Reg. HEX 1 2		Purpose			
1 2		Function	Comment 1	Comment 2	Action
2		FreqLSW	CH1 Freq =100 000*FreqMSW + FreqLSW μHz	FreqLSW = Freq - 100 000*FreqMSW	Action
3		FreqMSW	CH1 Freq =100 000*FreqMSW + FreqLSW μHz	FreqMSW = ENT(Freq/100 000)	
	2	FreqLSW	CH2 Freq =100 000*FreqMSW + FreqLSW µHz	FreqLSW = Freq - 100 000*FreqMSW	
4	2	FreqMSW	CH2 Freq =100 000*FreqMSW + FreqLSW µHz	FreqMSW = ENT(Freq/100 000)	
5	1,2	Channel Functions Mode	Bit 5-4-3 = 000 = 0 : CH2 Flash Functions	CH1 OFF is DC Mode with Amplitude&Offset = 0	
			Bit 5-4-3 = 001 = 1 : CH2 Square		
			Bit 5-4-3 = 010 = 2 : CH2 CMOS		
			Bit 5-4-3 = 011 = 3 : CH2 DC		
			Bit 5-4-3 = 100 = 4 : CH2 OFF		
			Bit 2-1-0 = 000 = 0 : CH1 Flash Functions Bit 2-1-0 = 001 = 1 : CH1 Square		
			Bit 2-1-0 = 010 = 2 : CH1 CMOS		
			Bit 2-1-0 = 011 = 3: CH1 Adj-Pulse		
			Bit 2-1-0 = 100 = 4: CH1 DC		
6	1,2	Relays Control + Config bits	Bit 0 = CH2 JD3 Relay ON/OFF (0/1)	CH1 Low Range = JD4=ON, JD2=OFF	Bit5 & Bit6 seem to be linked
			Bit 1 = CH2 JD1 Relay ON/OFF (0/1)	CH1 Mid Range = JD4=OFF, JD2=OFF	strangely: To be checked
			Bit 2 = CH1 JD4 Relay ON/OFF (0/1)	CH1 High Range = JD4=OFF, JD2=ON	
			Bit 3 = CH1 JD2 Relay ON/OFF (0/1)	CH2 Low Range = JD3=ON, JD1=OFF	
			Bit 4 = AC/DC Input Coupled Mode (0/1)	CH2 Mid Range = JD3=OFF, JD1=OFF	
			Bit 5 = Uplink ON/OFF (0/1)	CH2 High Range = JD3=OFF, JD1=ON	
			Bit 6 = Uplink Mode Master/Slave (0/1)		
_		PhaseDW	DI DECENTA DI DIVINI DI DI	DI DIV (4 DI /250\\$4040575	
9		PhaseDW PhaseDW	Phase = 360*(1-PhaseDW/1048575)  Phase = 360*(1-PhaseDW/1048575)	PhaseDW=(1-Phase/360)*1048575 PhaseDW=(1-Phase/360)*1048575	
A		FilaseDW	Filase - 300   1 - FilaseDW   1046373	FilaseDW-(1-Filase/300) 1046373	
В					
	+	Input_measure_Request value	01 = ?	Work in progress	
·	Прис	mpat_measure_nequest value	03 = Request Frequency	Work in progress	
			07 = Request counter		
			OB = Request +WIDE		
			OF = ?		
			1B = Request -WIDE		
			1A = ?		
			1E = ?		
			1F = ?		
		land many 2	Band value are washed by Ban 0:00		
		Input_measure_Requested value	Read value requested by Reg 0x0C	Address has to be written in reg0x12 before and	
Е	1,2	! Flash to FP Read_Value_Read	Return one single value read from flash (one waveform sample but not only)		
F	1.3	! Flash to FP Read_Trigger	Write 1 to trigger Read then write 0 (Reset Trigger)	triggered with Reg 0x0F	
10		THE STATE OF THE S	Request with value from 0 to F written then read reg 0x1A: Read 16 parameters	Seen only in startup sequence	To be identified. Low priority
11		! Flash to FPGA Read_Channel Number	CH1=1, CH2=2, 0=?	Set which channel to load the Waveform for	l little con con priority
12		Memory Address	Waveform Sample Memory address	Set Address in register and fire trigger (0F, 13, 14 or 16)	
13	1,2	Flash to FPGA Read_Trigger	Write 1 to trigger Read then write 0 (Reset Trigger)		
14		FP to Flash Write_Trigger	write 1 to trigger , 0 to reset (rearm trigger)	Written with 0 before flash read operation	
15	5	FP to Flash Write_Value	Value to write to Flash		
16		FP to Flash Write_Page_Erase_Trigger	Write 1 to trigger , 0 to reset (rearm trigger)	Reg0x12 contains address of page to be erased. 1	
				waveform = 4 pages	
17		FP to Flash Write_Start_Address_Trigger	Write 1 to trigger, 0 to reset (rearm trigger)	Trigger Start of block address to FPGA	
18	3	Flash operation Status Request	Ask for cyclic flash operation status update	FPGA returns 1/0 for pending/no pending operation.	
