**Tweez 250si - TCP Server Commands**

**Commands:**

CAMERA\_SET\_REC\_FILE *<file name>* // set recording file name

CAMERA\_SET\_IMG\_FILE *<file name>* // set single shot image file name

CAMERA\_REC\_START\_FM // start force measurement recording (postprocessing)

CAMERA\_REC\_START // start simple recording (no postprocessing)

CAMERA\_REC\_STOP // stop recording

CAMERA\_IMG\_SINGLE // single shot recording

CAMERA\_SET\_CLOCK *<clock rate>* // set camera pixel clock [Mhz]

CAMERA\_SET\_FRAME\_RATE *<frame rate>* // set camera frame rate [fps]

CAMERA\_SET\_EXPOSURE *<exposure>* // set camera exposure [ms]

CAMERA\_SET\_GAIN *<gain>* // set camera gain [1..4]

BEAM\_SET\_FOCUS *<beam focus>* // set beam focus [0..1000]

LASER\_ON // laser on

LASER\_OFF // laser off

LASER\_SET\_LEVEL *<laser level>* // laser level [0..1]

CLEAR\_PROJECT // clear project

TRAP\_CREATE\_FM // create force measurement trap

TRAP\_CREATE\_M // create manipulation trap

TRAP\_DELETE *<trap no.>* // delete trap T#

TRAP\_STRENGTH *<trap no.> <trap strength>* // set trap strength

TRAP\_POSITION *<trap no.> <X> <Y>* // set trap position (x/y in microns)

TRAP\_ON *<trap no.>* // set trap on

TRAP\_OFF *<trap no.>* // set trap off

TRAP\_SET\_SEQUENCE *<trap no.> <seq. no.>* // assign sequence to trap

TRAP\_REMOVE\_SEQUENCE *<trap no.>* // remove sequence from trap

TRAP\_SEQ\_ROTATION *<trap no.> <seq. rotation>* // set sequence rotation angle [deg.]

TRAP\_SEQ\_SCALE *<trap no.> <seq. scale>*  // set sequence scale factor (0,..]

LOAD\_SEQUENCE *<file name>* // load sequence

DELETE\_SEQUENCE *<seq. no.>* // delete sequence

**Example:**

CLEAR\_PROJECT // create new project

TRAP\_CREATE\_FM // create force measurement trap (trap no. 1)

LOAD\_SEQUENCE sample.tsf // load sequence (sequence no. 1)

TRAP\_SET\_SEQUENCE 1 1 // assign seq. no. 1 to trap no. 1

TRAP\_POSITION 1 10 20 // move trap no. 1 to position (10,20)

TRAP\_SEQ\_ROATATION 1 30 // rotate sequence on trap no.1 for 30 deg.

**Return values:**

0 // no error

1 // unknown command

2 // command active

3 // maximum number of force measurement traps exceeded

4 // manipulation traps not available under current license

5 // maximum number of manipulation traps exceeded

6 // trap out of working range

7 // invalid trap number

8 // invalid trap strength

9 // invalid trap position

10 // maximum number of sequences exceeded

11 // invalid sequence number

12 // sequence assigned to trap - can't delete

13 // invalid seq. rotation

14 // invalid seq. scale

13 // camera parameter invalid

14 // camera parameter not set (no camera or invalid parameter)

15 // invalid file name

16 // invalid recording/snapshot type

17 // error accessing video stream

18 // recoding not possible

19 // not possible to stop recording

20 // invalid beam focus parameter

21 // can not set beam focus

22 // invalid laser level parameter

23 // can not set laser level

30 // TSF missing

31 // TSF invalid data

32 // TSF read/write error

33 // TSF too long

34 // TSF empty