



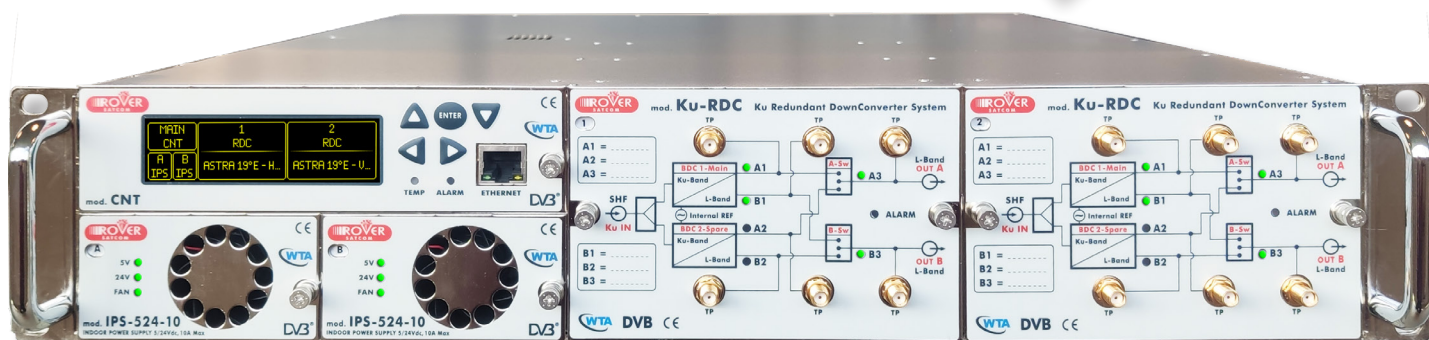
PRELIMINARY

HOT SWAP REDUNDANT DUAL Ku-DOWN CONVERTER SYSTEM

Dual band: L 10,7 - 11,7 & H 11,7 - 12,75 GHz • Dual polarity: Vert. & Horiz.

BAND
REDUNDANT
DUAL DOWN
CONVERTER

mod. **Ku-RDC System**



MAIN BENEFITS

- RF Switch protected against Mains Power Failure
- Simultaneously Supply of: Low & High Band and Vert & Horiz Polarity via RF coax or opt. Optic Fiber TX
- Fully redundant PSU and BDCs
- Front panel functional Block diagram with related LED & RF monitor Port
- Completely Hot swap, with minimum service interruption, thanks to front plug-in modules

MAIN FEATURES

- All Sat Band supported: S, X, Ku, Ka on request
- Very Low Phase noise and high frequency accuracy, high P1 dB and IP3
- Recommended for very low Symbol Rate carriers
- Suggested for Professional applications, Teleports, Broadcast & Military
- Display, SNMP, WEB Controller, with Alarms & Logger