				Cyclic	
19			Trigger reg 0x18 value	Seen only in startup sequence	To be identified. Low priority
1A 1B			? Answer of request from reg 0x10 0 to F?: Write 16 parameters. Parameters Initialization?	Seen only in startup sequence Seen only in startup sequence	To be identified. Low priority  To be identified. Low priority
10		Manual Source for FSK/ASK/PSK/BURST	0= Start, 1=Stop	For burst :Write 0 followed by 1 immediately	To be identified. Low priority
1D		Modulation Source & Burst Number	Reg 0x1D = 00AB BBBB	Set FSK/ASK/PSK /Burst Source + Burst number	
	1	Modulation Source & Surse Humber	A = FSK / ASK / PSK / BURST Source	Sec 13N/13N/13N/3N/3N/3N/3N/3N/3N/3N/3N/3N/3N/3N/3N/3	
			0 = FSK / ASK / PSK / BURST Not Selected		
			1 = CH2		
			2 = Ext.(AC)		
			3 = MANU		
			3 = MANU 4 = Fxt.(DC)		
			4 = Ext.(DC)		
1E	Input	Measure status Request	4 = Ext.(DC) B BBBB= Burst Numbers = 1 to F4240 (1 to 1 000 000)		To be checked
1E	Input	Measure status Request	4 = Ext.(DC)		To be checked
1E	Input	Measure status Request	4 = Ext.(DC) B BBBB= Burst Numbers = 1 to F4240 (1 to 1 000 000) Read 1 for Frequency available		To be checked
1E		Measure status Request	4 = Ext.(DC)  8 B8BBs Burst Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available  Read 2 for not data available		To be checked
1F 20		Measure status Request	4 = Ext.(DC) B BBBB=Burst Numbers = 1 to F4240 (1 to 1 000 000) Read 1 for Frequency available Read 2 for not data available Read 3 for min/max available		To be checked
1F 20 21	1	Pulse Width	4 = Ext.(DC) B BBBB Burst Numbers = 1 to F4240 (1 to 1 000 000) Read 1 for Frequency available Read 2 for not data available Read 3 for min/max available  10ns = 2, 4 000 000 000 ns = 389A CA00 > 1 step = 4 ns	CH1 Only	To be checked
1F 20 21 22	1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW	4 = Ext.(DC)  B BBBB= Burst Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available  Read 2 for not data available  Read 3 for min/max available  10ns = 2, 4 000 000 000 ns = 389A CA00 → 1 step = 4 ns  Freq = 100000*FreqMSW + FreqUSW μHz	FreqMSW = ENT(Freq/100 000)	To be checked
1F 20 21 22 23	1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW	# = Ext,(DC)  B B8BB Burst Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available  Read 3 for not data available  Read 3 for min/max available  Inns = 2, 4 000 000 000 ns = 389A CA00 -> 1 step = 4 ns  Freq = 100000*FreqMSW + FreqLSW µHz  Freq = 100000*FreqMSW + FreqLSW µHz	FreqMSW = ENT(Freq/100 000) FreqLSW = Freq - 100 000*FreqMSW	To be checked
1F 20 21 22	1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW	4 = Ext.(DC)  B BBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available  Read 2 for not data available  Read 3 for min/max available  10ns = 2, 4 000 000 000 ns = 389A CA00 -> 1 step = 4 ns  Freq =100000°FreqMSW + FreqLSW µHz  Freq =100000°FreqMSW + FreqLSW µHz  No Modulation = 10	FreqMSW = ENT(Freq/100 000)	To be checked
1F 20 21 22 23	1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW	4 = Ext.(DC) 8 BBBB= Burst Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available Read 2 for not data available  Read 3 for min/max available  Read 3 for min/max available  10ns = 2, 4 000 000 000 no = 389A CA00 → 1 step = 4 ns Freq = 100000*FreqMSW + FreqLSW μHz	FreqMSW = ENT(Freq/100 000) FreqLSW = Freq - 100 000*FreqMSW	To be checked
1F 20 21 22 23	1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW	4 = Ext,(DC)  8 B8BB Burst Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available  Read 2 for not data available  Read 3 for min/max available  10ns = 2, 4 000 000 000 ns = 389A CA00 > 1 step = 4 ns  Freq = 100000*FreqMSW + FreqUSW μHz  Freq = 100000*FreqMSW + FreqUSW μHz  No Modulation = 10  0.BURST = 10, Burst Number (Reg 0x10) then 0  1.PSK = 1 two times	FreqMSW = ENT(Freq/100 000) FreqLSW = Freq - 100 000*FreqMSW	To be checked
1F 20 21 22 23	1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW	4 = Ext.(DC)  B BBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available  Read 2 for not data available  Read 3 for min/max available  10ns = 2, 4 000 000 000 ns = 389A CA00 → 1 step = 4 ns  Freq =100000*FreqMSW + FreqLSW μHz  Freq =100000*FreqMSW + FreqLSW μHz  Freq =100000*FreqMSW + FreqLSW μHz  O :8 UBST = 10, Burst Number (Reg 0x1D) then 0  1:PSK = 1 two times  2:FSK = 2, Hop frequency(Reg 0x23 & 0x22) then 82	FreqMSW = ENT(Freq/100 000) FreqLSW = Freq - 100 000*FreqMSW	To be checked
1F 20 21 22 23	1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW	## = Ext,(DC)  ## B8BBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  ## Read 1 for Frequency available  ## Read 2 for not data available  ## Read 3 for min/max available  ## Read 4 for min/max avail	FreqMSW = ENT(Freq/100 000) FreqLSW = Freq - 100 000*FreqMSW	To be checked
1F 20 21 22 23	1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW	4 = Ext,(DC)  8 B8BB Burst Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available  Read 2 for not data available  Read 3 for min/max available  10ns = 2, 4 000 000 000 ns = 389A CA00 > 1 step = 4 ns  Freq = 100000*FreqMSW + FreqLSW μHz  Freq = 100000*FreqMSW + FreqLSW μHz  No Modulation = 10  0.8URST = 10, Burst Number (Reg 0x10) then 0  1.PSK = 1 two times  2.FSK = 2, Hop frequency(Reg 0x23 & 0x22) then 82  4.ASK = 4 two times  S.M with CH2 source = 8, Mod Rate(Reg 0x36) then 8	FreqMSW = ENT(Freq/100 000) FreqLSW = Freq - 100 000*FreqMSW	To be checked
1F 20 21 22 23	1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW	# = Ext,(DC)  B BBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available  Read 2 for not data available  Read 3 for min/max available  Read 3 for min/max available  Read 3 for min/max available    Read 3 for min/max available	FreqMSW = ENT(Freq/100 000) FreqLSW = Freq - 100 000*FreqMSW	To be checked
