer number	10, -10
<time>	ns, us, ms, s	time (millisecond, second)	10 ms, 1 s
<ampl>	dBm	absolute Amplitude value	10 dBm, 0 dBm
<rel_ampl>	dB	relative Amplitude value	10 dB, -10 dB
<freq>	Hz, kHz, MHz, GHz	frequency value	10 Hz, 10kHz, 10MHz, 10GHz
<bandwidth>	Hz	frequency's bandwidth value	10 Hz, 10kHz, 10MHz, 10GHz
<per>	%	percentage	100 %, 100%
<string>	-	Long string or special letters	"string_12 ()"
<table>	-	A lot of value	10.11,11.12,12.14
<IP Address>	-	IPv4 Address	"127.0.0.1"

Querying

For each command there is a corresponding query.

Most queries have no parameter. They then end with a «?». These queries are not given in the dictionary of commands provided below.

Example:

- INTERference:TRAce2:INFOrmation:DETector? Asks for the trace detector information

Common commands

The common commands described below are valid for CAA06M.

*CLS

The Clear Status (CLS) command clears all the event status registers in the device status-reporting mechanism and the error/event queue. This also results in the corresponding summary bits in the Status Byte (STB) to be cleared.

Syntax: *CLS
Parameter/Response: None

*ESE/*ESE?

*ESE is a standard event status enable command or query.

Syntax: * ESE <integer>
Parameter/Response: <integer>
Allowable values: 0-255

*IDN?

* IDN Asks for identification of the CAA06M instrument.

Syntax: *IDN?
Parameter: None
Response: "<Manufacturer>,<Model>,<Serial number>,<Firmware version>"
Data Type: string

*OPC/*OPC?

*OPC is an operation complete command or query. *OPC (Operation Complete) sets bit 0 in the ESR to 1 when all commands received before *OPC or *OPC? have been completed.

Syntax: *OPC/*OPC?
Parameter: None
Query Response: 1

*RST

*RST resets the CAA06M to its default settings.

Syntax: * RST
Parameter/Response: None

*SRE

*SRE is a service request enable command or query that enables bits in the SRE register. *SRE? query returns the decimal sum of the enabled bits in the SRE register.

Syntax: *SRE <integer>/* SRE?
Parameter/Response: <integer>

*STB?

*STB is a status byte query that reads the value of the instrument status byte.

Syntax: *STB?
Parameter: None
Response: <integer>

*TST?

*TST is a self-test query that initiates the device's internal self-test and returns the number 0 meaning all tests passed.

Syntax: *STB?
Parameter: None
Response: 0

*WAI

*WAI is a wait-to-continue command that stops the execution of any further commands or queries until all operations for pending commands are completed.

Syntax: *WAI
Parameter/Response: None

Measurement Commands

The commands described in this section is about the definition used in each measurement.

CAA:ALT:DISTance:STARt

Syntax: CAA:ALT:DISTance:STARt
Parameter/Response: N/A
Description: You can set or query the start distance of Alt DTF Band in Cable and Antenna Analyzer.
Example:
```
CAA:ALT:DISTance:STARt 1.0
```

CAA:ALT:DISTance:STOP

Syntax: CAA:ALT:DISTance:STOP
Parameter/Response: N/A
Description: You can set or query the stop distance of Alt DTF Band in Cable and Antenna Analyzer.
Example:
```
CAA:ALT:DISTance:STOP 10.0
```

CAA:ALT:FREQuency:CENTer

Syntax: CAA:ALT:FREQuency:CENTer
Parameter/Response: N/A
Description: You can set or query the center frequency of Alt DTF Band in Cable and Antenna Analyzer.
Example:
```
CAA:ALT:FREQuency:CENTer 2000.00 MHz
```

CAA:ALT:FREQuency:SPAN

Syntax: CAA:ALT:FREQuency:SPAN
Parameter/Response: N/A
Description: You can set or query the span frequency of Alt DTF Band in Cable and Antenna Analyzer.
Example:
```
CAA:ALT:FREQuency:SPAN 2000.00 MHz
```