**INNOVATIVE
PERFORMANCE**

for: SYSTEM INTEGRATOR,
TELEPORT BROADCASTER,
CABLE NETWORK, GOVERNMENT
& MILITARY COMMUNICATIONS

CE DVB



1972 > 2020 >>

48 YEARS OF INNOVATION

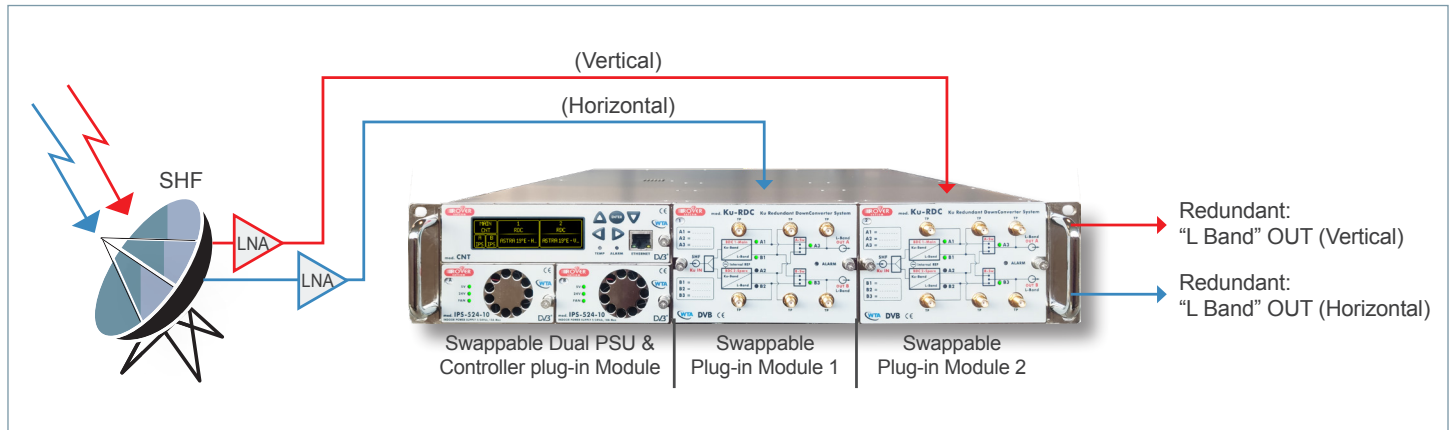
HOT SWAP DUAL REDUNDANT KU-DOWN CONVERTER SYSTEM

HOW THE "Ku-RDC SYSTEM" WORKS

The "Ku RDC System" is a compact and comprehensively Down Converter System, fully redundant, fully remote controllable, can supply simultaneously Low & High Band, Vertical & Horizontal (or Circular Left & Right) polarity via RF COAX or opt. Optic Fiber. The RF Redundancy Switch are protected against power failure thanks to Ultracap Technology.

Thanks to 5 front plug-in module, all parts can be HOT SWAPPED with minimum services interruptions, each module has an independent Microcontroller and Memory to clone the New Module installed.

The "Ku RDC System" is controllable via Local display or remotely via WEB GUI & SNMP; through N. 2 Ethernet port and thanks to N. 2 SFP Slot can be connected/controlled also via fiber optic.



Ku-RDC System WEB Control

Ku-RDC System < user defined >

Username: rover (admin)
IP Address: 192.168.1.11
Date: 14/01/2020
Time: 16:14:30

Log-Out

Alarms ON

Administration

- General Settings
- Network Settings
- Alarm Settings
- SNMP Settings
- Device Info

Modules

- Slot1 : ASTRA 19° vertical
- Slot2 : <User defined>

Home page

Slot1 : ASTRA 19° VERTICAL

- <user define>

LNA & BDC Powering

- LNA Powering: OFF ☒ ON
- BDC1 Current: 300 mA OFF ☒ ON 0 mA LNB Min Current Alarm Threshold Adj.: 500 mA 800 mA Fine Tune
- BDC2 Current: 300 mA OFF ☒ ON 0 mA LNB Min Current Alarm Threshold Adj.: 500 mA 800 mA Fine Tune

REDUNDANT MODE

- A3 Pwr OUT (RMS): -20 dBm -40 dBm RF Min Output Power Alarm Threshold Adj.: -34 dBm 15 dBm Fine Tune
- B3 Pwr OUT (RMS): -20 dBm -40 dBm RF Min Output Power Alarm Threshold Adj.: -34 dBm 15 dBm Fine Tune

B Out Switch

- REDUNDANT MODE: AUTO ☒ MANUAL
- B1 (Main) B2 (Spare)

BDC 1 - MAIN RF Power & Alarms

- A1 Pwr OUT (RMS): -20 dBm -40 dBm RF Min Output Power Alarm Threshold Adj.: -34 dBm 15 dBm Fine Tune
- B1 Pwr OUT (RMS): -20 dBm -40 dBm RF Min Output Power Alarm Threshold Adj.: -34 dBm 15 dBm Fine Tune

BDC 2 - SPARE RF Power & Alarms

- A2 Pwr OUT (RMS): -20 dBm -40 dBm RF Min Output Power Alarm Threshold Adj.: -34 dBm 15 dBm Fine Tune
- B2 Pwr OUT (RMS): -20 dBm -40 dBm RF Min Output Power Alarm Threshold Adj.: -34 dBm 15 dBm Fine Tune

