# DBBC3 DDC Multicast-Format for DDC\_V v124, DDC\_U v125 (17/06/2020)

### Control Software Version (0x0000-0x001F)

see version-Command for corresponding value

Address	Size (Bytes)	Name	Description
0x0000	32	Version String	Version String (ASCII Char Array)

### GCoMo Information (0x0020-0x005F)

8 Sets of 8 Bytes, one for each GCoMo (IFA-IFH), see dbbcifX-Command for corresponding values

Address	Size (Bytes)	Name	Description
0x0020	2	IFA AGC Mode	0 = manual, 1 = agc on
0x0022	2	IFA Attenuation	0-63 (in 0.5 dB Steps)
0x0024	2	IFA Total Power	0-65535
0x0026	2	IFA Total Power Target Value	0-65535 Target Total Power Value for AGC Control
0x0028	2	IFB AGC Mode	0 = manual, 1 = agc on
0x002A	2	IFB Attenuation	0-63 (in 0.5 dB Steps)
0x002C	2	IFB Total Power	0-65535
0x002E	2	IFB Total Power Target Value	0-65535 Target Total Power Value for AGC Control
0x0030	2	IFC AGC Mode	0 = manual, 1 = agc on

### Downconverter Information (0x0060-0x009F)

8 Sets of 8 Bytes, one for each Downconverter (for IFA-IFH)

Address	Size (Bytes)	Name	Description
0x0060	2	IFA Synthesizer OEN	Output Enabled Status(0 = oen off, 1 = oen on)
0x0062	2	IFA Synthesizer Lock	Lock Status (0 = no lock, 1 = locked)
0x0064	2	IFA Synthesizer Attenuation	Attenuation (0-31 in dB)
0x0066	2	IFA Synthesizer Frequency	Frequency (in MHz)
0x0068	2	IFB Synthesizer OEN	

## ADB3L Information (0x00A0-0x037F)

8 Sets of 92 Bytes, one for each ADB3L (for ADB3L 1-8, corresponding to IFA-IFH)

Address	Size (Bytes)	Name	Description
0x00A0	4	IFA S0 Total Power	Total Power Value for IFA/Sampler 0 (see dsc_tp-Command)
0x00A4	4	IFA S1 Total Power	Total Power Value for IFA/Sampler 1 (see dsc_tp-Command)
0x00A8	4	IFA S2 Total Power	Total Power Value for IFA/Sampler 2 (see dsc_tp-Command)
0x00AC	4	IFA S3 Total Power	Total Power Value for IFA/Sampler 3 (see dsc_tp-Command)
0x00B0	4	IFA S0 Bit Statistics 00	Bit Statistics for IFA/Sampler 0 Pattern 00 (see dsc_bstat-Command)
0x00B4	4	IFA S0 Bit Statistics 01	Bit Statistics for IFA/Sampler 0 Pattern 01 (see dsc_bstat-Command)
0x00B8	4	IFA S0 Bit Statistics 10	Bit Statistics for IFA/Sampler 0 Pattern 10 (see dsc_bstat-Command)
0x00BC	4	IFA S0 Bit Statistics 11	Bit Statistics for IFA/Sampler 0 Pattern 11 (see dsc_bstat-Command)
0x00C0	4	IFA S1 Bit Statistics 00	Bit Statistics for IFA/Sampler 1 Pattern 00 (see dsc_bstat-Command)
0x00F0	4	IFA delay correlation S0/S1	Delay Correlation Value S0 vs. S1 for IFA
0x00F4	4	IFA delay correlation S1/S2	Delay Correlation Value S1 vs. S2 for IFA
0x00F8	4	IFA delay correlation S2/S3	Delay Correlation Value S2 vs. S3 for IFA
0x00FC	4	IFB S0 Total Power	Total Power Value for IFB/Sampler 0 (see dsc_tp-Command)

**Core3H Information (0x0380-0x43F)** 8 Sets of 24 Bytes, one for each Core3H (for Core3H 1-8, corresponding to IFA-IFH)

Address	Size (Bytes)	Name	Description
0x0380	4	IFA Timestamp	VDIF Timestamp (only included in DDC_U v125 or higher)
0x0384	4	PPS Delay	PPS Delay for IFA (first Block in DDC Mode) in ns (internal vs. external PPS)
0x0388	4	Total Power ON S0	Total Power On for Sampler S0 with contcal
0x038C	4	Total Power OFF S0	Total Power Off for Sampler S0 with contcal
0x0390	4	TSys full band for IFA	TSys for the full band for IFA (only included in DDC_U v125 or higher)
0x0394	4	SEFD full band for IFA	SEFD for the full band for IFA (only included in DDC_U v125 or higher)
0x0398	4	IFB Timestamp	VDIF Timestamp (only included in DDC_U v125 or higher)

BBC Information (0x0440-0x183F)
128 Sets of 40 Bytes, one for each BBC (see dbbcXX-Command)

Address	Size (Bytes)	Name	Description
0x0440	4	BBC001 Frequency	Frequency for BBC001 (fix-point, divide by 524288.0 to get value in MHz)
0x0444	1	BBC001 Bandwidth	Bandwidth for BBC001 in MHz
0x0445	1	BBC001 AGC	Automatic Gain Control Status for BBC001 (0 = Off, 1 = On)
0x0446	1	BBC001 Gain USB	Gain Value BBC001 USB (0-255)
0x0447	1	BBC001 Gain LSB	Gain Value BBC001 LSB (0-255)
0x0448	4	BBC001 Total Power USB On	Total Power Value for BBC001 USB (contcal status On)
0x044C	4	BBC001 Total Power LSB On	Total Power Value for BBC001 LSB (contcal status On)
0x0450	4	BBC001 Total Power USB Off	Total Power Value for BBC001 USB (contcal status Off)
0x0454	4	BBC001 Total Power LSB Off	Total Power Value for BBC001 LSB (contcal status Off)
0x0458	2	BBC001 bit statistics counter 00	currently not used in DDC_V v124 and DDC_U v125
0x045A	2	BBC001 bit statistics counter 01	currently not used in DDC_V v124 and DDC_U v125
0x045C	2	BBC001 bit statistics counter 10	currently not used in DDC_V v124 and DDC_U v125
0x045E	2	BBC001 bit statistics counter 11	currently not used in DDC_V v124 and DDC_U v125
0x0460	2	BBC001 Tsys USB	Tsys for BBC001 USB (only included in DDC_U v125 or higher)
0x0462	2	BBC001 Tsys LSB	Tsys for BBC001 LSB (only included in DDC_U v125 or higher)
0x0464	2	BBC001 SEFD USB	SEFD for BBC001 USB (only included in DDC_U v125 or higher)
0x0466	2	BBC001 SEFD LSB	SEFD for BBC001 LSB (only included in DDC_U v125 or higher)
0x0468	4	BBC002 Frequency	Frequency for BBC002 (fix-point, divide by 524288.0 to get value in MHz)