CAA:ALT:FREQuency:STARt

Syntax: CAA:ALT:FREQuency:STARt
Parameter/Response: N/A
Description: You can set or query the start frequency of Alt DTF Band in Cable and
Antenna Analyzer.
Example:
```
CAA:ALT:FREQuency:STARt 100.00 MHz
```

CAA:ALT:FREQuency:STOP

Syntax: CAA:ALT:FREQuency:STOP
Parameter/Response: N/A
Description: You can set or query the stop frequency of Alt DTF Band in Cable and
Antenna Analyzer.
Example:
```
CAA:ALT:FREQuency:STOP 5000.00 MHz
```

CAA:ALT:FREQuency:STARt

Syntax: CAA:ALT:FREQuency:STARt
Parameter/Response: N/A
Description: You can set or query the start frequency of Alt DTF Band in Cable and
Antenna Analyzer.
Example:
```
CAA:ALT:FREQuency:STARt 100.00 MHz
```

CAA:AVERage:CURRent

Syntax: CAA:AVERage:CURRent
Parameter/Response: N/A
Description: You can query the average current in Cable and Antenna Analyzer.
Example:
```
CAA:AVERage:CURRent?
```

CAA:BIAStee

Syntax: CAA:BIAStee
Parameter/Response: [Off | On]
Description: You can set on/off or query if the Bias Voltage is on/off in Cable and
Antenna Analyzer.
Example:
```
CAA:BIAStee On
```

CAA:BIAStee:VALue

Syntax: CAA:BIAStee:VALue
Parameter/Response: N/A
Description: You can set or query the Bias voltage in Cable and Antenna Analyzer.
Example:
```
CAA:BIAStee VALue 10
```

CAA:CABLe:LOSS1g

Syntax: CAA:CABLe:LOSS1g
Parameter/Response: N/A
Description: You can set or query the cable loss at 1 GHz in Cable and Antenna Analyzer.
Example:
`CAA:CABLe:LOSS1g 0.070`

CAA:CABLe:LOSS2g

Syntax: CAA:CABLe:LOSS2g
Parameter/Response: N/A
Description: You can set or query the cable loss at 2 GHz in Cable and Antenna Analyzer.
Example:
`CAA:CABLe:LOSS2g 0.105`

CAA:CABLe:NAMe

Syntax: CAA:CABLe:NAMe
Parameter/Response: N/A
Description: You can set or query the cable name in Cable and Antenna Analyzer.(Please refer to the attached **Enum** column of **caa.cablelist.csv** file for detailed cable name information)
Example:
`CAA:CABLe:NAME 35`

CAA:CABLe:NAMe:STRing

Syntax: CAA:CABLe:NAMe:STRing
Parameter/Response: N/A
Description: You can query the cable name in Cable and Antenna Analyzer.
Example:
`CAA:CABLe:NAME:STRing?`

CAA:CABLe:VELocity

Syntax: CAA:CABLe:VELocity
Parameter/Response: N/A
Description: You can set or query the cable velocity in Cable and Antenna Analyzer.
Example:
`CAA:CABLe:VELocity 0.85`

CAA:CALibration

Syntax: CAA:CALibration
Parameter/Response: [Off | On]
Description: You can set on/off or query if the calibration is on/off in Cable and Antenna Analyzer.
Example:
`CAA:CALibration On`

CAA:CALibration:BACK

Syntax: CAA:CALibration:BACK
Parameter/Response: N/A

Description: You can set the calibration back to Open or Short during Short or Load in Cable and Antenna Analyzer.
Example:
`CAA:CALibration:back`

CAA:CALibration:FREQuency:STARt

Syntax: CAA:CALibration:FREQuency:STARt
Parameter/Response: N/A
Description: You can query the start frequency of calibration in Cable and Antenna Analyzer.
Example:
`CAA:CALibration:FREQuency:STARt?`