"Ku-RDC System " TECHNICAL SPECIFICATIONS

SHF Ku-Band SPECIFICATIONS:

- Dual Band BDC Input = L Band 10,7/11,75 GHz
H Band 11,75/12,50 GHz
- Dual Band BDC Output = L Band 950/1950 MHz
H Band 1100/2150 MHz
- Dual Band BDC L.O. Freq. = L Band 9,75 GHz
H Band 10,60 GHz
- Dual Band BDC L.O. = Reference = Built-in
- Dual Band BDC L.O. Leakage = - 60 dBm at SMA INPUT
- Dual Band BDC L.O. accuracy = ± 10 KHz typ. at -30/+70° C
- Dual Band BDC Noise Figure at 12 GHz = 17 dB typ. (20 max)
- Dual Band BDC gain = 10-30 dB internal Adjust, flat ± 3 dB
- SHF Ku Input connector = SMA (f) 50 ohm (Rear Panel)
- Dual Band BDC L.O. Phase Noise = 90 dB typ. (80 min) at 10 KHz

RF L-Band SPECIFICATIONS (Plug 1 & 2):

- Output freq. Redundant Low Band = 950/1950 MHz
- Output freq. Redundant High Band = 1100/2150 MHz
- Output R.L. = 18 dB typ. (16 min) SMA connector
- Output RF Connectors = SMA (f)
- Output Optical connector = SC/APC (optional)
- Front panel Test Point = N.3 for Low Band & N.3 for High Band (-20 dB)

LNA POWER CONTROL:

- LNA Powering ON/OFF Max current 800 mA
- LED = green OK, RED = short circuit allarm
- Alarm indication via LED or dry contact

DRY CONTACT ALARM BOARD:

- CONNECTOR = SUB-D9 Male
- CONTACT LOAD = 65 V 400 mA
- A & B MAINS PSU = One defective
- LNB = DC Short Circuit
- RF POWER SENSING = RF too Low or no RF Signal

REDUNDANT HOT-SWAP POWER SUPPLY:

- N. 2 AC MAINS PSU = 110-240 VAC (with 2 separate receptacle for 2 separate Power LINE)
- AC POWER CONSUMPTION = < 25 VA
- N. 1 EXT DC PSU = 48 V D.C. (optional)

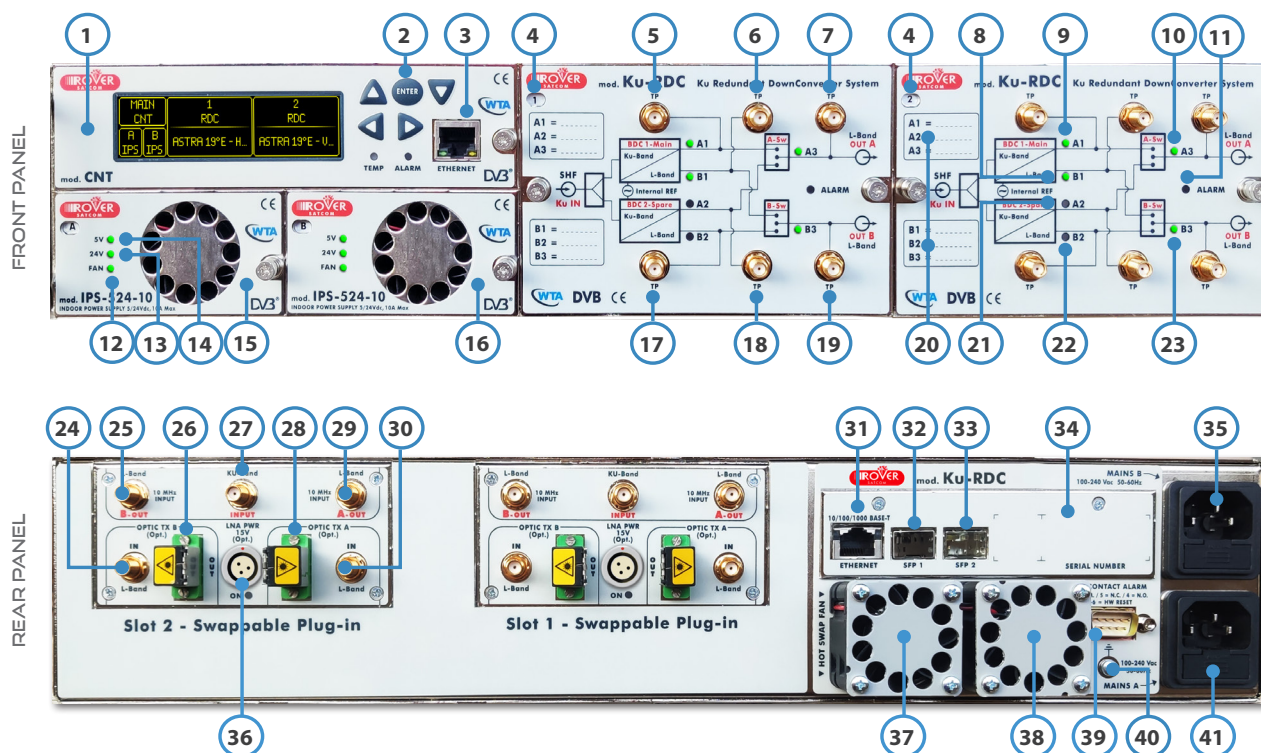
GENERAL SPECIFICATIONS:

