



ITC 2011

C-Band Special Session

C-Band Vendor Products

L3 communications
Telemetry East

Presented by: Mark Kukawski

October 26, 2010

Bally's

Las Vegas, NV



L-3 Communications
Telemetry East
1515 Grundy's Lane
Bristol, Pennsylvania



C-Band Transmitter

- Model ST5010C
 - Full frequency coverage: 4.4 to 5.25Ghz
 - 0.5Mhz frequency steps available
 - 10W output power guaranteed over all environments
 - RF output protected via internal isolator
 - programmable power from 2W to 10W
 - Operating voltage range: 22V to 36V
 - constant power
 - overvoltage to 40V, RVP to 40V



C-Band Transmitter

■ Model ST5010C

• Modulation

- compliant ARTM Tier 0, 1 selectable
 - Tier 2 under design
- auto-detect pre-mod filter
- data rate range: 25M PCM, 40M SOQPSK-TG
- accepts external clock and data
 - RS422 / LVDS std, TTL optional
 - internal clock available



C-Band Transmitter

■ Model ST5010C

• Features

■ Programmable

- power, frequency, FEC-TPC, randomizer, internal/external clock-data, reduced power, on/off power control, sleep mode

■ BIT

- temperature, forward power, current, serial number, frequency

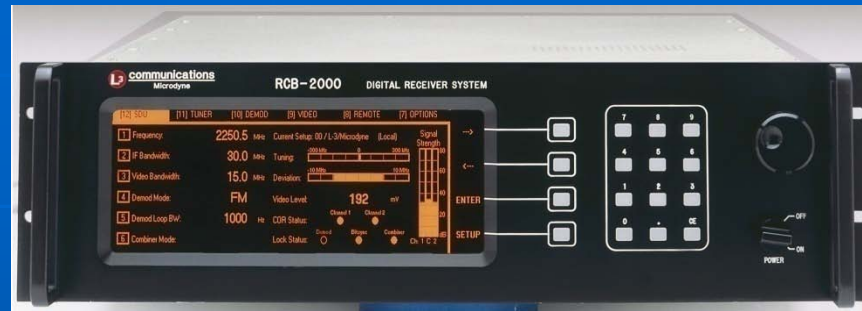


C-Band Transmitter

- Model ST5010C
 - Mechanicals
 - Size: 2 x 3 x 1in.
 - Weight: 8.0 ounces maximum



C-Band Receivers



- **DR-2000** Single Channel Receiver with Bit Synchronizer
- **RCB-2000** Dual Channel Receiver, Combiner & Bit Synchronizer system
- **RCB-4000** Dual/Independent Channel Receiver and Combiner and Bit Synchronizer System

RCB/DR Receivers

- Single and Dual Channel Receivers with C- band RF and IF and up to 3 other bands all in a 3U 19" rack mount package
- Data Rates to 20Mbps (40Mbps in Quaternary Modes)
- Spectrum Display, Tape Down Conversion and Dual Channel Bitsync options

C-Band Features

The C-Band update module will replace the local oscillator card inside the receiver



C-Band Upgrade Features

- Upgrade your New or existing RCB/DR series receivers to add C band capability internally
- Add both C band RF and C band IF bandwidths to the existing bands installed in the receiver
- Cost Effective solution to meet C band requirements
- No Degradation of existing receiver performance
- Maintain AGC linearity and Gain performance across all Bands
- Improved phase noise performance on Legacy receivers

Major Specifications of C-Band Performance

| Frequency of operation | Band | Dynamic Range | Noise Figure | Phase Noise |
|------------------------|---------------|-----------------------|---------------|-------------|
| 400MHz to 460MHz | C-Band IF | Noise floor to -10dBm | Less than 8dB | Tier-II |
| 610MHz to 1150MHz | C-Band IF | Noise floor to -10dBm | Less than 8dB | Tier-II |
| 4400MHz to 4940MHz | C-Band RF | Noise floor to -10dBm | Less than 8dB | Tier-II |
| 5090MHz to 5150MHz | C-Band RF | Noise floor to -10dBm | Less than 8dB | Tier-II |
| Existing Bands | E, UL,LL etc. | Noise floor to -10dBm | Less than 8dB | Tier-II |



C-Band Products



L-3 Communications

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