REQUIREMENTS OF
S-BAND UP AND DOWN CONVERTERS

A. OVERVIEW

This document describes all requirements related to S-Band up converter and Down converter which is going to be ordered by in KARI.

1. Delivery Schedule : Up to 31, December, 2018
2. Delivery Place : Republic of Korea Aerospace Research Institute, Satellite Operation & Application Center
3. Warranty : 1Year
4. Delivery Equipment and requirements
   1) S Band Down Converter : 2EA as below Model
   2) S Band UP Converter : 2EA as below Model
   3) Contractor must be provides installation and test results of specification
   4) For installation, contractor must be support and provide S/W and H/W interface test between delivered equipments and operated system
   5) For test results, contractor must be provide electronic test result of providing by manufactor

	Model Number	Manufacture
S Band D/C	(DTR-200240-6002044)	GeoSync
S Band U/C	(UTR-200240-6002044)	Geosync

B. Specifications

■ MITEQ S Band Down Converter (DTR-200240-6002044)

Items	SPECIFICATIONS
1. Input Frequency	2000MHz ~ 2400MHz
2. Input Impedance	50Ω
3. Input Return Loss	20dB min
4. Output Frequency	70MHz (±20MHz)
5. Output Impedance	50Ω,
6. Output Return Loss	26dB min
7. Power Output (P1dB)	+16dBm min
8. Gain	40dB
9. Noise Figure	11dB max
10. Amplitude response	±0.5dB p-p/±20MHz, ±0.2/±18MHz
11. SW ICD	appllicable 9400, 9600, 9800
12. Gain Slope	0.03dB/MHz max (10MHz max)
13. Gain adjustment	30dB in 0.2dB steps
14. Frequency stability	
	$\pm 2*10^{-8}$,0 to 50°C
15. External reference	5 or 10MHz, 4 ±3dBm Unit will automatically switch to internal reference if external reference level falls below +1dBm nominal
16. Primary power	90 ~ 250VAC
17. Remote Interface	RS232, Ethernet RS-232 & Ethernet (RS232 and Ethernet Interface) RS232 could be altered into RS422/485 if necessary.
18. Remote Protocol	interface protocol must be compatible with operated Model MITEQ 9400 ,9600, 9800
19. Dimension	Hardware interface must be compatible with operated Model MITEQ 9400 ,9600, 9800
20. AC INPUT	100~220VAC Free voltage
21. Ethernet Interface	10/100 Base-T Ethernet interface providing: HTTP-based web server SNMP1.0 configuration Alarm reporting via SNMP TrapPassword protection

■ MITEQ S Band UP Converter (UTR-200240-6002044)

Items	SPECIFICATIONS
1. Input Frequency	70MHz
2. Input Impedance	50Ω
3. Input Return Loss	20dB min
4. Output Frequency	2,000~2400MHz
5. Output Impedance	50Ω,
6. Output Return Loss	20dB min
7. Power Output (P1dB)	+16dBm min
8. Gain	30dB
9. Amplitude response	±0.25/±20MHz, ±0.2/±18MHz
10. SW ICD	appllicable 9400
11. Gain Slope	0.03dB/MHz max (10MHz max)
12. Gain adjustment	30dB in 0.2dB steps
13. Frequency stability	
	$\pm 2*10^{-8}$,0 to 50°C
14. External reference	5 or 10MHz, 4 ±3dBm Unit will automatically switch to internal reference if external reference level falls below +1dBm nominal
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