1F 20 21 22 23	1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW	4 = Ext.(DC)  8 B8BB Burst Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available  Read 2 for not data available  Read 3 for min/max available  Read 3 for min/max available  10ns = 2, 4 000 000 000 ns = 389A CA00 > 1 step = 4 ns  Freq = 100000 FreqMSW + FreqLSW μHz  Freq = 100000 FreqMSW + FreqLSW μHz  No Modulation = 10  D.BURST = 10, Burst Number (Reg 0x1D) then 0  1.PSK = 1 two times  2.FSK = 2, Hop frequency(Reg 0x23 & 0x22) then 82  4.ASK = 4 two times  8.AM with CH2 source = 8, Mod Rate(Reg 0x36) then 8  18.AM with CH2 source = 8, Mod Rate(Reg 0x36) then 18  2./ACKF with CH2 source = 20 two times, FM BMS (Reg 0x38 & 0x22) then A0 two times	FreqMSW = ENT(Freq/100 000) FreqLSW = Freq - 100 000*FreqMSW	To be checked
1F 20 21 22 23	1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW	# = Ext,(DC)  B BBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available  Read 2 for not data available  Read 3 for min/max available  Read 3 for min/max available  Read 3 for min/max available    Read 3 for min/max available	FreqMSW = ENT(Freq/100 000) FreqLSW = Freq - 100 000*FreqMSW	To be checked
1F 20 21 22 23	1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW	4 = Ext.(DC) 8 BBBB= Burst Numbers = 1 to F4240 (1 to 1 000 000) Read 1 for Frequency available Read 2 for not data available Read 3 for min/max available  Read 3 for min/max available  1.0ns = 2, 4 000 000 000 nos = 389A CA00 -> 1 step = 4 ns Freq = 100000*FreqMSW + FreqLSW μHz Freq = 100000*FreqMSW + FreqLSW μHz Freq = 100000*FreqMSW + FreqLSW μHz No Modulation = 10 0.0BURST = 10, Burst Number (Reg 0x1D) then 0 1.PSK = 1 two times 2.FSK = 2, Hop frequency(Reg 0x23 & 0x22) then 82 4.ASK = 4 two times 3.AM with CHZ source = 3, Mod Rate(Reg 0x36) then 8 18.AM with EXT. (VCO-IN) source = 210 two times, FM BIAS (Reg 0x23 & 0x22) then A0 two times 30/80.FM with EXT. (VCO-IN) source = 30 two times, FM BIAS (Reg 0x23 & 0x22) then B0 two times	FreqMSW = ENT(Freq/100 000) FreqLSW = Freq - 100 000*FreqMSW	To be checked
1F 20 21 22 23	1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW	## Ext.(DC)  ## B BBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  ## Read 1 for Frequency available  ## Read 2 for not data available  ## Read 3 for min/max availa	FreqMSW = ENT(Freq/100 000) FreqLSW = Freq - 100 000*FreqMSW	To be checked  To be identified. Low priority
1F 20 21 22 23 24	1 1 1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW	4 = Ext, (DC)  8 B8BB Burst Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available  Read 2 for not data available  Read 3 for min/max available  Read 3 for min/max available  10ns = 2, 4 000 000 000 ns = 389A CA00 > 1 step = 4 ns  Freq =100000*FreqMSW + FreqLSW μHz  Freq =100000*FreqMSW + FreqLSW μHz  No Modulation = 10  0.BURST = 10, Burst Number (Reg Dx1D) then 0  1.PSK = 1 two times  2.FSK = 2, Hop frequency(Reg 0x23 & 0x22) then 82  4.ASK = 4 two times  8.AM with CH2 source = 8, Mod Rate(Reg 0x36) then 8  18:AM with CH2 source = 0 two times, FM BIAS (Reg 0x36) then 18  20/ADFM with CH2 source = 20 two times, FM BIAS (Reg 0x23 & 0x22) then 80 two times  30/BDFM with CH2 source = 40, PM BIAS (Reg 0x36) then 18  30/BDFM with CH2 source = 40, PM BIAS (Reg 0x36) then 50 two times  40:PM with CH2 source = 40, PM BIAS (Reg 0x36) then 50  50:PM with EXT. (VCO-IN) source = 50, PM BIAS (Reg 0x36) then 50	FreqMSW = ENT[Freq/100 000) FreqLSW = Freq - 100 000*FreqMSW 2 identical writes looks useless for some modes	
25 26 27	1 1 1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW	A = Ext.(DC) B BBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available Read 2 for not data available Read 3 for min/max available Read 3 for min/max available  Read 3 for min/max available  Read 3 for min/max available  10ns = 2, 4 000 000 000 ns = 389A CA00 -> 1 step = 4 ns Freq = 100000*FreqMSW + FreqLSW μHz Freq = 100000*FreqMSW + FreqLSW μHz Freq = 100000*FreqMSW + FreqLSW μHz No Modulation = 10 0.0BURST = 10, Burst Number (Reg 0x10) then 0 1.pSKs = 1 two times 2.FSK = 2, Hop frequency(Reg 0x23 & 0x22) then 82 4.ASK = 4 two times 8.AM with CH2 source = 8, Mod Rate(Reg 0x36) then 8 18.AM with Ext. (VCO-IN) source = 18, Mod Rate(Reg 0x36) then 18 2.0/AD:FM with CH2 source = 20 two times, FM BIAS (Reg 0x23 & 0x22) then A0 two times 3.0/BD:FM with Ext. (VCO-IN) source = 30 two times, FM BIAS (Reg 0x23 & 0x22) then B0 two times 4.0:PM with CH2 source = 40, PM BIAS (Reg 0x3A) then 40 5:PM with Ext. (VCO-IN) source = 50, PM BIAS (Reg 0x3A) then 50 Written with 0x02FA F080 (= 50 000 000) Written with 0x1DCD 6500 (= 500 000 000) Written with 0x01CD 6500 (= 500 000 000)	FreqMSW = ENT[Freq/100 000) FreqLSW = Freq - 100 000*FreqMSW  2 identical writes looks useless for some modes  Seen only in startup sequence	To be identified. Low priority To be identified. Low priority To be identified. Low priority
25 26 27 28	1 1 1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW	## Ext,(DC)  ## BBBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  ## Read 1 for Frequency available  ## Read 2 for not data available  ## Read 3 for min/max availab	FreqMSW = ENT[Freq/100 000) FreqMSW = Freq - 100 000*FreqMSW 2 identical writes looks useless for some modes  Seen only in startup sequence	To be identified. Low priority
