



C-BAND TRANSCEIVER

70 MHz, 5 - 250 Watts



Features

- Low Phase Noise, harmonics
- 70MHz IF interface for Tx/Rx
- High frequency stability
- Excellent Gain Flatness
- Automatic shut down on failure
- Simple installation
- Trouble free maintenance
- Wide operating temperature

RADITEK's state of the art, field proven designs, up-converts from 70MHz to several C band frequency/power options. The IF interface is via a Type N(f) connector. The unit's power options include: 48V DC, 100-120V AC and 220-240V AC.

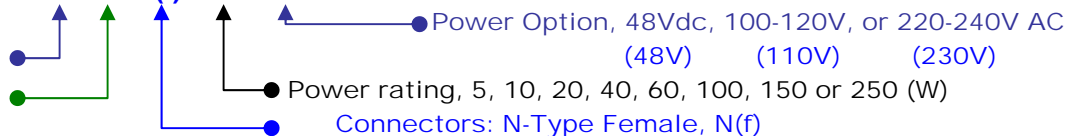
Gain adjustment and Intelligent Monitor and Control capability are accessed, via RS232/RS485. This access is via a hand held terminal, or via the IF cable (to NMS).

All units are built and tested to ISO9001, 14001, and OHSAS1801. Each unit has 3 days burn-in is and thoroughly environmentally tested.

Order Examples:

(TRANSCIVER:
C-Band Option_
(see table below)
70M (70MHz)

RTR-Ci-70M-N(f)-60W-48V-h1



| | C-Band Option | Tx Output Frequency MHz | Rx Input Frequency MHz |
|-----|------------------|-------------------------|------------------------|
| Cs | Standard-C | 5925 ~ 6425 | 3700-4200 |
| Ci | Intelesat | 5850 ~ 6425 | 3625 - 4200 |
| Cin | InSat | 6725 ~ 7025 | 4500 - 4800 |
| Cp | Palapa-C | 6425 ~ 6725 | 3400 - 3700 |
| Ce | Extended/ Full-C | 5850 ~ 6725 | 3400 - 4200 |

Options include

- Modem Interface:
L band interface. Type N
- Input power options:
48 VDC, 100-120V, or 220-240V AC

| Transmit | Technical Specification |
|----------------------------|------------------------------|
| Input Frequency | 70 +/- 18MHz |
| Output Frequency | C Band (See Table Above) |
| IF Input VSWR (Interface) | 1.5 : 1 (Max) (N (F)) |
| RF output VSWR (Interface) | 1.8:1 (Max) (N (F))/WG137) |
| Gain Adjustment | 30dB @ 0.5dB step |
| Receive (Exclude LNA) | Technical Specification |
| Input Frequency | C Band (See Table Above) |
| Output Frequency | 70 +/- 18MHz |
| RF Input VSWR (Interface) | 1.5 : 1 (Max) (N (F)) |
| IF output VSWR (Interface) | 1.5 : 1 (Max) (N (F)) |
| Gain | 45dB max |
| Gain Adjustment | 31dB @ 0.5dB step |
| Receive (LNA) | Technical Specification |
| Input Frequency | C Band |
| RF output VSWR (Interface) | 1.5 : 1 (Max) (N (F)) |
| Noise Temperature | 40 K typ. at |
| Gain | 58dB typ. |
| General Characteristics | Technical Specification |
| Temperature (operating) | -40 to 60°C |
| Temperature (storage) | -40 to 85°C |
| Humidity | 0 to 100% |

RTR-C-70M-N-2-250W-h1

Specifications ma

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C-BAND TRANSCEIVER, 70 MHz, 5 - 250 Watts

Our transceiver is enclosed in a single housing. This design facilitates quick and easy installation by direct mounting on a wide range of earth station antennas.

For requirements of 100W and above the transceiver is designed to have a low power unit with an external high power SSPA in a two housing configuration.

All can be factory configured to work in Standard-C, Extended-C, Full-C, Intelesat-C, and Insat-C band.