CAA:CALibration:FREQuency:STOP

Syntax: CAA:CALibration:FREQuency:STOP
Parameter/Response: N/A
Description: You can query the stop frequency of calibration in Cable and Antennena Analyzer.
Example:
`CAA:CALibration:FREQuency:STOP?`

CAA:CALibration:POINts

Syntax: CAA:CALibration:POINts
Parameter/Response: N/A
Description: You can set or query the data points of calibration in Cable and Antenna Analyzer.
Example:
`CAA:CALibration:POINts 6003`

CAA:CALibration:PROCess

Syntax: CAA:CALibration:PROCess
Parameter/Response: N/A
Description: You can query the current calibration process among Open, Short, Load, Thru, Quick in Cable and Antenna Analyzer.
Example:
`CAA:CALibration:PROCess?`

CAA:CALibration:PROCess:COUNt

Syntax: CAA:CALibration:PROCess:COUNt
Parameter/Response: N/A
Description: You can query which step(1st or 2nd in OSL calibration etc.) the calibration is on in Cable and Antenna Analyzer.

Example:
```
CAA:CALibration:PROCess:COUNt?
```

CAA:CALibration:PROCess:NUMber

Syntax: CAA:CALibration:PROCess:NUMber
Parameter/Response: N/A
Description: You can query the number of calibration process (3 in case of OSL calibration) in Cable and Antenna Analyzer.
Example:
```
CAA:CALibration:PROCess:NUMber?
```

CAA:CALibration:PROCess:RATe

Syntax: CAA:CALibration:PROCess:RATe
Parameter/Response: N/A
Description: You can query the current calibration process rate (0 – 100%) in Cable and Antenna Analyzer.
Example:
```
CAA:CALibration:PROCess:RATe?
```

CAA:CALibration:PROCess:STATus

Syntax: CAA:CALibration:PROCess:STATus
Parameter/Response: N/A
Description: You can query the current calibration process status in Cable and Antenna Analyzer.
Example:
```
CAA:CALibration:PROCess:STATus?
```

CAA:CALibration:STARt

Syntax: CAA:CALibration:STARt
Parameter/Response: N/A
Description: You can set to start calibration in Cable and Antenna Analyzer.
Example:
```
CAA:CALibration:STARt
```

CAA:CALibration:STATus

Syntax: CAA:CALibration:STATus
Parameter/Response: N/A
Description: You can query the current calibration status (Off, On, OnE, OnQ etc.) in Cable and Antenna Analyzer. (cf. E = Ezcal, Q = Quick)
Example:
```
CAA:CALibration:PROCess:STATus?
```

CAA:CALibration:STOP

Syntax: CAA:CALibration:STOP
Parameter/Response: N/A
Description: You can set to stop calibration in Cable and Antenna Analyzer.

Example:
```
CAA:CALibration:STOP
```

CAA:CALibration:TYPE

Syntax: CAA:CALibration:TYPE
Parameter/Response: [OSL | Quick | Thru]
Description: You can set or query the calibration type in Cable and Antenna Analyzer.
Example:
```
CAA:CALibration:TYPE Quick
```

CAA:DIAGnosis:PROCess::RATe

Syntax: CAA:DIAGnosis:PROCess::RATe
Parameter/Response: N/A
Description: You can query the current diagnostic process rate (0 – 100%) in Cable and Antenna Analyzer.
Example:
```
CAA:DIAGnosis:PROCess::RATe?
```

CAA:DIAGnosis:PROCess::STATus

Syntax: CAA:DIAGnosis:PROCess::STATus
Parameter/Response: N/A
Description: You can query the status of diagnostic process in Cable and Antenna Analyzer.
Example:
```
CAA:DIAGnosis:PROCess::STATus?
```