25 26 27 28 29	1 1 1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW	4 = Ext.(DC) B BBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available Read 2 for not data available Read 3 for min/max available  Read 3 for min/max available  Read 3 for min/max available  10ns = 2, 4 000 000 000 ns = 389A CA00 → 1 step = 4 ns Freq = 100000*FreqMSW + FreqLSW μHz Freq = 100000*FreqMSW + FreqLSW μHz Freq = 100000*FreqMSW + FreqLSW μHz No Modulation = 10 0.0BURST = 10, Burst Number (Reg 0x1D) then 0 1.PSKs = 1 two times 2.FSK = 2, Hop frequency(Reg 0x23 & 0x22) then 82 4.ASK = 4 two times 3.AM with CH2 source = 8, Mod Rate(Reg 0x36) then 8 18.AM with CH2 source = 8, Mod Rate(Reg 0x36) then 18 18.AM with CH2 source = 20 two times, FM BIAS (Reg 0x23 & 0x22) then A0 two times 30/Bo.FM with EXT. (VCO-IN) source = 30 two times, FM BIAS (Reg 0x23 & 0x22) then B0 two times 40:PM with CH2 source = 40, PM BIAS (Reg 0x3A) then 40 50:PM with EXT. (VCO-IN) source = 30 two times, FM BIAS (Reg 0x33 & 0x22) then B0 two times 40:PM with CH2 source = 40, PM BIAS (Reg 0x3A) then 40 50:PM with EXT. (VCO-IN) source = 30 two times, FM BIAS (Reg 0x3A) then 50 Written with 0x02FA F080 (= 50 000 000) Written with 0x2FA F080 (= 50 000 000) Written with 0x2AD F200 Written with 0x2AD F200 Written with 0x2AD F200 Written with 0x63FF	FreqMSW = ENT[Freq/100 000) FreqLSW = Freq - 100 000*FreqMSW  2 identical writes looks useless for some modes  Seen only in startup sequence	To be identified. Low priority
25 26 27 28 29 24	1 1 1	Pulse Width FSK HOP FM BIAS FreqLSW FSK HOP FM BIAS FreqMSW Modulation Mode	## = Ext,(DC)  ## B BBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  ## Read 1 for Frequency available  ## Read 2 for not data available  ## Read 3 for min/max avai	FreqMSW = ENT[Freq/100 000) FreqMSW = Freq - 100 000*FreqMSW  2 identical writes looks useless for some modes  Seen only in startup sequence	To be identified. Low priority
25 26 27 28 29	1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW	4 = Ext.(DC) B BBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available Read 2 for not data available Read 3 for min/max available  Read 3 for min/max available  Read 3 for min/max available  10ns = 2, 4 000 000 000 ns = 389A CA00 → 1 step = 4 ns Freq = 100000*FreqMSW + FreqLSW μHz Freq = 100000*FreqMSW + FreqLSW μHz Freq = 100000*FreqMSW + FreqLSW μHz No Modulation = 10 0.0BURST = 10, Burst Number (Reg 0x1D) then 0 1.PSKs = 1 two times 2.FSK = 2, Hop frequency(Reg 0x23 & 0x22) then 82 4.ASK = 4 two times 3.AM with CH2 source = 8, Mod Rate(Reg 0x36) then 8 18.AM with CH2 source = 8, Mod Rate(Reg 0x36) then 18 18.AM with CH2 source = 20 two times, FM BIAS (Reg 0x23 & 0x22) then A0 two times 30/Bo.FM with EXT. (VCO-IN) source = 30 two times, FM BIAS (Reg 0x23 & 0x22) then B0 two times 40:PM with CH2 source = 40, PM BIAS (Reg 0x3A) then 40 50:PM with EXT. (VCO-IN) source = 30 two times, FM BIAS (Reg 0x33 & 0x22) then B0 two times 40:PM with CH2 source = 40, PM BIAS (Reg 0x3A) then 40 50:PM with EXT. (VCO-IN) source = 30 two times, FM BIAS (Reg 0x3A) then 50 Written with 0x02FA F080 (= 50 000 000) Written with 0x2FA F080 (= 50 000 000) Written with 0x2AD F200 Written with 0x2AD F200 Written with 0x2AD F200 Written with 0x63FF	FreqMSW = ENTFread/100 000) FreqMSW = Freq - 100 000*FreqMSW 2 identical writes looks useless for some modes  Seen only in startup sequence	To be identified. Low priority
25 26 27 28 29 24	1 1 1	Pulse Width FSK HOP FM BIAS FreqLSW FSK HOP FM BIAS FreqMSW Modulation Mode	## = Ext,(DC)  ## B BBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  ## Read 1 for Frequency available  ## Read 2 for not data available  ## Read 3 for min/max avai	FreqMSW = ENT[Freq/100 000) FreqMSW = Freq - 100 000*FreqMSW  2 identical writes looks useless for some modes  Seen only in startup sequence Seen only of Settle W-2047+(4094/0,62)*Offset Mid Range : OffsetDW-2047+(4094/6,21)*Offset	To be identified. Low priority
25 26 27 28 29 28	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW Modulation Mode	## = Ext, (DC)  ## BBBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  ## Read 1 for Frequency available  ## Read 3 for min/max available  ## Inns = 2, 4 000 000 000 000 ns = 389A CA00 -> 1 step = 4 ns  ## Freq = 100000*FreqMSW + FreqUSW pHz  ## Freq = 100000*FreqMSW + FreqUSW pHz  ## Read 3 for min/max available  ## Inns Modulation = 10  ## Inns	FreqMSW = ENTfread/100 000) FreqMSW = Freq - 100 000*FreqMSW 2 identical writes looks useless for some modes  Seen only in startup sequence Iow Range : OffsetDW-2047+(4094/0,62)*Offset Mid Range : OffsetDW-2047+(4094/6,62)*Offset High Range : OffsetDW-2047+(4094/6)*Offset	To be identified. Low priority 4094 is a best match but not logical (DAC has 4096 steps)
25 26 27 28 29 24	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Pulse Width FSK HOP FM BIAS FreqLSW FSK HOP FM BIAS FreqMSW Modulation Mode	## = Ext,(DC)  ## B BBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  ## Read 1 for Frequency available  ## Read 2 for not data available  ## Read 3 for min/max avai	FreqMSW = ENT[Freq/100 000) FreqMSW = Freq - 100 000*FreqMSW  2 identical writes looks useless for some modes  Seen only in startup sequence Seen only in st	To be identified. Low priority 4094 is a best match but not logical (DAC has 4096 steps)