- CASE = 19" 2U Rack (43 cm deep)
- NET WEIGHT = from 8 to 12 Kg related to the IN/OUT modules
- SAFETY = EN 50 083-1 and EN 60 950.
- ENVIRONMENT:
 - Temperature range: -30° / + 55° (max 60°)
 - Umidity 95%
- EMC = EN 50 083-2

PERIFERALS & CONTROL:

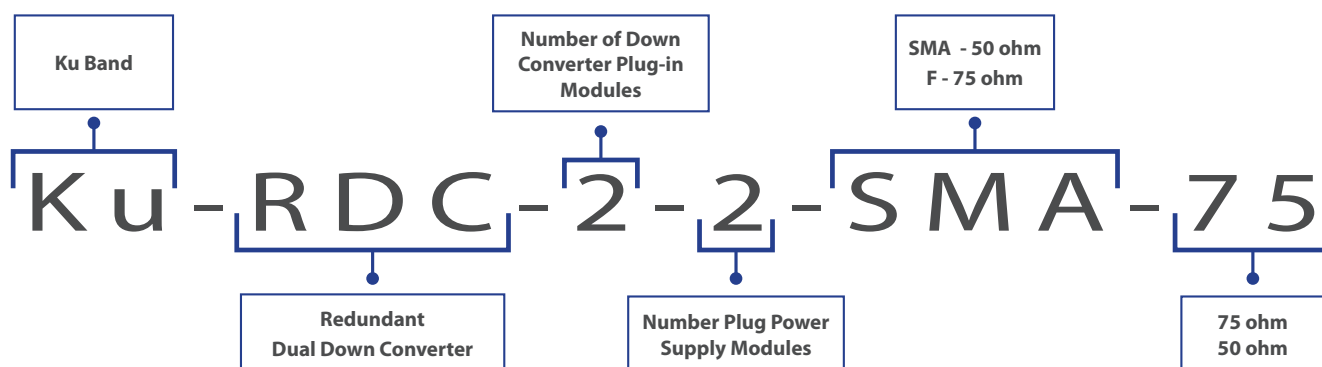
- Local control = with display and front LAN port
- PC control = via front LAN port
- Remote control = via rear LAN port through WEB & SNMP
- Fiber Remote Control via rear SFP Module
- LAN Port = 10-100-1.000 BASE-T