CAA:DIAGnosis:RX

Syntax: CAA:DIAGnosis:RX
Parameter/Response: N/A
Description: You can query the self test result of Rx Module in Cable and Antenna Analyzer.
Example:
```
CAA:DIAGnosis:RX?
```

CAA:DIAGnosis:STARt

Syntax: CAA:DIAGnosis:STARt
Parameter/Response: N/A
Description: You can set to start diagnosis in Cable and Antenna Analyzer.
Example:
```
CAA:DIAGnosis:STARt
```

CAA:DIAGnosis:STOP

Syntax: CAA:DIAGnosis:STOP
Parameter/Response: N/A
Description: You can set to stop diagnosis in Cable and Antenna Analyzer.
Example:
```
CAA:DIAGnosis:STOP
```

CAA:DIAGnosis:TX

Syntax: CAA:DIAGnosis:TX
Parameter/Response: N/A
Description: You can query the self test result of Tx Module in Cable and Antenna Analyzer.
Example:
`CAA:DIAGnosis:TX?`

CAA:DISTance:STARt

Syntax: CAA:DISTance:STARt
Parameter/Response: N/A
Description: You can set or query the start distance in Cable and Antenna Analyzer.
Example:
`CAA:DISTance:STARt 1.0`

CAA:DISTance:STOP

Syntax: CAA:DISTance:STOP
Parameter/Response: N/A
Description: You can set or query the stop distance in Cable and Antenna Analyzer.
Example:
`CAA:DISTance:STOP 10.0`

CAA:FREQuency:BANDlist

Syntax: CAA:FREQuency:BANDlist
Parameter/Response: N/A
Description: You can set or query the frequency band from the band list in Cable and Antenna Analyzer.(Please refer to the attached **Enum** column of **caa.bandlist.csv** file for detailed band name information)
Example:
`CAA:FREQuency:BANDlist 20`

CAA:FREQuency:BANDlist:STRing

Syntax: CAA:FREQuency:BANDlist:STRing
Parameter/Response: N/A
Description: You can query if the frequency band is string from the band list in Cable and Antenna Analyzer.
Example:
`CAA:FREQuency:BANDlist:STRing?`

CAA:FREQuency:CENTer

Syntax:CAA:FREQuency:CENTer
Parameter/Response: N/A
Description: You can set or query the center frequency in Cable and Antenna Analyzer.
Example:
`CAA:FREQuency:CENTer 2000.00 MHz`

CAA:FREQuency:SPAN

Syntax:CAA:FREQuency:SPAN
Parameter/Response: N/A
Description: You can set or query the span frequency in Cable and Antenna Analyzer.
Example:
```
CAA:FREQuency:SPAN 2000.00 MHz
```

CAA:FREQuency:STARt

Syntax:CAA:FREQuency:STARt
Parameter/Response: N/A
Description: You can set or query the start frequency in Cable and Antenna Analyzer.
Example:
```
CAA:FREQuency:STARt 100.00 MHz
```

CAA:FREQuency:STOP

Syntax:CAA:FREQuency:STOP
Parameter/Response: N/A
Description: You can set or query the stop frequency in Cable and Antenna Analyzer.
Example:
```
CAA:FREQuency:STOP 5000.00 MHz
```

CAA:GENeral:AVERage

Syntax: CAA:GENeral:AVERage
Parameter/Response: N/A
Description: You can set or query the number of measurements to be averaged in Cable and Antenna Analyzer.
Example:
```
CAA:GENeral:AVERage 5
```

CAA:GENeral:INTRejection

Syntax: CAA:GENeral:INTRejection
Parameter/Response: [Off | On]
Description: You can set or query On/Off the Interference Rejection in Cable and Antenna Analyzer.
Example:
```
CAA:GENeral:INTRejection On
```

CAA:GENeral:OUTPut

Syntax: CAA:GENeral:OUTPut
Parameter/Response: [0dBm | -30dBm]
Description: You can set or query 0dBm or -30dBm for the level of output power to be inserted in Cable and Antenna Analyzer.
Example:
```
CAA:GENeral:OUTPut -30dBm
```