25 26 27 28 29 28	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW Modulation Mode	## = Ext, (DC)  ## BBBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  ## Read 1 for Frequency available  ## Read 3 for min/max available  ## Inns = 2, 4 000 000 000 000 ns = 389A CA00 -> 1 step = 4 ns  ## Freq = 100000*FreqMSW + FreqUSW pHz  ## Freq = 100000*FreqMSW + FreqUSW pHz  ## Read 3 for min/max available  ## Inns Modulation = 10  ## Inns	FreqMSW = ENT[Freq/100 000) FreqMSW = Freq - 100 000*FreqMSW  2 identical writes looks useless for some modes  Seen only in startup sequence Low Range : OffsetDW-2047+(4094/0.62)*Offset Mid Range : OffsetDW-2047+(4094/2.4)*Offset Low Range : OffsetDW-2047+(4094/2.6)*Offset Low Range : OffsetDW-2047+(4094/2.6)*Offset Low Range : OffsetDW-2047+(4094/2.6)*Offset Mid Range : OffsetDW-2047+(4094/2.6)*Offset Mid Range : OffsetDW-2047+(4094/2.6)*Offset	To be identified. Low priority 4094 is a best match but not logical (DAC has 4096 steps)
25 26 27 28 29 2A 2B	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW Modulation Mode  OffsetDW  OffsetDW	# = Ext.(DC) B BBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available Read 2 for not data available Read 3 for min/max available  Read 3 for min/max available  ### Read 3 for min/max	FreqMSW = ENT[Freq/100 000) FreqMSW = Freq - 100 000*FreqMSW  2 identical writes looks useless for some modes  Seen only in startup sequence Seen only in st	To be identified. Low priority A094 is a best match but not logical (DAC has 4096 steps) 4094 is a best match but not logical (DAC has 4096 steps)
25 26 27 28 29 28	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW Modulation Mode	## Ext.(DC) B BBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available Read 2 for not data available Read 3 for min/max available  Read 3 for min/max available  Inns = 2, 4 000 000 000 ns = 389A CA00 -> 1 step = 4 ns Freq = 100000°FreqMSW + FreqUSW µHz Freq = 100000°FreqMSW + FreqUSW µHz Freq = 100000°FreqMSW + FreqUSW µHz No Modulation = 10 0.8URST = 10, Burst Number (Reg 0x1D) then 0 1.PSKs = 1 two times 2.FSK = 2, Hop frequency(Reg 0x23 & 0x22) then 82 4.ASK = 4 two times 8.AM with CH2 source = 8, Mod Rate(Reg 0x36) then 8 8.AM with CH2 source = 8, Mod Rate(Reg 0x36) then 18 20/ADFM with CH2 source = 20 two times, FM BIAS (Reg 0x23 & 0x22) then A0 two times 30/BDFM with EXT. (VCO-IN) source = 30 two times, FM BIAS (Reg 0x23 & 0x22) then B0 two times 40:PM with CH2 source = 40, PM BIAS (Reg 0x3A) then 40 SO:PM with EXT. (VCO-IN) source = 50, PM BIAS (Reg 0x3A) then 50 Written with 0x2AD 5 E00 00 000) Written with 0x2AD 5 E00 Written with 0x2AD 5 E00 Written with 0x3AD 1 A000 Voltage DC  LowRange: Amp=0.5xAmpDW/3685	FreqMSW = ENT[Freq/100 000) FreqMSW = Freq - 100 000*FreqMSW  2 identical writes looks useless for some modes  Seen only in startup sequence Low Range : OffsetDW=2047+(4094/0,62)*Offset Mid Range : OffsetDW=2047+(4094/0,62)*Offset Low Range : OffsetDW=2047+(4094/0,62)*Offset Mid Range : OffsetDW=2047+(4094/0,62)*Offset Low Range : AmpDW=Amp=3685/0,5	To be identified. Low priority 4094 is a best match but not logical (DAC has 4096 steps)  4094 is a best match but not logical (DAC has 4096 steps)  Just for offset = 0. Ranges depend or
25 26 27 28 29 2A 2B	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW Modulation Mode  OffsetDW  OffsetDW	## Ext.(DC)  ## BBBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  ## Read 1 for Frequency available  ## Read 3 for min/max available  ## Inns = 2, 4 000 000 000 ns = 389A CA00 > 1 step = 4 ns  ## Freq = 100000*FreqMSW + FreqUSW pHz  ## Freq = 100000*FreqMSW + FreqUSW pHz  ## Read 3 for min/max available  ## Inns Modulation = 10  ## Inns Modulat	FreqMSW = ENT[Freq/100 000) FreqMSW = Freq - 100 000*FreqMSW 2 identical writes looks useless for some modes  Seen only in startup sequence Seen only in sta	To be identified. Low priority A094 is a best match but not logical (DAC has 4096 steps) 4094 is a best match but not logical (DAC has 4096 steps)
25 26 27 28 29 24 20 27 28 20 20 20 20 20 20 20 20 20 20 20 20 20	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Pulse Width FSK HOP FM BIAS FreqLSW FSK HOP FM BIAS FreqMSW Modulation Mode  OffsetDW  AmpDW	## Ext.(DC)  B BBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available  Read 2 for not data available  Read 3 for min/max available  Read 3 for min/max available  Read 3 for min/max available  ### Read 4 for min/max available  #### Read 5 for min/max available  #### Read 5 for min/max available  #### Read 5 for min/max	FreqMSW = ENT[Freq/100 000) FreqMSW = Freq - 100 000 "FreqMSW  2 identical writes looks useless for some modes  Seen only in startup sequence Low Range : OffsetDW=2047+(4094/6,21)*Offset Mid Range : OffsetDW=2047+(4094/6,21)*Offset Low Range : OffsetDW=2047+(4094/6,21)*Offset Mid Range : OffsetDW=2047+(4094/6,21)*Offset Low Range : OffsetDW=2047+(4094/6)*Offset Low Range : OffsetDW=2047+(4094/6)*Offset Low Range: AmpDW=Amp*3685/0.  Mid Range: AmpDW=Amp*3685/0.	To be identified. Low priority Hop4 is a best match but not logical (DAC has 4096 steps)  Just for offset = 0. Ranges depend or offset value too
25 26 27 28 29 2A 2B	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW Modulation Mode  OffsetDW  OffsetDW	## Ext.(DC)  ## BBBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available  Read 2 for not data available  Read 3 for min/max available    Date	FreqMSW = ENT[Freq/100 000) FreqMSW = Freq - 100 000*FreqMSW  2 identical writes looks useless for some modes  Seen only in startup sequence Low Range : OffsetDW=2047+(4094/0,62)*Offset Mid Range : OffsetDW=2047+(4094/0,62)*Offset Low Range : OffsetDW=2047+(4094/2)*Offset Low Range : OffsetDW=2047+(4094/2)*Offset Low Range : OffsetDW=2047+(4094/2)*Offset Low Range : OffsetDW=2047+(4094/2)*Offset Low Range : AmpDW=Amp*3685/0,5 Mid Range: AmpDW=Amp*3685/20 Low Range: AmpDW=Amp*3685/0,5	To be identified. Low priority 4094 is a best match but not logical (DAC has 4096 steps) Just for offset = 0. Ranges depend or offset value too  Just for offset = 0. Ranges depend or