Ku-RDC System Front & Rear panels DESCRIPTION



- | | | | |
|-------------------------------|--------------------------------|-------------------------------------|---|
| 1. CNT, controller module | 12. FAN LED | 23. A3 LED switching state | 33. SFP2 Slot, Ethernet Fiber Optic |
| 2. Keyboard | 13. 24 V LED | 24. L-Band Input to B-2 Optic TX | 34. Serial Number label |
| 3. Front Ethernet port | 14. 5 V LED | 25. L-Band B2 coax Out | 35. Main B, receptacle |
| 4. Down Converter Modules 1&2 | 15. Plug-in PSU Module A | 26. L-Band Optic B-2 Out | 36. Ku-Band LNA 15 Vd.c. Fisher Connector |
| 5. A1, L-Band T.P. (SMA/f) | 16. Plug-in PSU Module B | 27. Ku-Band Input (vert. Pol.) | 37. Chassis FAN |
| 6. B1, L-Band T.P. (SMA/f) | 17. B2, L-Band T.P. (SMA/f) | 28. L-Band Optic A-2 Out | 38. Chassis FAN |
| 7. A out, L-Band T.P. (SMA/f) | 18. A2, L-Band T.P. (SMA/f) | 29. L-Band A-2 coax Out | 39. SUB-D, dry contact alarm |
| 8. B1 LED Signal presence | 19. B out, L-Band T.P. (SMA/f) | 30. L-Band Input to A-2 Optic TX | 40. Ground screw |
| 9. A1 LED Signal presence | 20. Signal legend | 31. Rear Ethernet port | 41. Mains A, receptacle |
| 10. A3 LED switching state | 21. A2 LED Signal presence | 32. SFP1 Slot, Ethernet Fiber Optic | |
| 11. Alarm Down Converter 2 | 22. B2 LED Signal presence | | |

ORDERING MODEL/CODE EXPLANATIONS



COMPLETE CHASSIS ORDERING MODEL / CODE EXAMPLE

MODEL	DESCRIPTION	APPLICATION
Ku-RDC-1-2-SMA-50	Hot Swap Redundant Down converter System with one Plug-In Down converter, double Power supply SMA 50 ohm Output connectors	SAT/Teleport & Broadcast
Ku-RDC-2-2-SMA-50	Hot Swap Redundant Down converter System with two Plug-In Down converter, double Power supply SMA 50 ohm Output connectors	SAT/Teleport & Broadcast

ROVER SATCOM PRODUCTS

TCM

TRANSPONDERS CONVERTER MATRIX

250-2.350 MHz, 16 Inputs, 48 Transponders
Redundant Hot-Swap PSU, Web GUI & SNMP,
opt. Optical Out



KU-RDC SYSTEM

DUAL REDUNDANT DOWN CONVERTER SYSTEM

250-2.350 MHz, 2 Hot Swap RF modules,
RF switch protected against Power Failure,
Display, SNMP, WEB controller, Alarms & Logger



TMD

TRANSPONDERS MONITORING & DEMODULATOR

250-2.350 MHz, 8 Inputs, 24 Transponders
Redundant Hot-Swap PSU, Digital
Measurements, Web GUI & SNMP, opt. Optical Out



RLP

LIGHTNING PROTECTION

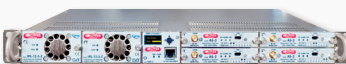
5-3.000 MHz, up to 12 Feeds



RAS-2

MANAGED WIDEBAND ACTIVE SPLITTER/COMBINER

1-4 RF In & 4-32 RF Out, 700-3.000 MHz, RF
Monitor Port & RF Power Meas., Redundant
Hot-Swap PSU, Web GUI & SNMP, opt. Optical In



LPHO-V-F

LNB POWERING INSERTER

5-3.000 MHz, 10 times individual switchable
LNB Powering (Voltage & Tone), Redundant
Hot-Swap PSU, Dry Contact Alarms



RAL

REDUNDANT L-BAND LINE AMPLIFIER

1 To 4 Hot Swap Amplifier Module, Low
Noise, High Gain & High Power, Display,
SNMP, WEB Controller, Alarms & Logger



ROF 20-OU

RF OVER FIBER LINKS

20 Slots for Tx- or Rx-Modules,
1+1, +1, 3+1 & 4+1
Path Redundancy,
Redundant Hot-Swap PSU,
local Display, SNMP,
WEB Controller,
Alarms & Logger

V.3 19-2-2020



Product
made in Italy by
Rover Broadcast.com

CERTIFICATES N°
1263 ISO 9001
1264 ISO 14001
1265 BS OHSAS 18001



Specifications and features are subject to change without notice.

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