RADITEK

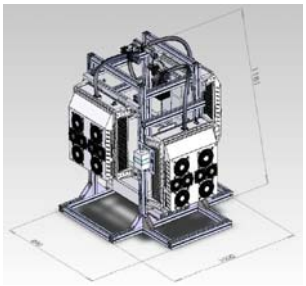
SATCOM
L-Ku Band BUC

Block Up Converter L to Ku-Band

N-Type Female Connector, 500W, Outdoor Unit, Redundant

RoHS COMPLIANT

RRCU-Tx or -Rx controller



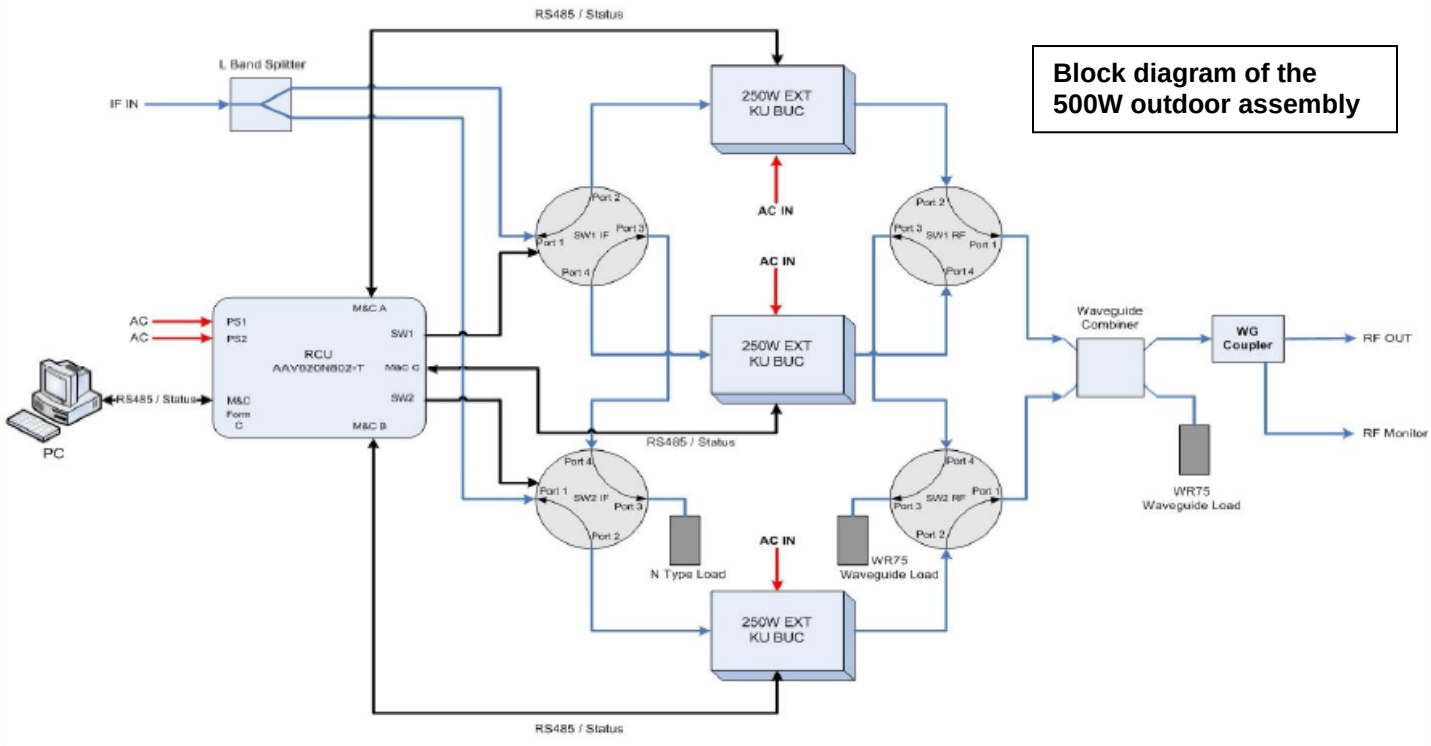
Preassembled 500W BUC outdoor assembly

The RADITEK extended Ku band Redundant BUC uses 2 phase combined 2 x 250W BUCs to make a 500W P1dB (typ.) minimum output. If one of the two primary BUCs should fail, for whatever reason, the third BUC will automatically switch in to take over for full performance 500W, P1dB (typ.) operation. In addition, if the unlikely case that another BUC should fail, the output power will still only drop 3 dB (not just vanish!).

