DATA SHEET

# 5700 series C-Band transceiver

Codan's 5700 series C-Band transceivers offer a wide range of distinctive advantages and enhanced features for satellite communications systems based in remote or challenging geographic regions.

Available in single or dual synthesiser options, standard or extended C-Band operation and 70 or 140 MHz IF configurations - and a range of power outputs - the 5700 provides industry leading technical performance.

Developed with the expertise of more than 25 years' supplying and servicing communications equipment for rugged areas, the 5700 series combines this technical excellence and performance with exceptional reliability even in the harshest environments.

*5700 series C-Band transeiver*

## KEY FEATURES

### Durability

The 5700 series is designed and tested to meet all its performance specifications in an ambient temperature range from -40°C to +55°C and up to 100 per cent relative humidity, ensuring long-term survival in extreme conditions. The thermal protection provided allows operation up to +60°C ambient.

### RF performance

RF performance is superb, particularly: intermodulation performance, gain stability over temperature and flatness across the IF band.

The 5700 also boasts industry leading spurious and harmonics specifications while guaranteed RF performance ensures expensive system link margins do not have to be used to cope with RF transceiver variations.

### DAMA options

Many unique configuration and control features are possible, optimising the performance capability of earth stations supporting Demand Assigned Multiple Access network services. The 5700's high linearity and low spurious characteristics contribute to superior multi-carrier performance.

### Output power options

Output ratings of 5, 10 and 20 watts are standard, while higher power options are also available.

### Power consumption

Codan's C-Band transceivers all feature low power consumption and low temperature rise, ensuring internal components do not suffer undue stress. For example, the 5W system uses a maximum of 95W, SSPA on, while the 20W uses 200W maximum.

### Power supply

The 5700 features a 48 VDC floating input (37V to 60V range) with reverse polarity protection. This is ideal for battery backup and solar-powered systems. In addition, the 5700 may be supplied with an optional AC power supply module with field selectable 115/230V operation.

### Internal protection

Internal protection against high temperature and short or open circuit RF output is standard. As well, input voltage detection ensures reliable shutdown and restart under brown-out or black-out conditions.

### External protection

All user access is via a transparent cover which can be removed without exposing major internal electronics to the elements. In addition, special sealant is used to ensure the sealing integrity of all connectors.

RF modules are fully sealed and pressure tested to 34kpa (5psi). Particle and moisture penetration is rated to IP68 and the units are submersible to 3 metres. High quality polyurethane paint is used to protect the modules from corrosion.

## ADVANCED FEATURES

### Enhanced monitor and control

All operating functions can be controlled and monitored via the serial interface and the operating configuration is stored in EEPROM to ensure the set-up parameters are restored in the event of a power failure. The status of the transceiver is reported automatically.

### *Universal interface compatability*

The 5700 has universal interface compatibility capable of operating with dumb terminals, laptop/PC emulating terminals, handheld terminals and personal organisers without requiring proprietary software. The versatile configuration options support: contact closure, RS232, RS422 and RS485 (2 or 4 wire).

### *Redundancy switching system*

A redundancy switching system provides an automatic changeover to a second transceiver to maximise link availability and minimise any disruption to service. This can be fully outdoor mounted with an optional indoor monitor and control unit.

Hot and cold standby operation options enable either fast changeover (typically 0.5 second) when running hot, or lower power consumption when running cold.

## CODAN QUALITY AND SERVICE

All C-Band transceivers are built and tested in Codan's ISO9001 quality certified manufacturing facility, and undergo 100 per cent burn-in and performance monitoring over the temperature range specified.

Codan's fully trained staff and agents provide in-factory and in-country training services and complete installation and on-site assistance. This service is backed up by a 24-hour customer service line and a warranty of three years on manufacturing, design or component defects.

*Typical installation on offset antenna*

## MAJOR CONFIGURATION OPTIONS

| Frequency bands | | Transmit | Receive |
|---|---|---|---|
| **1** | C-Band Standard | 5925 - 6425 | 3700 - 4200 |
| **2** | C-Band Extended | 5850 - 6425 | 3625 - 4200 |
| **3** | C-Band India | 6725 - 7025 | 4500 - 4800 |
| **4** | C-Band, Palapa-C, Thaicom-3, Intelsat VIII-A | 6425 - 6700 | 3400 - 3675 |

### Transmit/receive frequency control

| | | |
|---|---|---|
| **D** | Dual synthesiser | - all frequency bands |
| **S** | Single synthesiser | - frequency bands 1,2,3 |

### Bandwidth

| | | |
|---|---|---|
| **N** | Narrow band (40MHz) | - field selectable 70 or 140MHz IF |
| **W** | Wide band (80MHz) | - 140MHz IF |

### SSPA output

**N** N-type connector output
**W** WR-137 waveguide output

### LNAs

A selection of LNAs are available to best meet noise temperature and configuration needs.

INTERNATIONAL QUALITY MANAGEMENT SYSTEM ISO9001 NATA CERTIFIED


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