

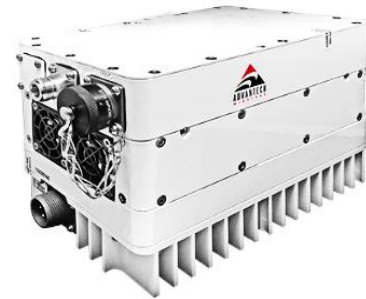
# Pamir-Line

## Ku, C, X Band GaAs SSPA BUC

### Overview

The Pamir-Line are hub-mount up-converter transmitters operating in the C, Ku, and X-Band. The Pamir-Line Compact BUC is built for stabilized platforms and mobile stations, while also offering benefits for fixed site and offshore applications. Weighing less than 8 lbs., makes it ideal for feed mounting.

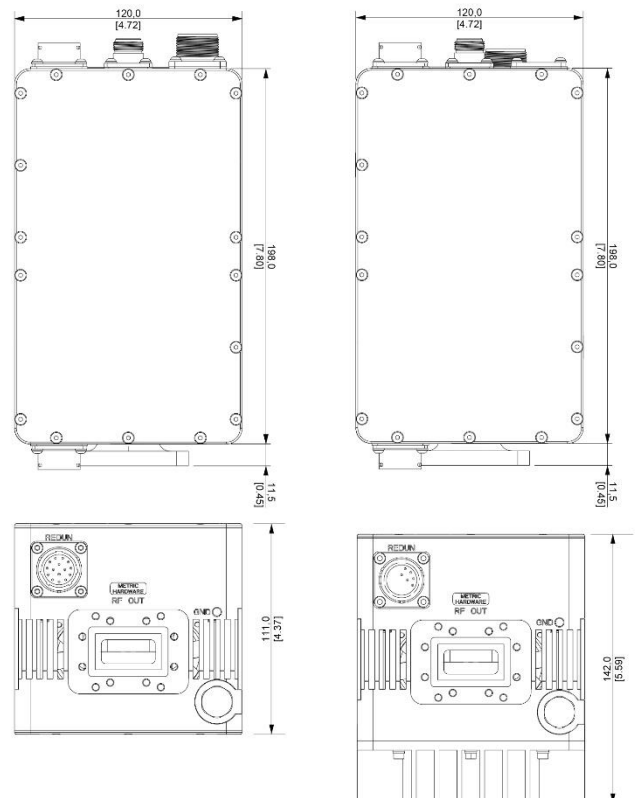
- Ku-Band GaAs: 16W / 20W / 25W
- C-Band GaAs: 20W / 25W / 40W / 50W / 60W
- X-Band GaAs: 20W / 25W / 40W / 50W / 60W



With AC module

### Features

- Extremely compact size
- Available in AC or DC
- Up to 60W of Linear power
- Built-in monitoring of critical parameters such as: RF power detection, mute control, over temperature shutdown, summary alarm
- IP67 rated housing and fan (weather proof construction)
- M&C Interfaces included: RS485, RS232, Ethernet and dry-contacts
- WEB interface and SNMP monitoring
- Optional 1:1 and 1:2 built into the BUC eliminating external controller
- Other frequency ranges available
- Optional Remote control unit



With AC module

## Pamir-Line GaAs SSPA BUC

### Technical Specifications

#### Ku-Band

| Electrical Characteristics | 16W                         | 20W                            | 25W                            |
|----------------------------|-----------------------------|--------------------------------|--------------------------------|
| RF Output at P1dB          | 42 dBm                      | 43 dBm                         | 44 dBm                         |
| RF Output at P Lin         | 39 dBm                      | 40 dBm                         | 41 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         |

#### C-Band

| Electrical Characteristics | 20W                        | 25W                          | 40W                          | 50W                        | 60W    |
|----------------------------|----------------------------|------------------------------|------------------------------|----------------------------|--------|
| RF Output at P1dB          | 43 dBm                     | 44 dBm                       | 46 dBm                       | 47 dBm                     | 48 dBm |
| RF Output at P Lin         | 40 dBm                     | 41 dBm                       | 43 dBm                       | 44 dBm                     | 45 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          |        |

#### X-Band

| Electrical Characteristics | 20W            | 25W    | 40W    | 50W    | 60W    |
|----------------------------|----------------|--------|--------|--------|--------|
| RF Output at P1dB          | 43 dBm         | 44 dBm | 46 dBm | 47 dBm | 48 dBm |
| RF Output at P Lin         | 40 dBm         | 41 dBm | 43 dBm | 44 dBm | 45 dBm |
| Output Frequency Range     | 7.9 – 8.4 GHz  |        |        |        |        |
| Input Frequency Range      | 950 – 1450 MHz |        |        |        |        |
| Local Oscillator Frequency | 6.95 GHz       |        |        |        |        |

|   |  |                 |                 |                  |                 |
|---|--|-----------------|-----------------|------------------|-----------------|
| Gain Stability Over Temp.                     | ± 2.0 dB max   |                 |                 |                  |                 |
| Gain Variation at fixed temp                  | ± 2.0 dB over full band; ± 0.5 dB over 40 MHz  |                 |                 |                  |                 |
| Linear Gain                                   | 60 dB nominal  |                 |                 |                  |                 |
| Gain Control                                  | 20 dB nominal in 0.5 dB steps  |                 |                 |                  |                 |
| Output VSWR                                   | 1.50:1   |                 |                 |                  |                 |
| 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                               | 0 dBm ± 5.0 dB   |                 |                 |                  |                 |
|   | <b>@ 100 Hz</b>  | <b>@ 1 KHz</b>  | <b>@ 10 KHz</b> | <b>@ 100 KHz</b> | <b>@ 1 MHz</b>  |
| 10 MHz Phase Noise Requirement                | -130 dBc/Hz max  | -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                               | -55 dBc max  |                 |                 |                  |                 |
| Input Impedance                               | 50 Ohms  |                 |                 |                  |                 |
| Input VSWR                                    | 1.50:1   |                 |                 |                  |                 |
| Power consumption (at rated power) AC version |  |                 |                 |                  |                 |
|   | <b>Ku-Band</b>   | 150W            | 200W            | 225W             |                 |
|   | <b>C -Band</b>   | 150W            | 175W            | 200W             | 250W 275W       |
|   | <b>X-Band</b>  | 150W            | 175W            | 200W             | 250W 275W       |
| Power requirement                             | 120/220 AC or +36 to +72 VDC   |                 |                 |                  |                 |

#### Interface

|                  |  |                   |                                      |  |  |
|------------------|--|-------------------|--------------------------------------|--|--|
| Output Interface | Ku: Waveguide, WR75G (Grooved) / C: Waveguide, CPR 137G (Grooved) / X: Waveguide, CPR 112G (Grooved) |                   |                                      |  |  |
| Input Interface  | N-Type Female, 50 Ohms   |                   |                                      |  |  |
| Connectors       | DC Connector: MS3102R14S-9P<br>AC Connector: MS3102R14S-7P   | M&C: MS3112E1419P | Redundancy: MS3112E14-15P (Optional) |  |  |

#### Mechanical

|                        |   |   |  |  |  |
|------------------------|---|---|--|--|--|
| Cooling                | Forced Air  |   |  |  |  |
| Dimensions (L x W x H) | DC Model: 7.8 x 4.72 x 4.37 in (198 x 120 x 111 mm) | AC Model: 7.8 x 4.72 x 5.59 in (198 x 120 x 142 mm) |  |  |  |
| Weight                 | DC Model: 8 lbs (3.65 kg)                           | AC Model: 9 lbs (4.1 kg)                            |  |  |  |

#### 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 |

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