CAA:GENeral:POINts

Syntax: CAA:GENeral:POINts
Parameter/Response: [126 | 251 | 501 | 1001 | 2001]
Description: You can set or query the Data Points among 126, 251, 501, 1001 and 2001 in Cable and Antenna Analyzer.
Example:
CAA:GENeral:POINts 501

CAA:GENeral:UNITs

Syntax: CAA:GENeral:UNITs
Parameter/Response: [Meter | Foot]
Description: You can set or query the distance unit between Meter and Foot in Cable and Antenna Analyzer.
Example:
CAA:GENeral:UNITs Foot

CAA:GENeral:WINDows

Syntax: CAA:GENeral:WINDows
Parameter/Response: [Rectangular | Blackman | NSL | LSL | MSL]
Description: You can set or query the Windowing option to set the method of video filtering to display the trace among Rectangular, Blackman, Nominal Side, Low Side and Minimum Side. in Cable and Antenna Analyzer.
Example:
CAA:GENeral:WINDows Blackman

CAA:HOLD

Syntax: CAA:HOLD
Parameter/Response: [Off | On]
Description: You can set or query On/Off the HOLD in Cable and Antenna Analyzer.
Example:
CAA:HOLD On

CAA:LIMit:ALARm

Syntax: CAA:LIMit:ALARm
Parameter/Response: [Off | On]
Description: You can set or query On/Off the Alarm sound of Limit in Cable and Antenna Analyzer.
Example:
CAA:LIMit:ALARm On

CAA:LIMit:ALARm:VOLume

Syntax: CAA:LIMit:ALARm:VOLume
Parameter/Response: N/A
Description: You can set or query the Volume of limit alarm in Cable and Antenna Analyzer.
Example:

```
CAA:GENeral:VOLume 5
```

CAA:LIMit:JUDGe

Syntax: CAA:LIMit:JUDGe
Parameter/Response: [Off | On]
Description: You can set or query On/Off the Judge (Pass/Fail result option) of Limit in
Cable and Antenna Analyzer.
Example:
```
CAA:LIMit:JUDGe On
```

CAA:LIMit:LINe:VALue

Syntax: CAA:LIMit:LINe:VALue
Parameter/Response: N/A
Description: You can set or query the limit line value in Cable and Antenna Analyzer.
Example:
```
CAA:LIMit:LINe:VALue 25
```

CAA:LIMit:LINe:WARNing

Syntax: CAA:LIMit:LINe:WARNing
Parameter/Response: [Off | On]
Description: You can set or query On/Off the Warning Line of threshold value in Cable
and Antenna Analyzer.
Example:
```
CAA:LIMit:LINe:WARNing On
```

CAA:LIMit:LINe:WARNing:VALue

Syntax: CAA:LIMit:LINe:WARNing:VALue
Parameter/Response: N/A
Description: You can set or query the threshold(warning) value of limit line in Cable and
Antenna Analyzer.
Example:
```
CAA:LIMit:LINe:WARNing:VALue 25
```

CAA:LIMit:WINDow

Syntax: CAA:LIMit:WINDow
Parameter/Response: [Off | On]
Description: You can set or query On/Off the Limit window in Cable and Antenna
Analyzer.
Example:
```
CAA:LIMit:WINDow On
```

CAA:LIMit:WINDow:AMPLitude#

Syntax: CAA:LIMit:WINDow:AMPLitude#
Parameter/Response: N/A
Description: You can set or query the Amplitude/distance (Y-axis coordinate) value of
point (1, 2, 3, or 4) of limit window in Cable and Antenna Analyzer.

