

# ACCVR-CL-Ex-V31

## C-band BDC Cerberus Series indoor 1/3 rack

The ACCVR-CL family of BDCs is designed for the most challenging C-band professional & military satellite communication systems (ground, SOTP, SOTM, maritime, etc.).

Latest technology is applied to obtain the best power efficiency, phase noise, gain stability and spur rejection according to MIL-STD-188-164C. The ACCVR-CL family is a high reliability solution designed for harsh environmental conditions, with every single production unit fully tested in an environmental chamber and delivered with a complete factory acceptance test report.

- ✘ AC supply operation
- ✘ External and internal reference capabilities (5 & 10 MHz)
- ✘ Redundancy operation available
- ✘ Standard M&C with serial port (RS232/485), Ethernet and SNMPv2
- ✘ Rack frames compatible with 3 bays (1U) and 6 bays (2U)
- ✘ High spur rejection performance



# CERBERUS

Dog of the God Hades, known for his fierceness and his 3 heads, this indomitable dog guarded the gate and entrance to the underworld. That is why our family of indoor rack converters designed for maritime applications offers high performance frequency conversion in a very compact and versatile format.

## Receiver

|  |   |
|--|---|
| Input frequency                                    | 3.4 to 4.8 GHz                                |
| Input C-band VSWR (50 Ω)                           | < 1.3:1                                       |
| Output frequency                                   | 950 to 1750 MHz                               |
| Output L-band VSWR (50 Ω)                          | < 1.3:1                                       |
| Spectrum inversion                                 | None  |
| Max. input level without damage                    | 0 dBm   |
| PIdB   | > +18 dBm                                     |
| Spurious signal related @ P <sub>OUT</sub> = 0 dBm | < -65 dBc                                     |
| Spurious signal independent                        | < -75 dBm                                     |
| LO leakage   | < -80 dBm                                     |
| TOI @ 2 carriers 0 dBm each                        | < -60 dBc                                     |
| Gain @ min attenuation                             | 35 ± 3 dB                                     |
| Gain adjustment range                              | 30 dB with 0.2 steps                          |
| Gain flatness                                      | ±1.0 dB over whole BW<br>±0.25 dB over 40 MHz |
| Gain stability (24 hours)                          | ±0.25 dB @ constant T                         |
| Gain variation over temperature                    | ±1.5 dB                                       |
| Mute   | > 60 dB                                       |
| Noise figure @ min attenuation                     | < 15 dB                                       |
| Image rejection                                    | > 60 dB                                       |
| Input & Output signal monitors                     | -20 ± 2 dBc                                   |

## Local Oscillator

|   |   |
|---|---|
| Output phase noise (IESS-308/309 – 12 dB)       |   |
|   | 10 Hz –50 dBc/Hz                        |
|   | 100 Hz –76 dBc/Hz                       |
|   | 1 kHz –82 dBc/Hz                        |
|   | 10 kHz –92 dBc/Hz                       |
|   | 100 kHz –102 dBc/Hz                     |
| External reference (Auto selection on presence) | 5 & 10 MHz                              |
| External reference level                        | +4 dBm ± 3 dB                           |
| Internal reference stability                    |   |
|   | versus time per day ±1x10 <sup>-9</sup> |
|   | versus temperature ±5x10 <sup>-9</sup>  |

## Environmental

|                       |   |
|-----------------------|---|
| Storage temperature   | -40 °C to +70 °C                          |
| Operating temperature | 0 °C to +50 °C                            |
| Relative humidity     | up to 95%                                 |
| Operating altitude    | up to 3000 m                              |
| Shock & vibration     | MIL-STD-810F<br>Method 514.8 Procedure II |
| EMC                   | CE Mark<br>ETSI EN 301 489-1 V.1.9.2      |

## Mechanical

|                        |  |
|------------------------|--|
| Size (LxWxH)           | 508 x 128 x 38.5 mm<br>20.0 x 5.0 x 1.5 in             |
| Weight                 | 2.0 kg<br>4.4 lbs                                      |
| Compatible rack frames | ACRC-V31 (3 bays over 1U)<br>ACRC-V62 (6 bays over 2U) |

## Interfaces

*All mating connectors provided*

|                              |                    |
|------------------------------|--------------------|
| RX input & monitor (C-band)  | Type SMA(F) 50 Ω   |
| RX output & monitor (L-band) | Type SMA(F) 50 Ω   |
| LO monitor & Ext. Ref. input | Type SMA(F) 50 Ω   |
| M&C (RS-232/485)             | D-Sub9             |
| M&C (Redundancy)             | D-Sub9             |
| M&C (Ethernet/SNMPv2)        | RJ-45              |
| Power supply                 | IEC 320            |
| Front panel                  | Keyboard & display |

## Power Supply

|                  |                                   |
|------------------|-----------------------------------|
| AC input voltage | 85-265 V <sub>AC</sub> (47-63 Hz) |
| Consumption      | 25 W                              |

## Order information

| Part-number      | Input         | Output         | Inversion | LO frequency   |
|------------------|---------------|----------------|-----------|----------------|
| ACCVR-CL-E44-V31 | 3.4 - 4.2 GHz | 950 - 1750 MHz | None      | 8.85/11.30 GHz |
| ACCVR-CL-E4-V31  | 3.4 - 4.2 GHz | 950 - 1750 MHz | Yes       | 5.150 GHz      |
| ACCVR-CL-E5-V31  | 4.5 - 4.8 GHz | 950 - 1250 MHz | None      | 3.550 GHz      |

*Any other frequency band or custom specification available under request. Please, contact factory. Specifications are subject to change without notice.*

|   |                |                  |
|---|----------------|------------------|
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