

# Denali-Line

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

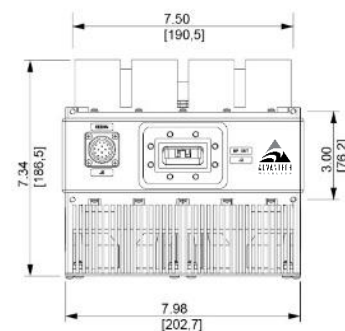
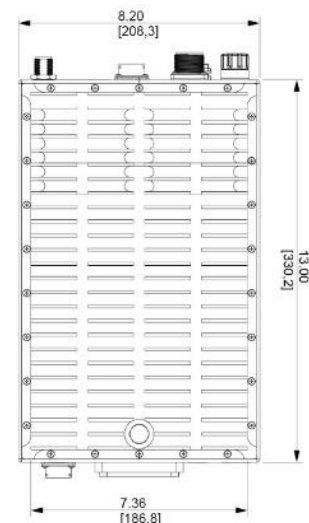
### Overview

An ideal solution for both mobile and fixed Communication terminals. The Denali-Line SSPAs / BUCs are 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: 80W / 100W / 125W
- C-Band: 150W / 200W / 250W
- X-Band: 150W / 200W / 250W

### Features

- Compact size
- Available in AC
- Up to 250W of RF Output Power
- Up to 125W 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
- Internal 10MHz reference
- Optional output sample port
- Optional Remote control unit





## Denali-Line GaN SSPA BUC

Technical Specifications			
Ku-Band			
Electrical Characteristics	80W	100W	125W
RF Output at P Sat	49 dBm	50 dBm	51 dBm
RF Output at P Lin	46 dBm	47 dBm	48 dBm
Output Frequency Range	Low Ku Band: 12.75 – 13.25 GHz	Standard Ku: 14.00 – 14.50 GHz	Extended Ku: 13.75 – 14.50 GHz
Input Frequency Range (BUC)	Low Ku Band: 950 – 1450 MHz	Standard Ku: 950 – 1450 MHz	Extended Ku: 950 – 1700 MHz
Input Frequency Range (SSPA)	Low Ku Band: 12.75 – 13.25 GHz	Standard Ku: 14.00 – 14.50 GHz	Extended Ku: 13.75 – 14.50 GHz
Local Oscillator Frequency	Low Ku Band: 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 max over any 40 MHz; ± 2.25 dB over full band Standard Band: ± 0.5 dB max over any 40 MHz; ± 2.0 dB over full band Extended Band: ± 0.75 dB max over any 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	150W	200W	250W
RF Output at P Sat	52 dBm	53 dBm	54 dBm
RF Output at P Lin	49 dBm	50 dBm	50.5 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 (BUC)	Lower C: 975 – 1675 MHz	Standard C: 950 – 1525 MHz	Extended C: 950 – 1825 MHz Insat C: 1275 – 1575 MHz
Input Frequency Range (SSPA)	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
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 max over any 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	150W	200W	250W
RF Output at P Sat	52 dBm	53 dBm	54 dBm
RF Output at P Lin	49 dBm	50 dBm	51 dBm
Output Frequency Range	7.9 – 8.4 GHz		
Input Frequency Range (BUC)	950 – 1450 MHz		
Input Frequency Range (SSPA)	7.9 – 8.4 GHz		
Local Oscillator Frequency	6.95 GHz		
Gain Stability Over Temperature	± 1.5 dB nominal		
Gain Variation at fixed temperature	± 0.5 dB max over any 40 MHz; ± 2.0 dB over full band		
Linear Gain	70 dB min.		
User Adjustable Gain	20 dB in 0.5 dB steps		

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## Denali-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)				
	@ 100 Hz	@ 1 KHz	@ 10 KHz	@ 100 KHz	@ 1 MHz
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	-103 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	80W	100W	125W		
Power consumption (Watts)	750W	780W	800W		
C-Band	150W	200W	250W		
Power consumption (Watts)	880W	900W	1000W		
X-Band	150W	200W	250W		
Power consumption (Watts)	900W	1000W	1100W		
Power requirement	110-220 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, F-Type Female, 75 Ohms (optional)				
Connectors	AC Connector: MS3102R16-10P	M&C: MS3112E14-19P	Redundancy: MS3112E14-15P (Optional)		
Mechanical					
Cooling	Forced Air				
Dimensions (L x W x H)	Ku-Band: 12.8 x 8.2 x 7.1 / 32.5 x 20.8 x 18.0 C-Band, X-Band: 13 x 8.2 x 6.3 / 33.02 x 20.83 x 16				
Weight	27.8 / 12.5				
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-DLg-19290

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