Example:
```
CAA:LIMit:WINDow:AMPLitude1 25
```

CAA:LIMit:WINDow:FREQuency#

Syntax: CAA:LIMit:WINDow:FREQuency#
Parameter/Response: N/A
Description: You can set or query the Frequency (X-axis coordinate) value of point (1, 2, 3, or 4) of limit window in Cable and Antenna Analyzer.
Example:
```
CAA:LIMit:WINDow:FREQuency1 1500
```

CAA:LIMit:WINDow:POSition

Syntax: CAA:LIMit:WINDow:POSition
Parameter/Response: N/A
Description: You can set or query the position of Limit window point (1, 2, 3, or 4) in Cable and Antenna Analyzer.
Example:
```
CAA:LIMit:POSition 2
```

CAA:MARKer#

Syntax: CAA:MARKer#
Parameter/Response: N/A
Description: You can set or query On/Off the Marker# in Cable and Antenna Analyzer.
Example:
```
CAA:MARKER1 On
```

CAA:MARKer#:DELTa:RESUlt:FREQuency

Syntax: CAA:MARKer#:DELTa:RESUlt:FREQuency
Parameter/Response: N/A
Description: You can query the Delta Marker Frequency in Cable and Antenna Analyzer.
Example:
```
CAA:MARKer1:DELTa:FREQuency?
```

CAA:MARKer#:DELTa:RESUlt:Y

Syntax: CAA:MARKer#:DELTa:RESUlt:Y
Parameter/Response: N/A
Description: You can query the Y value of Delta Marker in Cable and Antenna Analyzer.
Example:
```
CAA:MARKer1:DELTa:Y?
```

CAA:MARKer#:TYPE

Syntax: CAA:MARKer#:TYPE
Parameter/Response: N/A
Description: You can set or query the Marker Type in Cable and Antenna Analyzer.
Example:
```
CAA:MARKer1:TYPE Normal
```

CAA:MARKer:AOFF

Syntax: CAA:MARKer:AOFF
Parameter/Response: N/A
Description: You can set the all markers Off in Cable and Antenna Analyzer.
Example:
`CAA:MARKer:AOFF`

CAA:MARKer:SEARch:LEFT

Syntax: CAA:MARKer:SEARch:LEFT
Parameter/Response: N/A
Description: You can set to search for the highest peak to the left from the current position in Cable and Antenna Analyzer.
Example:
`CAA:MARKer:SEARch:LEFT`

CAA:MARKer:SEARch:NEXT

Syntax: CAA:MARKer:SEARch:NEXT
Parameter/Response: N/A
Description: You can set to search for the second highest peak on the trace in Cable and Antenna Analyzer.
Example:
`CAA:MARKer:SEARch:NEXT`

CAA:MARKer:SEARch:PEAK

Syntax: CAA:MARKer:SEARch:PEAK
Parameter/Response: N/A
Description: You can set to search for the highest peak on the trace in Cable and Antenna Analyzer.
Example:
`CAA:MARKer:SEARch:PEAK`

CAA:MARKer:SEARch:RIGHt

Syntax: CAA:MARKer:SEARch:RIGHt
Parameter/Response: N/A
Description: You can set to search for the highest peak to the right from the current position in Cable and Antenna Analyzer.
Example:
`CAA:MARKer:SEARch:RIGHt`

CAA:MARKer:SEARch:VALLey

Syntax: CAA:MARKer:SEARch:VALLey
Parameter/Response: N/A
Description: You can set to search for the lowest peak (valley) on the trace in Cable and Antenna Analyzer.
Example:
`CAA:MARKer:SEARch:VALLey`

CAA:MARKer:SELect

Syntax: CAA:MARKer:SELect
Parameter/Response:
[Marker01 | Marker02 | Marker03 | Marker04 | Marker05 | Marker06]
Description: You can query or select the marker among Marker01 – Marker06 in Cable and Antenna Analyzer.
Example:
`CAA:MARKer:SELect Marker01`

