

# Taurus-Line

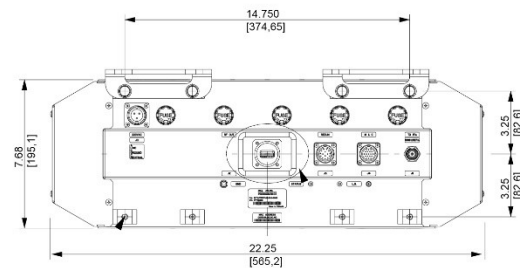
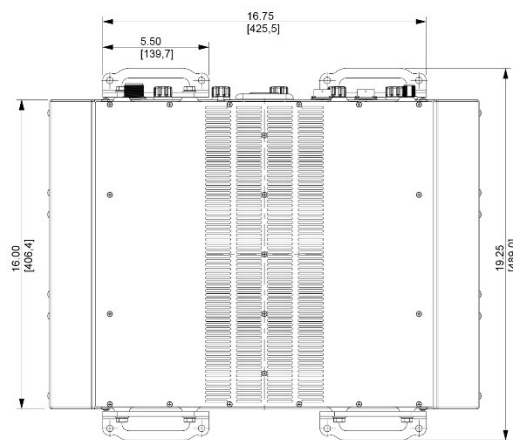
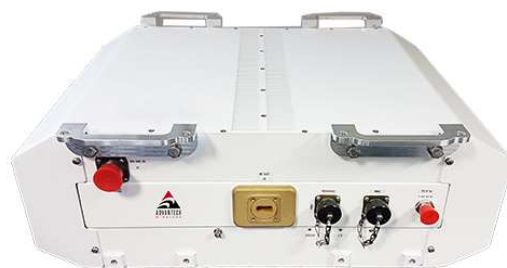
## Ku, C, X-Band GaN SSPA BUC

**Smallest form factor in the industry.  
Ideal for mobile and SNG applications.**

### Overview

An ideal solution for both mobile and fixed Communication terminals. It is designed for high efficiency resulting in an optimal compact form factor with high performance and reliability. With the advanced customer interface and HTTP embedded web page, the operator is able to monitor and control the BUC and the System Redundancy.

- Ku-Band: 300W / 400W / 500W
- C-Band: 800W / 1000W
- X-Band: 800W / 1000W



### Features

- Highest power density in the industry
- Available in AC
- Up to 1000W of RF Output Power
- Up to 400W of Linear power
- Built-in monitoring of critical parameters such as: RF power detection, mute control, over temperature shutdown, summary alarm
- IP55 rated housing and fan (weather proof construction)
- M&C Interfaces included: RS485, RS232, Ethernet and dry-contacts
- WEB interface and SNMP monitoring
- Redundant Ready
- 1:1 and 1:2 built into the BUC eliminating external controller
- Ku-Band: Optional Dual LO (Switchable). covers both regular and ext. Ku-Band
- Other frequency ranges available
- Optional 10MHz reference
- Optional output sample port
- Optional Remote control unit