25 26 27 28 29 24 20 27 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Pulse Width FSK HOP FM BIAS FreqLSW FSK HOP FM BIAS FreqMSW Modulation Mode  OffsetDW  AmpDW	A = Ext.(DC) B BBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available Read 2 for not data available Read 3 for min/max available Read 3 for min/max available  Read 3 for min/max available  10ns = 2, 4 000 000 000 0s = 389A CA00 → 1 step = 4 ns Freq = 100000*FreqMSW + FreqLSW μHz Freq = 100000*FreqMSW + FreqLSW μHz Freq = 100000*FreqMSW + FreqLSW μHz No Modulation = 10 0.0BURST = 10, Burst Number (Reg 0x10) then 0 1.PSK = 1 two times 2.FSK = 2, Hop frequency(Reg 0x23 & 0x22) then 82 4.ASK = 4 two times 8.AM with CH2 source = 8, Mod Rate(Reg 0x36) then 8 18.AM with CH2 source = 8, Mod Rate(Reg 0x36) then 8 18.AM with CH2 source = 20 two times, FM BIAS (Reg 0x23 & 0x22) then A0 two times 30/BoFM with Ext. (VCO-IN) source = 30 two times, FM BIAS (Reg 0x23 & 0x22) then B0 two times 40:PM with CH2 source = 40, PM BIAS (Reg 0x3A) then 40 50:PM with Ext. (VCO-IN) source = 30 two times, FM BIAS (Reg 0x3A) then 50 Written with 0x02FA F080 (= 50 000 000) Written with 0x1DC0 5500 (= 500 000 000) Written with 0x1D (S500 (= 500 000 000) Written with 0x61BF Written with 0x61BF Written with 0x61BF Written with 0x63F	FreqMSW = ENT[Freq/100 000) FreqMSW = Freq - 100 000*FreqMSW  2 identical writes looks useless for some modes  Seen only in startup sequence Seen only in st	To be identified. Low priority Hop4 is a best match but not logical (DAC has 4096 steps)  Just for offset = 0. Ranges depend or offset value too
25 26 27 28 29 24 20 27 28 20 20 20 20 20 20 20 20 20 20 20 20 20	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW Modulation Mode  OffsetDW  AmpDW  AmpDW	## Ext.(DC)  ## B BBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  ## Read 1 for Frequency available  ## Read 2 for not data available  ## Read 3 for min/max available  ## Read 4 for min/max availa	FreqMSW = ENT[Freq/100 000) FreqMSW = Freq - 100 000*FreqMSW  2 identical writes looks useless for some modes  Seen only in startup sequence Low Range : OffsetDW=2047+(4094/0,62)*Offset Mid Range : OffsetDW=2047+(4094/0,62)*Offset Low Range : OffsetDW=2047+(4094/2)*Offset Low Range : OffsetDW=2047+(4094/2)*Offset Low Range : OffsetDW=2047+(4094/2)*Offset Low Range : OffsetDW=2047+(4094/2)*Offset Low Range : AmpDW=Amp*3685/0,5 Mid Range: AmpDW=Amp*3685/20 Low Range: AmpDW=Amp*3685/0,5	To be identified. Low priority 4094 is a best match but not logical (DAC has 4096 steps) Just for offset = 0. Ranges depend or offset value too  Just for offset = 0. Ranges depend or
25 26 27 28 29 2A 2B 2C	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW Modulation Mode  OffsetDW  OffsetDW  AmpDW  AmpDW  DutyDW	## Ext.(DC) B BBBBB BUSK Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available Read 2 for not data available Read 3 for min/max available  ### Read 3 for min/m	FreqMSW = ENT[Freq/100 000) FreqMSW = Freq - 100 000*FreqMSW  2 identical writes looks useless for some modes  Seen only in startup sequence Seen only in st	To be identified. Low priority 4094 is a best match but not logical (DAC has 4096 steps) Just for offset = 0. Ranges depend or offset value too  Just for offset = 0. Ranges depend or
25 22 23 24 25 26 27 28 29 2A 2B 2C 2D	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW Modulation Mode  OffsetDW  AmpDW  AmpDW	## Ext.(DC)  ## B BBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  ## Read 1 for Frequency available  ## Read 2 for not data available  ## Read 3 for min/max available  ## Read 4 for min/max availa	FreqMSW = ENT[Freq/100 000) FreqMSW = Freq - 100 000*FreqMSW  2 identical writes looks useless for some modes  Seen only in startup sequence Seen only in st	To be identified. Low priority 4094 is a best match but not logical (DAC has 4096 steps) Just for offset = 0. Ranges depend or offset value too  Just for offset = 0. Ranges depend or
25 26 27 28 29 20 27 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW Modulation Mode  OffsetDW  OffsetDW  AmpDW  AmpDW  DutyDW	## Ext.(DC) B BBBBB BUSK Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available Read 2 for not data available Read 3 for min/max available  ### Read 3 for min/m	FreqMSW = ENT[Freq/100 000) FreqMSW = Freq - 100 000*FreqMSW  2 identical writes looks useless for some modes  Seen only in startup sequence Seen only in st	To be identified. Low priority 4094 is a best match but not logical (DAC has 4096 steps) Just for offset = 0. Ranges depend or offset value too  Just for offset = 0. Ranges depend or
25 26 27 27 28 29 28 20 20 20 20 20 20 20 20 20 20 20 20 20	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW Modulation Mode  OffsetDW  OffsetDW  AmpDW  AmpDW  DutyDW	## Ext.(DC) B BBBBB BUSK Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available Read 2 for not data available Read 3 for min/max available  ### Read 3 for min/m	FreqMSW = ENT[Freq/100 000) FreqMSW = Freq - 100 000*FreqMSW  2 identical writes looks useless for some modes  Seen only in startup sequence Seen only in st	To be identified. Low priority 4094 is a best match but not logical (DAC has 4096 steps) Just for offset = 0. Ranges depend o offset value too Just for offset = 0. Ranges depend o