CAA:MODE

Syntax: CAA:MODE
Parameter/Response: [ReflectionVSWR | ReflectionReturnLoss | DTFVSWR | DTFReturnLoss | OnePortCableLoss | OnePortPhase | TwoPortTransmission | SmithChart | RFSource | Amplitude | LoadCAL | CableDelay]
Description: You can query or set the mode in Cable and Antenna Analyzer.
Example:
`CAA:MODE ReflectionReturnLoss`

CAA:PRESet

Syntax: CAA:PRESet
Parameter/Response: N/A
Description: You can set to reset the instrument to the factory default in Cable and Antenna Analyzer.
Example:
`CAA:PRESet`

CAA:RFSource

Syntax: CAA:RFSource
Parameter/Response: [Off | On]
Description: You can set or query On/Off the RF source in Cable and Antenna Analyzer.
Example:
`CAA:RFSource On`

CAA:RFSource:FREQuency

Syntax: CAA:RFSource:FREQuency
Parameter/Response: N/A
Description: You can set or query the frequency in RF source mode of Cable and Antenna Analyzer.
Example:
`CAA:RFSource:FREQuency 1000 MHz`

CAA:RFSource:POWer

Syntax: CAA:RFSource:POWer
Parameter/Response: N/A
Description: You can set or query the output power of CW signal in RF source mode of Cable and Antenna Analyzer.

Example:
```
CAA:RFSource:POWer -25
```

CAA:SCALe:AUTO

Syntax: CAA:SCALe:AUTO
Parameter/Response: N/A
Description: You can set the scale automatically in Cable and Antenna Analyzer.
Example:
```
CAA:SCALe:AUTO
```

CAA:SCALe:BOTTom

Syntax: CAA:SCALe:BOTTom
Parameter/Response: N/A
Description: You can set or query the bottom amplitude in Cable and Antenna Analyzer.
Example:
```
CAA:SCALe:BOTTom 1.5
```

CAA:SCALe:FULL

Syntax: CAA:SCALe:FULL
Parameter/Response: N/A
Description: You can set to restore the instrument's default range for the Y-scale in Cable and Antenna Analyzer.
Example:
```
CAA:SCALe:FULL
```

CAA:SCALe:TOP

Syntax: CAA:SCALe:TOP
Parameter/Response: N/A
Description: You can set or query the top amplitude in Cable and Antenna Analyzer.
Example:
```
CAA:SCALe:TOP 50
```

CAA:TRACe#:DATA

Syntax: CAA:TRACe#:DATA
Parameter/Response: N/A
Description: You can query the trace data in Cable and Antenna Analyzer.
Example:
```
CAA:TRACe1:DATA?
```

CAA:TRACe#:TYPE

Syntax: CAA:TRACe#:TYPE
Parameter/Response: N/A
Description: You can set or query the trace type in Cable and Antenna Analyzer.
Example:
```
CAA:TRACe1:TYPE Max
```

CAA:TRACe#:VIEW

Syntax: CAA:TRACe#:VIEW
Parameter/Response: N/A
Description: You can set or query On/Off the trace view in Cable and Antenna Analyzer.
Example:
```
CAA:TRACe1:VIEW Off
```

CAA:TRACe:ACLear

Syntax: CAA:TRACe:ACLear
Parameter/Response: N/A
Description: You can set to clear all the traces displayed on the chart in Cable and Antenna Analyzer.
Example:
```
CAA:TRACe:ACLear
```

CAA:TIMe:STARt

Syntax: CAA:TIMe:STARt
Parameter/Response: 0 ~ 6 ns
Description: You can set the cable's start time delay and the unit is second.
Example:
```
CAA:TIMe:STARt 0.00000001
```

CAA:TIMe:STOP

Syntax: CAA:TIMe:STOP
Parameter/Response: 6 ns ~ 83.45 ns

Description: You can set the cable's stop time delay and the unit is second.

Example:
```
CAA:TIMe:STOP 0.000000083
```

caa_bandlist.csv   caa_cablelist.csv

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www.viavisolutions.com