

# Cryogenic Analog RF Module

## Model CARM-02 Low Noise Amplifier

### Features

- Extremely low noise amplification
- Light and Compact
- High gain
- Ka-Band
- Turn-key operation
- Various customization options available

### Applications

- Satellite Communication
- Line-of-sight Datalinks
- Signals Intelligence
- Electronic Warfare
- Radar
- Channelizing Receiver
- Transient Digitizer
- Software Radio
- Spectrum Monitoring



CARM-02 module

### Description

HYPRES is proud to announce an “Analog-RF Amplifier” product. Using state-of-the-art low noise amplifier and compact cryogenic cooler, the Cryogenic Analog RF Module (CARM-02) provides amplification with extremely low noise.

Its compactness allows the module to be used directly after an antenna in place of a traditional LNA or LNB. Initially developed for Ka Band, different frequency bands will soon be available. Customization of the mechanical interface, form-factor, or additional filtering are also possible.

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### Configuration Options

#### RF Band

(Select one from the list below, for multiple channel module, please contact HYPRES)

- Ka Band (default)
- X Band
- UHF
- Custom

#### Form factor

- Module for GBS antenna (default, as shown)
- Benchtop
- Custom

#### Filtering

- None (default)
- Cold copper filter
- High-temperature Superconductor Filter

#### Output Interface

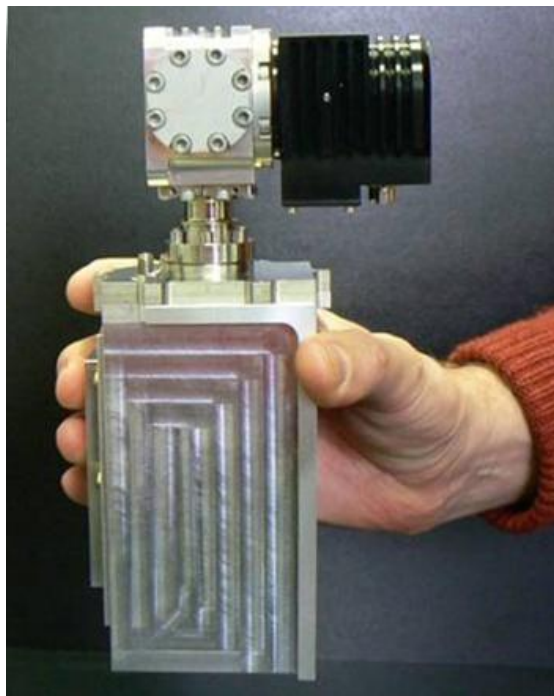
- Electrical coaxial K connector (default)
- Optical

### Installation and Warranty

On-site installation and training

1-year standard warranty

Recommended Maintenance: Every 2 years



Module for GBS antenna

### General Specification

Dimensions: 10" x 5" x 4"

Weight: 2.7 kg ( < 6 lbs)

Frequency Band: 20.2-21.2 GHz

Input: WR42 square flange

Output: Coaxial K connector

Operating temperature of the LNA : ~80K

Noise Temperature: <50K

Gain: 25 dB

Start up time: none

Cool down time: ~ 1h

Peak power: <40W

Steady state power: ~25W



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