25 26 27 28 29 2A 2B 2C 2D 2E	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW Modulation Mode  OffsetDW  OffsetDW  AmpDW  AmpDW  DutyDW	## Ext.(DC) B BBBBB BUSK Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available Read 2 for not data available Read 3 for min/max available  ### Read 3 for min/m	FreqMSW = ENT[Freq/100 000) FreqMSW = Freq - 100 000*FreqMSW  2 identical writes looks useless for some modes  Seen only in startup sequence Seen only in st	To be identified. Low priority 4094 is a best match but not logical (DAC has 4096 steps) Just for offset = 0. Ranges depend or offset value too  Just for offset = 0. Ranges depend or
25 26 27 28 24 25 26 27 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW Modulation Mode  OffsetDW  OffsetDW  AmpDW  AmpDW  DutyDW	## Ext.(DC) B BBBBB BUSK Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available Read 2 for not data available Read 3 for min/max available  ### Read 3 for min/m	FreqMSW = ENT[Freq/100 000) FreqMSW = Freq - 100 000*FreqMSW  2 identical writes looks useless for some modes  Seen only in startup sequence Seen only in st	To be identified. Low priority 4094 is a best match but not logical (DAC has 4096 steps) Just for offset = 0. Ranges depend or offset value too  Just for offset = 0. Ranges depend or
25 26 27 28 29 2A 2B 2C 2D 2E	1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW Modulation Mode  OffsetDW  OffsetDW  AmpDW  DutyDW  DutyDW	## Ext.(DC)  ## B8BBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  ## Read I for Frequency available  ## Read I for Frequency available  ## Read I for min/max available  ## I fo	FreqMSW = ENT[Freq/100 000) FreqMSW = Freq - 100 000*FreqMSW  2 identical writes looks useless for some modes  Seen only in startup sequence Seen only in st	To be identified. Low priority 4094 is a best match but not logical (DAC has 4096 steps) Just for offset = 0. Ranges depend o offset value too Just for offset = 0. Ranges depend o
25 26 27 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	1 1 1 2 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 1 2 2 1	Pulse Width FSK HOP FM BIAS FreqUSW FSK HOP FM BIAS FreqMSW Modulation Mode  OffsetDW  AmpDW  AmpDW  DutyDW  DutyDW  Modulation AM Mod.Rate	## Ext.(DC)  B BBBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available  Read 2 for not data available  Read 3 for min/max available  Read 3 for min/max available  Read 3 for min/max available  ### Read 3 for min/max a	FreqMSW = ENT[Freq/100 000) FreqMSW = Freq - 100 000*FreqMSW  2 identical writes looks useless for some modes  Seen only in startup sequence Low Range : OffsetDW-2047+(4094/0,62)*Offset Mid Range : OffsetDW-2047+(4094/0,62)*Offset Mid Range : OffsetDW-2047+(4094/4)*Offset Low Range : OffsetDW-2047+(4094/4)*Offset Low Range : OffsetDW-2047+(4094/4)*Offset Low Range : OffsetDW-2047+(4094/4)*Offset Low Range : AmpDW-Amp*3685/0,5 Mid Range : AmpDW-Amp*3685/20 Low Range : AmpDW-Amp*3685/5 High Range: AmpDW-Amp*3685/5 High Range: AmpDW-Amp*3685/5 High Range: AmpDW-Amp*3685/5	To be identified. Low priority 4094 is a best match but not logical (DAC has 4096 steps) Just for offset = 0. Ranges depend or offset value too  Just for offset = 0. Ranges depend or
25 26 27 28 29 20 20 20 21 23 24 24 26 27 28 29 29 20 20 20 21 20 20 20 20 20 20 20 20 20 20 20 20 20	1 1 1 1 1 1 1 2 2 1 1 2 2 1 1 2 2 1	Pulse Width FSK HOP FM BIAS FreqLSW FSK HOP FM BIAS FreqMSW Modulation Mode  OffsetDW  OffsetDW  AmpDW  DutyDW  DutyDW  Modulation AM Mod.Rate Phase Trigger	A = Ext.(DC) B BBBB Burst Numbers = 1 to F4240 (1 to 1 000 000) Read 1 for Frequency available Read 2 for not data available Read 3 for min/max available Read 3 for min/max available Read 3 for min/max available  Ions = 2, 4 000 000 000 0s = 389A CA00 → 1 step = 4 ns Freq =100000*FreqMSW + FreqLSW μHz Freq =100000*FreqMSW + FreqLSW μHz Freq =100000*FreqMSW + FreqLSW μHz No Modulation = 10 0.BURST = 10, Burst Number (Reg 0x10) then 0 1.PSK = 1 two times 2.FSK = 2, Hop frequency(Reg 0x23 & 0x22) then 82 4.ASK = 4 two times 8.AM with CH2 source = 8, Mod Rate(Reg 0x36) then 8 18.AM with EXT. (VCO-IN) source = 18, Mod Rate(Reg 0x36) then 18 12.0/ADFM with CH2 source = 20 two times, FM BIAS (Reg 0x23 & 0x22) then A0 two times 30/BDFM with EXT. (VCO-IN) source = 30 two times, FM BIAS (Reg 0x23 & 0x22) then B0 two times 40:PM with CH2 source = 40, PM BIAS (Reg 0x3A) then 40 50:PM with EXT. (VCO-IN) source = 50, PM BIAS (Reg 0x3A) then 50 Written with 0x02FA F080 (= 50 000 000) Written with 0x02FA F080 (= 50 000 000) Written with 0x1DCD E550 (= 500 000 000) Written with 0x01 Written with 0x02AD 5 F200 Written with 0x3AD 5 F200 Written with 0x3AD 5 F200 Written with 0x3AD 5 F200  Voltage DC  LowRange: Amp=0.5xAmpDW/3685 High Range: Amp=5xAmpDW/3685 Hi	FreqMSW = ENT[Freq/100 000) FreqMSW 2 identical writes looks useless for some modes  Seen only in startup sequence Low Range : OffsetDW=2047+(4094/0,62)*Offset Mid Range : OffsetDW=2047+(4094/0,62)*Offset High Range : OffsetDW=2047+(4094/0,62)*Offset High Range : OffsetDW=2047+(4094/0,62)*Offset Low Range : AmpDW=Amp*3685/0.5 Mid Range: AmpDW=Amp*3685/0.5 Mid Rang	To be identified. Low priority 4094 is a best match but not logical (DAC has 4096 steps)  Just for offset = 0. Ranges depend or offset value too  Just for offset = 0. Ranges depend or offset value too
