



## FEATURES

- RF Input: Ku – Ka frequency bands
- Horizontal & Vertical RF Converters
- Low phase noise
- 1GHz bandwidth slices
- IF Outputs: Both Analog & RF over Fiber

iRF has developed a series of the Banded Low Noise Block Down Converters (“BLND”) as well as an associated rack mount assembly, which offers compact, modular, cost effective approach for a highly dense design of fixed dual channel coherent down converters.

The BLND product provides multiple fixed 1 GHz Ka/Ku-band block down converters, each with a 950 – 1950 MHz output. The plug-in channel card supports two channels on a single input frequency and is phase coherent.

This RF Front End design provides a dual channel fixed L – Band IF to interface for compatibility with existing processing systems. The converters will be housed in a rugged 5-slot Network Capable Card Cage (CD-ROM style chassis). Power requirement is 9 – 16V DC input via a LEMO connector.

The chassis also provides a removable rear panel through which optional IF interface modules can be inserted. This module is installed via a blind-mate DC connector with front panel thumbscrews. A separate terminated IF connector (with a factory provided IF cable) is available if the Fiber module or iDSP is required.

The IF output will support the following interfaces;

- Dual Copper outputs to support field alignment and IF to an optional factory or field installed RF to Fiber module or a 12 Bit digitized Dual 10 GigE Vita 49 module (future option).
- The RF to Fiber L Band transmitter module which is guaranteed to interface with the existing RF over Fiber receiver module.

## ICC-1000 APPLICATIONS

- Cross Polarization
- Antenna Diversity Processing
- Backhaul
- MILSATCOM
- Terrestrial Communications

## SPECIFICATIONS (AT 25° C)

**Input Frequency (Ku & Ka-bands)  
Dual Channels; Horizontal & Vertical**  
10.7 – 12.75GHz & 17.2 – 21.2GHz

**IF Outputs: Analog & RF over fiber**  
950 – 1950MHz

**Max. Input Power without damage**  
+20dBm

**Gain**  
10dB nom.

**Gain Flatness**  
+/- 1dB over 100MHz

**Noise Figure**  
<19dB; inclusive of RF Bandpass filter & step attenuator

**IIP3**  
+20dBm

**Internally Generated Spurious**  
<-80dBm

**10MHz REF IN**  
0 to +15dBm, Sinewave

**Input 1dB Compression Point**  
+10dBm

**Input Attenuation**  
0-20dB; 1dB steps

**Phase Noise**  
<0.4° RMS

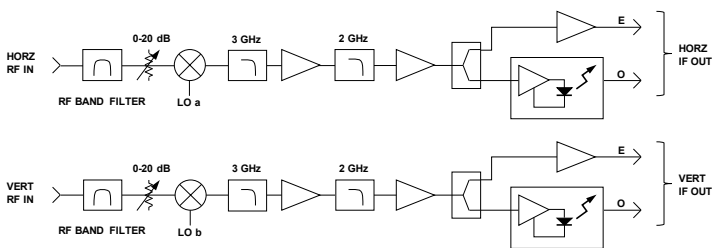
**Input Power**  
9-16V DC; 65 watts/rack

**Size**  
3.2"H x 5.5"Wx10"D enclosure; 2 LiteRails

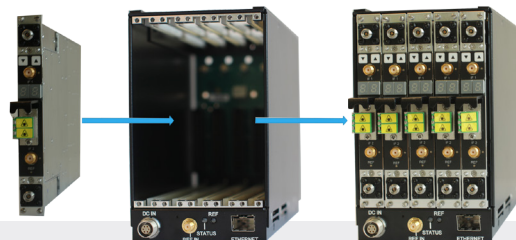
**Weight**  
8 lbs. (includes 5 slices per enclosure)

**Operating Temperature**  
-10° to +70°C

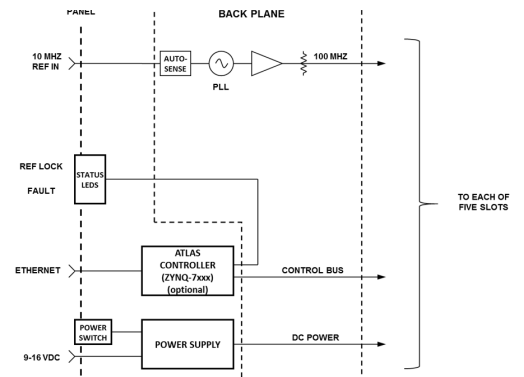
## RF SLICE BLOCK DIAGRAM



LO	RF BAND
9.75 GHz	10.7-11.7 GHz
10.75 GHz	11.7-12.7 GHz
16.25 GHz	17.2-18.2 GHz
17.25 GHz	18.2-19.2 GHz
18.25 GHz	19.2-20.2 GHz
19.25 GHz	20.2-21.2 GHz
20.25 GHz	21.2-22.2 GHz



## 5 SLOT CARD CAGE BLOCK DIAGRAM



## MODELS

**iCC-1000 5-Slot Card Cage**  
**iSL-DCxx.x RF Slice (Ku & Ka-bands)**  
Other bands available; contact factory for availability