This is an ideal choice for any VSAT application including: wide area telephony, video conferencing and data communication systems

using SCPC/MCPC, TDMA and DAMA configuration with different modulation formats such as BPSK, QPSK and QAM.

| Freq Band | Receive | | Transmit | | | | Power Supply | | Mechanical | | Product Highlights | | | |
|-----------|--|----------------------------|--|--------------------|-------------------|-----------|---------------------------|---|-------------------|----------------------|--------------------|---|-----------------|---|
| | I/P Frequency (MHz) | RF O/P : IF I/P connector | O/P Frequency (MHz) | Power @P1dB (Watt) | Power @P1dB (dBm) | Gain (dB) | IF I/p : RF O/p connector | Supply Voltage | Power Consumption | Dimension LxWxH (mm) | | Wt (kg) | | |
| C Band | Intelsat (3625 ~ 4200) Palapa (3400 ~ 3700) Insat(4500 ~ 4800) | N-type (F) : N-type (F) | Intelsat (5850~6425) Palapa (6425~6725) Insat (6725 ~7025) | 5 | 37 | 57 | N-type (F) N-type (F) | 220VAC, Option: 48VDC or 110VAC | 100W | 238 x 327 x126 | 7.7 | * Single Package Transceiver + LNA, Redundancy Ready * M&C RS232 & 485, Handheld (optional) * Frequency step size of 1MHz * AC cable come with Transient protection * Guarantee performance with 16QAM Modulation * Completely independent Tx & Rx frequency Selection | | |
| | | | | 10 | 40 | 60 | | | 135W | 238 x 327 x 160 | 8 | | | |
| | | | | 20 | 43 | 63 | | | 250W | | | | | |
| | | | | 40 | 46 | 66 | | | 360W | | | | | |
| | | | | 50 | 47 | 67 | | | 400W | | | | | |
| | | | | 60 | 48 | 67 | | | 450W | | | | | |
| C Band | Full C (3400 ~ 4200) | N-type (F) : N-type (F) | Full C (5850 ~ 6725) | 5 | 37 | 57 | N-type (F) N-type (F) | 220VAC, Option: 48V or 110VAC | 100W | 238 x 327 x126 | 7.7 | * AC cable come with Transient protection * Guarantee performance with 16QAM Modulation * Completely independent Tx & Rx frequency Selection | | |
| | | | | 10 | 40 | 60 | | | 135W | 238 x 327 x 160 | 8 | | | |
| | | | | 20 | 43 | 63 | | | 250W | | | | | |
| | | | | 40 | 46 | 66 | | | 360W | | | | | |
| | | | | 50 | 47 | 67 | | | 370W | | | | | |
| | | | | 60 | 48 | 67 | | | 380W | | | | | |
| C Band | Full C (3400 ~ 4200) | N-type (F) : N-type (F) | Full C (5850 ~ 6725) | 100 | 50 | 68 | N-type (F) N-type (F) | 220VAC, Option: 110VAC | 900W | 495 x 265 x 215 | 22 | *2 Boxes: 1mW Driver (connect to respective SSPA via Low Loss cable) + SSPA +LNA | | |
| | | | | 150 | 52 | 68 | | | 1100W | 600 x 450 x 335 | 38 | | | |
| | | | | 200 | 53 | 70 | | | 1500W | | | | | |
| | | | | 250 | 54 | 70 | | | 1700W | | | | | |
| | | | | 1mW + | 0 | 35 | | | 10W | | | | 238 x 327 x 126 | 7 |

| Common | Technical Specification | |
|---------------------------|---|-------------------------------|
| Gain flatness | ±1dB (over IF band) | |
| | ±2dB (over RF band) | |
| Gain stability | ±2.0dB (-40 to 60°C) | |
| Frequency Step Size | 1MHz or 5 MHz (Full C: Independent Tx & Rx adjustment and Frequency step size: 1MHz) | |
| Frequency Stability | +/- 0.5 ppb/day | |
| Inter-modulation | -27dBc @ 3dB Output Power back off | |
| Second Harmonic/ Spurious | 55 dBc | |
| Phase Noise | @100Hz | -63dBc/Hz (Typ) |
| | @1kHz | -73dBc/Hz (Typ) |
| | @10kHz | -83dBc/Hz (Typ) |
| | @100kHz | -93dBc/Hz (Typ) |
| M&C | Monitor via PC (RS232/RS485) | Monitor via Handheld Terminal |
| | 1. Channel Selection | 1. Channel Selection |
| | 2. ODU Status | 2. ODU Status |
| | 3. Gain Adjustment | 3. Gain Adjustment |
| | 4. Temperature Alarm | 4. Temperature Alarm |
| | 5. Out of Lock Alarm | 5. Out of Lock Alarm |

Applications

- Video Teleconferencing
- Broadcasting
- Wide area telephony
- Rural Telecommunications Expansion
 - Backhaul Trunking
 - Back Up Network
- Private Data network
- Point of Sales System
- Emergency Link Restoration