The system is controlled by the RRCU-TX controller; either Auto or manual operation is possible. The RRCU-TX continually monitors and adjusts the combining phase for optimum, 500W output, at all times.

Order Examples: **RBUC-L(950-1700M) to Ku(13.75-14.50)-Nf-500W-ODU-1+1-g11**
Description: *(Block Up Converter, L Band(950-1700MHz) to Ku(13.75-14.50GHz), N-Type Female Connector, 500Watts, Outdoor Unit, Redundant*

Power	Output Psat (dBm)	Output P1dB (dBm)	Gain (dB)
500W	57	54	80



Block diagram of the 500W outdoor assembly

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Block Up Converter L to Ku-Band

N-Type Female Connector, 500W, Outdoor Unit, Redundant

RF specifications		Units
Transmit frequency	13.75 to 14.5	GHz
IF frequency	950-1700	MHz
LO frequency	12.8	GHz
Output Power (Psat)	500W (57dBm)	P1dB typ. (meets spectral regrowth and IMD)
Output Power (P Linear)	54 dBm	P1dB typ .(meets spectral regrowth and IMD)
Spectral regrowth	<30	dBc at 3 dB back off, from P 1dB
Third order intermod (2 tone)	-25	dBc max (tones = 3dB back off, 2MHz apart))
Input VSWR	1.3:1	Typ.
Output VSWR	1.25:1	Typ.
Noise power density (tx band)	70	dBw/4KHz
Small signal gain	80 min.	dB
Gain flatness, full band (over 40MHz)	±2dB, (±1dB)	
Gain variation over temperature	±2dB from -40 to +80°C	
Gain control	20dB in 0.5dB steps	
O/P spurious	Meets EN301428	
Phase noise	-73 dBc/Hz at 1KHz (offset) -83 dBc/Hz at 10KHz (offset) -93 dBc/Hz at 100KHz (offset)	
Power Supply	96 to 264VAC (<3860W typ. for 3 BUCS and controller)	
Reference (internal)	10MHz (will be automatically disabled when external reference is used)	
Reference (External)	10MHz typ. Phase noise:(-150dBc /Hz @ 1KHz; -155dBc/Hz @10KHz	
Level	-5 to 0dBm	

Interface	
RF Input	50 Ω N-Type Female
RF Output	WR75G

Monitor and Control	
Monitor	BUC Temperature Status Alarm RF Output Power Input power Reverse power LED status
Control	OUTPUT Mute Attenuation
Protection	Over temperature SSPA shutdown
Interface	RS232 / RS485 and Ethernet (SNMP and HTTP) WIFI (optional)
Inbuilt Redundancy Control	Yes

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Environmental	
Operating Temperature	-40 to + 60ºC (Outdoor SSPA)
Relative Humidity	Up to 100% (sealed to IP65)

Mechanical	
Size (Outdoor SSPA)	1000L x 890W x 1181H mm (20W)
Weight (Outdoor SSPA) in kg	<200Kg
Color (Outdoor SSPA)	White powder coat

Compliance Standards	
IEC 609501 2nd Edition	International Safety Standard for Information Technology Equipment
ETSI EN 301 489-12	Electromagnetic Compatibility and Radio Spectrum Matters (ERM); Electromagnetic Compatibility (EMC) Standard for Very Small Aperture Terminal (VSAT)
ETSI EN 301 489-1	Electromagnetic Compatibility and Radio Spectrum Matters (ERM); Electromagnetic Compatibility Standard for Radio Equipment and Services
FCC Class A	Two levels of radiation and conducted emissions-FCC mark

Reliability

Field proven with world wide deployment
Equipment can withstand temperature ranging
from -40°C to +60°C with up to 100% humidity

Quality Assurance (ISO 9001-design and manufactured)

Outdoor Assemblies go through intensive active electrical stress screening
They undergo 100% waterproof test equivalent to IP65 to ensure normal operation during tropical, cold and harsh environment

Note: See Redundant LNB, RLNB-Ku-L-band-WR75-1+1-g11

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