25 26 27 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	1 1 1 1 1 1 1 2 2 1 1 2 2 1 1 2 2 1	Pulse Width FSK HOP FM BIAS FreqUSW FSK HOP FM BIAS FreqMSW Modulation Mode  OffsetDW  AmpDW  AmpDW  DutyDW  DutyDW  Modulation AM Mod.Rate	## Ext.(DC)  ## BBBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  ## Read I for Frequency available  ## Read I for Frequency available  ## Read I for min/max available  ## Read I for min/max available  ## Read I for min/max available  ## I for min/max a	FreqMSW = ENT[Freq/100 000) FreqMSW = Freq - 100 000*FreqMSW  2 identical writes looks useless for some modes  Seen only in startup sequence Low Range : OffsetDW-2047+(4094/6,21)*Offset Mid Range : OffsetDW-2047+(4094/6,21)*Offset High Range : OffsetDW-2047+(4094/24)*Offset Low Range : OffsetDW-2047+(4094/24)*Offset Low Range : OffsetDW-2047+(4094/24)*Offset Low Range : OffsetDW-2047+(4094/24)*Offset Low Range: AmpDW-Amp*3685/0.5 Mid Range: AmpDW-Amp*3685/0.5 Mid Range: AmpDW-Amp*3685/0.5 Mid Range: AmpDW-Amp*3685/5 High Range: AmpDW-Amp*3685/5 High Range: AmpDW-Amp*3685/5 High Range: AmpDW-Amp*3685/5 With Range: AmpDW-Amp*3685/20  Written after Phase update  Written after Phase update  Written after Phase update	To be identified. Low priority 4094 is a best match but not logical (DAC has 4096 steps)  Just for offset = 0. Ranges depend or offset value too  Just for offset = 0. Ranges depend or offset value too  Multiple of 4ns, default=8ns
25 26 27 28 29 2A 2B 2C 2D 2E 2F 30 31 32 33 34 35 36 37	1 1 1 1 1 1 1 2 2 1 1 2 2 1 1 2 2 1	Pulse Width FSK HOP FM BIAS FreqLSW FSK HOP FM BIAS FreqMSW Modulation Mode  OffsetDW  OffsetDW  AmpDW  DutyDW  DutyDW  Modulation AM Mod.Rate Phase Trigger	A = Ext.(DC) B BBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available Read 2 for not data available Read 3 for min/max available  Read 2 for min/max available  Read 3 for min/max available  Read 3 for min/max available  Read 3 for min/max available  Read 2 for min/max available	FreqMSW = ENT[Freq/100 000) FreqMSW 2 identical writes looks useless for some modes  Seen only in startup sequence Low Range : OffsetDW=2047+(4094/0,62)*Offset Mid Range : OffsetDW=2047+(4094/0,62)*Offset High Range : OffsetDW=2047+(4094/0,62)*Offset High Range : OffsetDW=2047+(4094/0,62)*Offset Low Range : AmpDW=Amp*3685/0.5 Mid Range: AmpDW=Amp*3685/0.5 Mid Rang	To be identified. Low priority 4094 is a best match but not logical (DAC has 4096 steps)  Just for offset = 0. Ranges depend or offset value too  Just for offset = 0. Ranges depend or offset value too
25 26 27 28 29 2A 2D 2D 2E 2F 30 31 32 33 34 35 36 37	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW Modulation Mode  OffsetDW  OffsetDW  AmpDW  DutyDW  DutyDW  DutyDW  Modulation AM Mod.Rate Phase Trigger Square Wave: Rise time /Fall time	## Ext.(DC)  ## BBBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  ## Read I for Frequency available  ## Read I for Frequency available  ## Read I for min/max available  ## I for	FreqMSW = ENT[Freq/100 000) FreqMSW = Freq - 100 000*FreqMSW  2 identical writes looks useless for some modes  Seen only in startup sequence Low Range : OffsetDW-2047+(4094/0.62)*Offset Mid Range : OffsetDW-2047+(4094/0.62)*Offset Mid Range : OffsetDW-2047+(4094/2.4)*Offset Low Range : OffsetDW-2047+(4094/2.4)*Offset Low Range : OffsetDW-2047+(4094/2.4)*Offset Low Range : OffsetDW-2047+(4094/2.4)*Offset Low Range : AmpDW-Amp*3685/5 Mid Range: AmpDW-Amp*3685/5 Mid Range: AmpDW-Amp*3685/0.5 Mid Range: AmpDW-Amp*3685/0.5 Mid Range: AmpDW-Amp*3685/0.5 Mid Range: AmpDW-Amp*3685/20  Written after Phase update ObOORR RRRR RRRR RRRR=ENT(65532/Rise) ObOORR RRRR RRRR RRRR ENT(65532/Fail)	To be identified. Low priority 4094 is a best match but not logical (DAC has 4096 steps)  Just for offset = 0. Ranges depend or offset value too  Just for offset = 0. Ranges depend or offset value too  Multiple of 4ns, default=8ns Stored on 14 bits
25 26 27 28 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Pulse Width FSK HOP FM BIAS FreqLSW FSK HOP FM BIAS FreqMSW Modulation Mode  OffsetDW  OffsetDW  AmpDW  DutyDW  DutyDW  Modulation AM Mod.Rate Phase Trigger	## Ext.(DC)  ## BBBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  ## Read I for Frequency available  ## Read I for Frequency available  ## Read I for min/max available  ## I for	FreqMSW = ENT[Freq/100 000) FreqMSW = Freq - 100 000*FreqMSW  2 identical writes looks useless for some modes  Seen only in startup sequence Low Range : OffsetDW-2047+(4094/6,21)*Offset Mid Range : OffsetDW-2047+(4094/6,21)*Offset High Range : OffsetDW-2047+(4094/24)*Offset Low Range : OffsetDW-2047+(4094/24)*Offset Low Range : OffsetDW-2047+(4094/24)*Offset Low Range : OffsetDW-2047+(4094/24)*Offset Low Range: AmpDW-Amp*3685/0.5 Mid Range: AmpDW-Amp*3685/0.5 Mid Range: AmpDW-Amp*3685/0.5 Mid Range: AmpDW-Amp*3685/5 High Range: AmpDW-Amp*3685/5 High Range: AmpDW-Amp*3685/5 High Range: AmpDW-Amp*3685/5 With Range: AmpDW-Amp*3685/20  Written after Phase update  Written after Phase update  Written after Phase update	To be identified. Low priority 4094 is a best match but not logical (DAC has 4096 steps)  Just for offset = 0. Ranges depend or offset value too  Just for offset = 0. Ranges depend or offset value too  Multiple of 4ns, default=8ns
25 26 27 28 29 28 29 20 20 20 21 21 21 21 21 22 22 23 24 24 25 26 27 28 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Pulse Width FSK HOP/ FM BIAS FreqLSW FSK HOP/ FM BIAS FreqMSW Modulation Mode  OffsetDW  OffsetDW  AmpDW  DutyDW  DutyDW  DutyDW  Modulation AM Mod.Rate Phase Trigger Square Wave: Rise time /Fall time	## Ext.(DC)  B BBBB Burst Numbers = 1 to F4240 (1 to 1 000 000)  Read 1 for Frequency available  Read 2 for not data available  Read 3 for min/max available  Read 3 for min/max available  ### Read 3 for min/ma	FreqMSW = ENT[Freq/100 000) FreqMSW = Freq - 100 000*FreqMSW  2 identical writes looks useless for some modes  Seen only in startup sequence Seen only in st	To be identified. Low priority 4094 is a best match but not logical (DAC has 4096 steps)  Just for offset = 0. Ranges depend or offset value too  Just for offset = 0. Ranges depend or offset value too  Multiple of 4ns, default=8ns Stored on 14 bits