



Ku-Band Transceiver 5900 series

Codan's 5900 series Ku-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 all common Ku-Band operating frequencies and 70 or 140 MHz IF configurations—and a range of power outputs—the 5900 provides industry leading technical performance.

Developed with the expertise of more than 25 years' supplying and servicing communications equipment for rugged areas, the 5900 series combines this technical excellence and performance with exceptional reliability even in the harshest environments.

KEY FEATURES

Durability

The 5900 series is designed and tested to meet all its performance specifications in an ambient temperature range from -40°C to $+55^{\circ}\text{C}$ and up to 100 per cent relative humidity, ensuring long-term survival in extreme conditions. The thermal protection provided allows operation up to $+60^{\circ}\text{C}$ ambient.

Field experience for Codan transceivers shows that MTBFs of greater than 100,000 hours can be expected.

RF performance

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

The 5900 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. The 5900's high linearity and low spurious characteristics contribute to superior multi-carrier performance.

Output power options

Output ratings of 2, 4, 8 and 16 watts are standard, while higher power options are also available.

The SSPAs include an output power monitoring capability via the monitor and control serial interface.

Power consumption

Codan's Ku-Band transceivers all feature low power consumption and low temperature rise, ensuring internal components do not suffer undue stress.

Power supply

The 5900 features a 48 V DC floating input (37 V to 72 V range) with reverse polarity protection. This is ideal for battery backup and solar-powered systems. In addition, the 5900 may be supplied with an optional AC power supply unit with field selectable 115/230 V 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 brownout or blackout 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 34 kPa (5 psi). 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. 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 compatibility

The 5900 has universal interface compatibility capable of operating with dumb terminals, laptop/PC emulating terminals, hand-held terminals and personal organisers without requiring proprietary software. The versatile configuration options support: contact closure, RS232, RS422 and RS485 (2 or 4 wire).



Ku-Band Transceiver 5900 series with optional power supply unit

Two dedicated controllers are available from Codan:

- 5560 Hand-Held Controller, suitable for in the field installation setup.
- 5570 Remote Controller, suitable for indoor rack mounting to provide permanent monitoring and control capabilities.

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 system is fully outdoor mounted but can be supplied with the 5587 Redundant System Monitor to provide indoor monitor and control.

CODAN QUALITY AND SERVICE

All Ku-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.

MAJOR CONFIGURATION OPTIONS

Receive frequency bands

- Band 1 10.95–11.7 GHz
- Band 2 11.7–12.2 GHz
- Band 3 12.25–12.75 GHz

Receive frequency control

All systems use the common 5900 series converter module, which has an RF input of 950–1700 MHz

Receive bands are selected by the use of an appropriate LNB

Standard frequency bands are listed above whilst other bands are available on request

Transmit frequency bands

- Band 1 14.0–14.5 GHz
- Alternative frequency bands are available on request

Bandwidth

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

SSPA

WR75 Waveguide output

LNB

A selection of phase locked LNBs are available to best meet noise temperature and configuration needs

LNBs are phase locked to the internal 10 MHz reference in the 5900 converter module

- Receive L-Band output port
- Hand-Held controller
- Remote controller
- Redundancy switching systems



5560 Hand-Held Controller



5570 Remote Controller



Redundancy Switching System



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