## Taurus-Line GaN SSPA BUC

Technical Specifications			
Ku-Band			
Electrical Characteristics	300W	400W	500W
RF Output at P Sat (typical)	55 dBm	56 dBm	57 dBm
RF Output at P Lin	52 dBm	53 dBm	54 dBm
Output Frequency Range	Lower Ku: 12.75 – 13.25 GHz	Standard Ku: 14.00 – 14.50 GHz	Extended Ku: 13.75 – 14.50 GHz
Input Frequency Range	Lower Ku: 950 – 1450 MHz	Standard Ku: 950 – 1450 MHz	Extended Ku: 950 – 1700 MHz
Local Oscillator Frequency	Lower Ku: 11.80 GHz	Standard Ku: 13.05 GHz	Extended Ku: 12.80 GHz
Gain Stability Over Temp.	Low Ku Band: ± 1.5 dB nominal; ± 2.25 dB max Standard Band: ± 1.5 dB nominal; ± 2.0 dB max Extended Band: ± 1.5 dB nominal; ± 2.25 dB max		
Gain Variation at fixed temp	Low Ku Band: ± 0.75 dB over max over 40 MHz; ± 2.25 dB over full band Standard Band: ± 0.5 dB over max over 40 MHz; ± 2.0 dB over full band Extended Band: ± 0.75 dB over max over 40 MHz; ± 2.25 dB over full band		
Linear Gain	70 dB min.		
User Adjustable Gain	20 dB nominal in 0.5 dB steps		
C-Band			
Electrical Characteristics	800W	1000W	
RF Output at P Sat (typical)	59 dBm	60 dBm	
RF Output at P Lin	56 dBm	57 dBm	
Output Frequency Range	Lower C: 5.725 – 6.425 GHz	Standard C: 5.85 – 6.425 GHz	Extended C: 5.85 – 6.725 GHz Insat C: 6.725 – 7.025 GHz
Input Frequency Range	Lower C: 975 – 1675 MHz	Standard C: 950 – 1525 MHz	Extended C: 950 – 1825 MHz Insat C: 1275 – 1575 MHz
Local Oscillator Frequency	Lower C: 4.75 GHz	Standard C: 4.9 GHz	Extended C: 4.9 GHz Insat C: 5.45 GHz
Gain Stability Over Temperature	± 1.5 dB nominal		
Gain Variation at fixed temperature	± 0.5 dB over max over 36 MHz; ± 2.0 dB over full band		
Linear Gain	70 dB min.		
User Adjustable Gain	20 dB in 0.5 dB steps		
X-Band			
Electrical Characteristics	800W	1000W	
RF Output at P Sat (typical)	59 dBm	60 dBm	
RF Output at P Lin	56 dBm	57 dBm	
Output Frequency Range	7.9 – 8.4 GHz		
Input Frequency Range	950 – 1450 MHz		
Local Oscillator Frequency	6.95 GHz		
Gain Stability Over Temperature	± 1.5 dB nominal		
Gain Variation at fixed temperature	± 0.5 dB over max over 40 MHz; ± 2.0 dB over full band		
Linear Gain	70 dB min.		
User Adjustable Gain	20 dB in 0.5 dB steps		

\*P<sub>LINEAR</sub> is the power at which the IMD=-25 dBc for two CW signals 5 MHz apart and the Spectral regrowth is <-30 dBc @ 1.0 x symbol rate, tested with a single QPSK, 2MS/s SR, 0.35 roll-off.

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## Taurus-Line GaN SSPA BUC

Technical Specifications				
Ku, C Band				
Spectral Re-growth	-30dBc @PLinear			
Third order IMD (2 equal tones 5MHz apart)	-25 dBc, with 2 equal carriers at 3dB total power back off from rated power (P Sat -3dB)			
10MHz Reference	0dBm ± 5.0 dB - External via IF / (Internal 10MHz reference optional)			
	<b>@ 100 Hz</b>	<b>@ 1 KHz</b>	<b>@ 10 KHz</b>	<b>@ 100 KHz</b>
Ref Phase Noise Requirement		-140 dBc/Hz max	-150 dBc/Hz max	-155 dBc/Hz max
Local Oscillator Phase Noise	-63 dBc/Hz max	-73 dBc/Hz max	-83 dBc/Hz max	-93 dBc/Hz max
Output Spurious	-55dBc max @PLinear			
Harmonics	-50dBc max @PLinear			
VSWR	Input (1:50:1) Output (1.30:1)			
Power consumption				
	Ku-Band	300W	400W	500W
Power consumption (at rated power) AC version		2400W	2500W	3200W
	C-Band			1000W
Power consumption (at rated power) AC version		800W		3750W
	X-Band			1000W
Power consumption (at rated power) AC version		3750W		4000W
Power requirement	220 VAC			
Interface				
Output Interface	Ku-Band: Waveguide, WR75G (Grooved) C-Band: Waveguide, CPR 137G (Grooved) X-Band: Waveguide, CPR 112G (Grooved)			
Input Interface	N-Type Female, 50 Ohms			
Connectors	AC Connector: MS3102R16-10P	M&C: MS3112E14-19P	Redundancy: MS3112E14-15P (Optional)	
Mechanical				
Dimensions (L x W x H)	16.0 x 22.3 x 7.7 / 40.6 x 56.5 x 19.5			
Weight	93lb / 42kg			
Environmental				
	Temperature Range (ambient)	Humidity	Altitude	
	-40°C to + 55°C (operating) -40°C to + 75°C (storage)	0 to 100% (condensing)	10,000 ft ASL	

Ref.: PB-AWT-TLg-22144

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