Dictionary Creation Exercise

Class Name: Instrument_Status

Attribute	Min/Max	Description	Type	Min	Max	Values
number_of_samples	1,1	Number of samples to be measured in the test.	ASCII_NonNegative_Integer	0	65535	
sampling_frequency	1,1	Sampling frequency for the commanded test.	ASCII_NonNegative_Integer	0	65535	
instrument_status_type	1,1	The first 4 bits (MSB ones) determine the Current SW mode as follows: 1 -> StandBy; 2-> Ready; 4 -> Safe. The next 4 bits (LSB ones) determine the test ID.	ASCII_NonNegative_Integer	Not Used	Not Used	=1 meaning Standby, =2 meaning Ready, = 4 meaning Safe
beginning_of_test_timestamp	1,1	Timestamp at the beginning of the test (since the last power on of RAMAN).	ASCII_NonNegative_Integer	0	65535	
rotation_angle	1,1	rotation angle, not actually an rls attribute	ASCII_Real	-180	180	Include Units_of_Angle in attribute definition
criticality	1,1	Critical levels of the Science TM packets.	ASCII_NonNegative_Integer	Not Used	Not Used	= 03 meaning Science Critical, Science packets with the highest download priority = 02 meaning Science Non-Critical, Science packets with the lowest download priority

Class Name: Autofocus_Data

Attribute	Min/Max	Description	Type	Min	Max	Values
step_mode	1,1	Step Mode controls how a stepper motor operates, there are three commonly used excitation modes for stepper motors, full step, quarter step and microstepping.	ASCII_NonNegative_Integer	Not Used	Not Used	Permissible value = 0 meaning Full Step, = 1 meaning Quarter Step, = 2 meaning Micro Step

		These excitation modes have an effect on both the running properties and torque the motor delivers. - 0 = FullStep - 1 = QuarterStep - 2 = MicroStep.				
autofocus_range	1,1	Encoder range of the Autofocus.	ASCII_NonNegative_Integer	0	65535	
autofocus_position_tolerance	1,1	Tolerance of the Autofocus position during Autofocus operation.	ASCII_NonNegative_Integer	0	65535	
preamplifier_gain	1,1	Preamplifier Gain at the end of the Autofocus.	ASCII_Integer			=0 meaning GainBit1=0,GainBit2=0 --> Gain Value 128. = 1 meaning GainBit1=0,GainBit2=1 --> Gain Value 32. = 2 meaning GainBit1=1,GainBit2=0 --> Gain Value 8. =3 meaning GainBit1=1,GainBit2=1 --> Gain Value 2.
number_of_points_on_curve	1,1	Number Of Points on Curve.	ASCII_NonNegative_Integer	1	900	
focus_position_calculated	1,1	Focus position after algorithm.	ASCII_NonNegative_Integer	1	4095	
laser_channel	1,1	Laser channel switch on (From System Parameter). Values- 01 Nominal Laser- 02 Redundant Laser.	ASCII_NonNegative_Integer	Not Used	Not Used	Permissible value = 0 meaning Nominal Laser, = 1 meaning Redundant Laser
end_of_test_trigger	1,1	Event that triggered the end of the test. Values:- 0x00 if range is covered - 0x01 if Test timed out.	ASCII_NonNegative_Integer	Not Used	Not Used	Permissible value = 0 meaning range covered, = 1 meaning Test Timeout
end_of_test_timestamp	1,1	Timestamp at the end of the test (since the last power on of RAMAN).	ASCII_NonNegative_Integer	0	65535	
snr	0,1	Onboard calculated SNR value of the reference frame acquired with Final Ti.	ASCII_NonNegative_Integer	0	4095	

enabling_algorithm_mask	0,1	Mask indicating which acquisition parameter calculation algorithms will be executed.	ASCII_NonNegative_Integer	0	12167928680721	
criticality	1,1	Critical levels of the Science TM packets.	ASCII_NonNegative_Integer			= 03 meaning Science Critical, Science packets with the highest download priority = 02 meaning Science Non-Critical, Science packets with the lowest download priority