

DBBC Command Set

Description

This chapter describes the basic commands the DBBC is able to recognize with the control console. The structure and the meaning of the different commands is Field System based, so to simplify the dialogue with the FS and minimize efforts on the FS side. Any commands sent to the interpreter from the DBBC console is then identical to the command sent from the Field System environment. Similarly output information issued by any command are reported in FS style.

Commands entered in lower case.

At present 10 commands are defined for the main functionalities:

DBBCnn = freq, IF, bwdU, bwdL, gainU, gainL, tpint
(DownConverterConfiguration)

where

nn => 01, ..,16 indicates the number of CoreModule;

freq => is the base band frequency in MHz, in the range 0010.000000 - 2,048.000000;

IF => A or B or C or D. Any Core2 is connected to a band in the standard communication so this value is only informative.

bwdU => band width of the upper side, in MHz;

bwdL => band width of the lower side, in MHz;

bwdL and bwdU are always the same in a single bbc.

gainU => gain of the upper side in the range 0 - 255, step 1

gainL => gain of the upper side in the range 0 - 255, step 1

this values could normally kept to 1 as the magnitude bit is controlled with a dynamic threshold.

tpint => total power integration time in seconds, in the range 1 - 60, step 1

(1 sec implemented at present).

DBBCnn

reports the setting of the CoreModule nn, including cal tone off.

DBBCnn/freq,IF,bwdU,bwdL,gainU,gainL,tpU/calon,tpL/calon,tpUcaloff,tpLcaloff

DBBCIF(A,B,C,D) = input_ch, gain, filter

where

input => input channel of the four possible (1,2,3,4) .

gain => the gain of the channel is set in manual mode if a number is indicated in the range -16 to +16 dB, step 0.5 dB. If AGC is indicated the gain is automatically set so to satisfy the optimal level for the analog to digital converter.

filter=> 2 (10-512 MHz), 1 (512-1024 MHz), 3 (ext 1), 4 (1024-1536)

DBBCIF

reports the settings of the IFs modules.

DBBCFORM = VSI1 mode, VSI2 mode

where

VSI1/2mode => is the mapping of the 64 channels in the VSI1/2 interface. Possible predefined values are: GEO, ASTRO.

DBBCFORM

reports the settings of the VSI output mapping.

DBBCMON= bnn[u|l]

set the Digital to Analog Channel source.

nn => 01,2,3 indicates the number of band;

u/l => upper or lower side band

DBBCMON

reports the Digital to Analog Channel source.

DBBC_CAL_IF

reports the entire system total power and gain settings in the IF units. The output is:

DBBC_CAL_IF=tp_ifa, gain_ifa, tp_ifb, gain_ifb, tp_ifc, gain_ifc,, tp_ifd,
gain_ifd

Not yet active

DBBC_CAL_CH

reports the entire system total power and gain settings in the converted channels. The output is:

DBBC_CAL_IF=tp_l1, gain_l1, tp_u1, gain_u1, tp_l2, gain_l2, tp_u2, gain_u2,
..., tp_l16, gain_l16, tp_u16, gain_u16

Not yet active

PPS_SYNC

Synchronize to external 1pps

DBBCGAIN=dbbcnn,gainU,gainL

Adjust gain level

dbbcnn = 1-16

gainU = 0 - 255
gainL = 0 -255

RESETALL

System reset

RECONF

System reconfiguration