FY3200S series DDS PC communication protocol specification

● Overview

      The overall structure of the control command command line, communication baud rate to a fixed value 9600bps, issued by the PC command, the machine analysis execution, and return the results to the PC, life
So only lowercase letters a to z, digits 0-9, the end of the symbol for each command line breaks
(Hexadecimal representation as "0x0a"), PC machine command a total length of maximum 15 characters (including
Including 0x0a included). The following elaborate on the different commands.

● A detailed description of each command

1. a command

      PC sends "a + 0x0a" command, the unit returns to the machine model. Therefore, the results may
      There are many: FY3206S, FY3212S, FY3220S or FY3224S.

2. b command

(1) bw command: Set the main waveform.

    Format: bwx + 0x0a

    Where "x" represents a digital waveform represented by, for example:

      bw0 sets waveform to sine

      bw1 sets waveform to triangle sawtooth (depending on duty cycle setting)

      bw2 sets waveform to a rectangular or square wave

      bw3 sets waveform to pulse wave

(2) bf command: Setting the main wave frequency.

    Format: bfxxxxxxxxx + 0x0a

    Where "xxxxxxxxx" represents nine numbers represent frequency value, for example:

      bf100000000 indicates the set frequency of 1MHz

      bf000123456 indicated set frequency 1.23456kHz

      bf000000001 indicates the set frequency is 0.01Hz

(3) ba command: Set the main wave amplitude.

    Format: baxx.x + 0x0a

    Where "xx.x" is the magnitude of value to be set, for example:

      ba12.3 indicated set amplitude 12.3V

      ba0.3 indicated set amplitude of 0.3V

(4) bo command: Setting the main wave DC offset value.

    Format: boxxx.x + 0x0a

    Where "xxx.x" is the offset value to be set, for example:

      bo12.3 indicated set amplitude 12.3V

FY3200S series DDS PC communication protocol specification

bo-12.3 indicated set amplitude -12.3V

(5) bd command: Set the main wave duty cycle.

   Format: bdxx + 0x0a

   Where "xx" represents two figures represent the duty cycle, for example:

      bd51 represented 51% duty cycle setting

(6) bu command: set pulse width.

   Format: buxxxx + YY + 0x0a

   Where "xxx" 4 number represents the width of the pulse wave value, yy two characters represent veins

   Unit rushing wave width, total (ns, us, ms three kinds), pulse width limits of 10nS-1S.

    For instance:

      bu0010ns represents pulse width of 010ns

bu0202us represents pulse width of 202us

      bu1000ms represents pulse width of 1000ms

(7) bt command: set sweep time.

    Format: btxx + 0x0a

   Where "xx" represents two figures represent the sweep time, for example:

      Bt51 indicated set sweep time of 51 seconds

(8) bs command: store the current parameters (frequency, duty cycle, waveform) to a storage
Position (0-9).

   Format: bsx + 0x0a

   Where "x" represents a figure represents storage locations, for example:

bs0 represents deposit to position 0, this position gives special significance, namely the opportunity to open the default transferred the value of this location. (after Strart-Up)

bs1 represents deposit to position 1, this position gives special significance, namely sweep of the initial value.

bs2 represents deposit to position 2, the position of special significance given that the end value of the sweep.

(9) bl command: transferred to the current parameters (frequency, duty ratio from the storage location (0-9), waveform). (load from)

      Format: blx + 0x0a

      Where "x" represents a figure represents storage locations, for example:

          3 shows bl3 transferred position values (frequency, duty cycle, waveform)

(10) br command: control the operation of the sweep, br1 command to start the sweep, br0 command to pause

FY3200S series DDS PC communication protocol specification

the sweep.

(11) bc command: Clearing the internal counter.

(12) bm command: Set the scan mode. (sweep)
    Format: bmx + 0x0a
    Where "x" represents a figure represents the scanning mode, for example:
        bm0 expressed as a linear scan mode setting
        bm1 indicated set for the number of scanning
(14) bb command "bb": To set sweep beginning frequency value.
        Form as: bbxxxxxxxxx + 0x0a
        Above "xxxxxxxxx" shows the frequency value represented by 9 digits. For example:
        bb100000000 means setting sweep beginning frequency to 1 MHz. bb000123456 means setting sweep
        beginning frequency to 1.23456 KHz
        bb000000001 means setting sweep beginning frequency to 0.01 Hz.
(15) be command "be": To set sweep end frequency value.
        Form as: bexxxxxxxxx + 0x0a
        Above "xxxxxxxxx" shows the frequency value represented by 9 digits. For example:
        be100000000 means setting sweep end frequency to 1 MHz.

3. c command
c command is to read some information about the current machine.

(1) cf command: Read current set frequency value.
        PC, sent cf + 0x0a, the unit returns cf001000000 indicates the current set frequency rate of 10kHz.

(2) ce command: Read current external measurement frequency.
        PC, sent ce + 0x0a, the unit returns ce001000000 represents the current measured frequency rate of
        10kHz.
(3) cc command: Read current external count.
        PC, sent cc + 0x0a, the unit returns cc000000678 represent the current counter count is 678.

(4) cd command: Read currently set duty cycle.
        PC, sent cd + 0x0a, the unit returns cd50 indicates that the current 50% duty cycle
(5) ct command: Read current sweep time value.
        PC, sent ct + 0x0a, the unit returns ct10 indicates the current sweep time of 10 seconds.
4.d command
(1) dw command: Set deputy waveform.
    Format: dwx + 0x0a

FY3200S series DDS PC communication protocol specification

Where "x" represents a digital waveform represented by, for example:

dw0 expressed set to sine wave

dw1 indicated set a triangular wave or sawtooth

dw2 set represents a rectangular or square wave

(2) df command: Set deputy wave frequency.

Format: dfxxxxxxxxx + 0x0a

Where "xxxxxxxxx" represents nine numbers represent frequency value, for example:

df100000000 indicates the set frequency of 1MHz

df000123456 indicated set frequency 1.23456kHz

df000000001 indicates the set frequency is 0.01Hz

(3) da Command: Set deputy wave amplitude.

Format: baxx.x + 0x0a

Where "xx.x" is the magnitude of value to be set, for example:

da12.3 indicated set amplitude 12.3V

da0.3 indicated set amplitude of 0.3V

(4) do command: Set deputy wave DC offset value.

Format: doxxx.x + 0x0a

Where "xxx.x" is the offset value to be set (the first x is the sign bit, when positive number omitted), for example:

do12.3 represents DC bias is set to 12.3V

do-12.3 represents DC bias is set to -12.3V

(5) dp command: Set deputy wave phase relative to the value of the main wave.

Format: dpxxx.x + 0x0a

Where "xxx.x" is the offset value to be set, for example:

dp123 indicated set deputy wave phase lag of the main wave 123

dp45 indicated set deputy wave phase lag of the main wave of 45 degrees

(6) dd command: Set deputy wave duty cycle.

Format: ddxx + 0x0a

Where "xx" represents two figures represent the duty cycle, for example:

dd51 represented 51% duty cycle setting