

TMR 5200 HF DIGITAL TRANSCEIVERS

THE TMR5200 family of HF transceivers is part of Thales Communications' high performance Series 5000 integrated equipment range.

All Series 5000 transmitters, receivers and transceivers feature a common low-level module architecture and a common control protocol, which together with DSP technology, and a wide range of control options provides flexible and configurable solutions for long range ground-air/ ground-ground applications.

The compact and robust design supports easy integration in fixed, sheltered or transportable stations.

Associated radio gateway, adaptive communication controllers and high speed modems define the cost effective Series 5000 as a state of the art HF communications system.



TMR1090 Amplifier

KEY FEATURES

- High performance 125 W and 1 kW transceivers in a range of configurations
- 1.5 to 29.999999MHz in 1Hz steps (10kHz to 29.999999MHz Receive)
- Multimode including high speed data transmission and ALE capabilities
- DSP technology and optional built-in high selectivity post-selector
- Local, remote and PC control
- Comprehensive BITE
- Meets ITU and ICAO Annex 10 requirements



TMR5200 Exciter/Receiver

TMR 5200 transceivers are available in 125 W and 1 kW versions. They share a common module architecture and a common software protocol with the associated Series 5000 receivers and transmitters. This flexibility of design enables complex HF systems, with facilities for voice, fax and data file transfer, to be configured and controlled. Narrow band filtering and baseband signal processing are implemented using flexible and programmable digital signal processing (DSP) techniques. TMR5200 transceivers are designed for output at full rated power in continuous duty applications.

Technical Specifications

GENERAL

Stored Channels

1000 user-programmable preset channels

Frequency Stability

0.33 ppm from 0° C to +35° C
 2 ppm from 0° C to +50° C typical
 External frequency standard input 0.1, 1, 5
 or 10 MHz
 Optional OCXO 0.01 ppm from 0° C to +50° C

Modes of Operation

USB, LSB, ISB, CW, AME

Tuning

Direct frequency/channel entry from keyboard
 or keypad

Synthesizer Tune Time

<20 ms

Remote Control Interfaces

RS-232 or RS-485

Line Input/Output

Two independent channels, -20 dBm to +10 dBm,
 600 Ohms balanced audio

Power Supply

AC 85-132 / 170-264 V 47-63 Hz Auto-ranging

EQUIPMENT CONFIGURATION

One or two independent half-duplex exciter/receiver
 in one 4U chassis

EXCITER/RECEIVER

Frequency Range

1.5 MHz to 29.999999 MHz in 1 Hz steps (Tx)
 10 kHz to 29.999999 MHz in 1 Hz steps (Rx)

Output Power

50 mW \pm 1 dBPEP, 50 Ohms

Carrier Suppression

>60 dB

Unwanted Sideband Suppression

>60 dB

In-band SNR

>50 dB in 3 kHz bandwidth

Temperature Range

-5° C to +55° C operating, -40° C to +70° C storage

Weight

<18.5 kg (depending on the configuration)

Size

Height 178, width 483, depth 460mm

POWER AMPLIFIERS

1 kW Power Amplifier

RF Output 1000 W PEP/AVG
 Frequency Range 1.5 MHz to 30 MHz
 Forward Intermodulation Products 34 dB (below PEP) and better
 38 dB in enhanced linearity mode
 Harmonic Level Suppression -73 dBc
 BITE To module level
 Weight 56 kg
 Size (H x W x D) 480 x 483 x 510 mm

125 W Power Amplifier

125 W PEP/AVG
 1.5 MHz to 30 MHz
 30 dB (below PEP) and better
 -65 dBc
 To module level
 10 kg
 178 x 483 x 510 mm

Associated ACU 1 kW fast antenna tuning unit (AEA 179)

THALES

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