

# TELEMETRY

## CBT-610 Transmitter



The CBT-610 transmitter is a car-based L-band RF transmitter for telemetry data. Data is transmitted as an approx 2MHz wide signal in the L-band. Three different frequency ranges are available, 1310-1490MHz, 1450-1650MHz and 1510-1710MHz. The unit has 48MB internal memory to support probability based re-transmission strategies.

Telemetry data is primarily transferred to the CBT-610 unit from the on-car host unit via HDLC or ARCNET. Payload RF telemetry data rates of up to 2Mbps are supported. Retransmitted data handshaking for improved lap coverage is not required at many circuits, but may be provided using a small companion UHF modem (the CBX-450).

### Electrical

- Supply Voltage 11.5 to 16.0V DC (full RF performance)
- Reverse polarity input protection provided on the supply
- Supply Current operating  
3.5A typical @ 13.8V on high power setting  
1.6A typical @ 13.8V on low power setting
- Supply Current quiescent (RF shutdown) mode <1A
- Frequency range specified in ordercode details (L-band, 2MHz steps)
- Minimum channel spacing 4MHz (6MHz recommended)
- RF output power 50mW to 1W adjustable

### Outputs

- 1 RF output (L-band)  
Typical error corrected payload data rate of 2Mbps

### Communications

- 2 HDLC interfaces, full duplex with 2 way synchronous clocks, up to 8Mbps (can be software configured as 1 HDLC and 1 ARCNET, up to 10Mbps)
- 1 CAN bus interface, up to 1Mbps as standard
- 1 RS232 interface, up to 57.6kbps

### Diagnostics

- 2 internal diagnostic temperature sensors
- 2 internal RF power sensors (forward and reverse)

### Application

- High data rate continuous telemetry transmitter

### Connection Definition

- Chassis connector AS2 12-35PN
- RF connector 50ohm SMA socket
- For pinout information please consult our Technical Consultancy Department

### Mechanical

- Case material magnesium alloy, chromate converted and painted with black epoxy polyester paint
- Weight approximately 508g
- Vibration isolation is recommended

### Recommended Service Interval

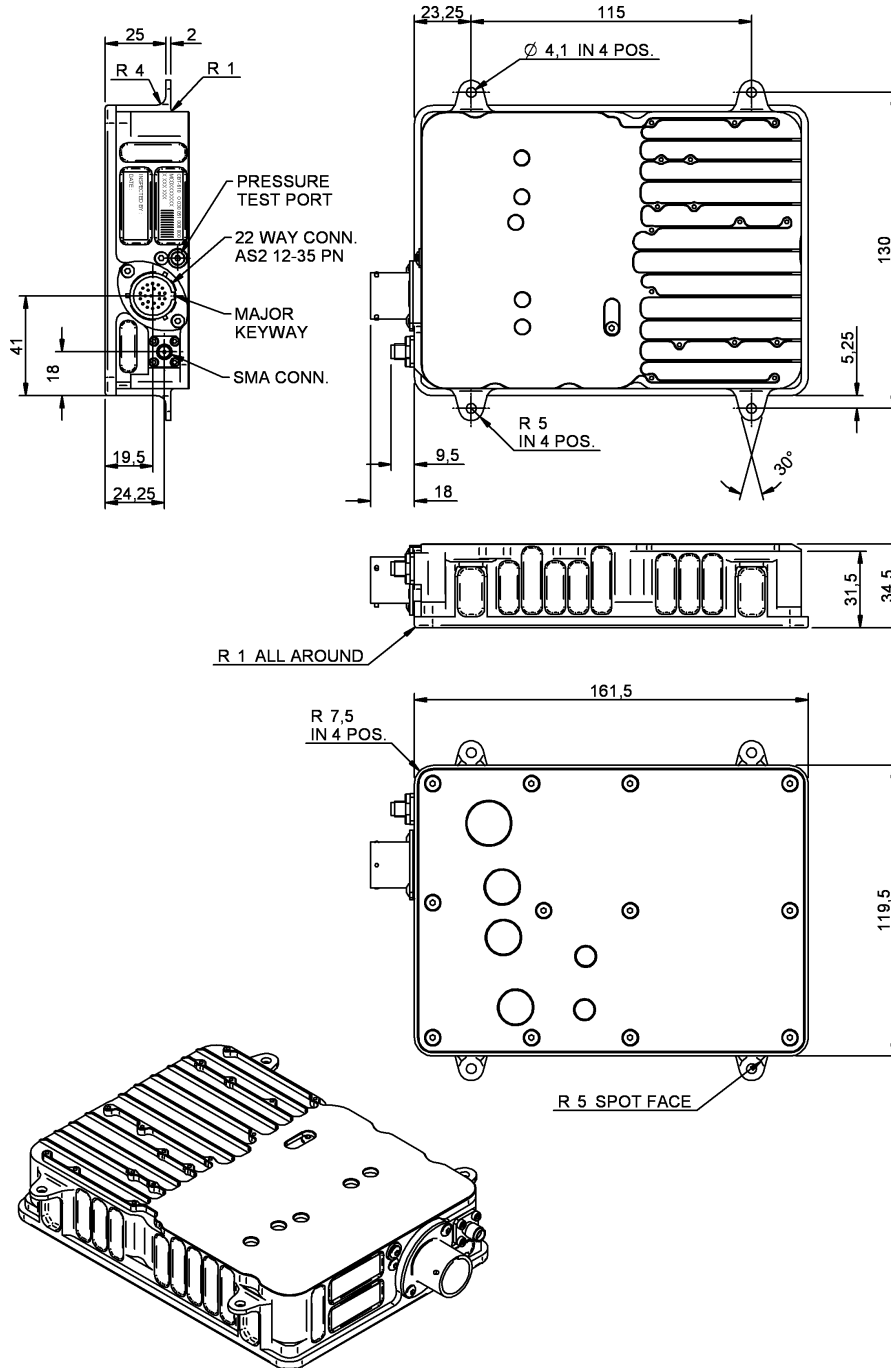
1 year

### Environmental

- Splash resistant to standard motorsport fluids
- Lid is sealed to the case, all through-case fixings sealed with silicone sealant, sealed motorsport connectors
- Maximum humidity 100%
- Minimum operating temperature 0°C
- Internal temperature not to exceed 70°C as measured on the temperature diagnostic, if necessary forced air cooling should be applied
- Storage temperature -10 to 85°C
- Vibration 100 to 1000Hz, all axes, 24hrs

# TELEMETRY

## CBT-610 Transmitter



Description	Frequency	Order Code
CBT-610	Standard 1450-1650MHz	O 030 051 008 001
CBT-610	Standard 1450-1650MHz – optimum for 1450-1550MHz	O 030 051 008 002
CBT-610	Low 1310-1490MHz	O 030 051 008 005
CBT-610	High 1510-1710MHz	O 030 051 008 003

16/11/09