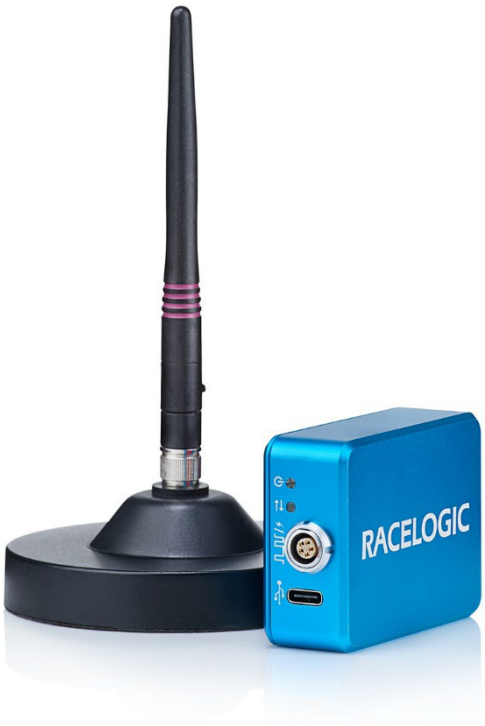
2.4 GHz High-Power Telemetry Radios

(RLRTMXB2P/ RLRTMXB2BS-P/ RLRTMXB2VBT-P)

The 2.4 GHz high-power radio modules are certified for use in the USA, Canada, Mexico, Brazil, Australia, and New Zealand. Specifically designed to work with the VBOX product range.



Each module is supplied with a magnetic mounting antenna and contains a radio modem capable of transmitting and receiving serial data via either an RS232 or USB interface. It can be connected to a VBOX or Base Station with just one cable.

The RLRTMXB2**BS-P** radios can be used with a Base Station to provide DGNSS corrections to a VBOX.

The RLRTMXB2**P** radios can be used to provide the link between two or more VBOX units at a range of 1000 m, which is used for ADAS testing where measurement of vehicle separation is required.

The RLRTMXB2**VBT-P** radios are used to transmit VBOX serial data from a remote unit to a laptop PC at a maximum rate of 20 Hz.

All 2.4 GHz high-power radios are available with a transmission power of +19 dBm.

Transmission Range

Environment	Range
Difficult Environment (e.g., buildings, reinforced concrete)	90 m (300 feet)
Open environment with antennas ground level (e.g., vehicle roofs)	1000 m (3300 feet)
In view with Base Station antenna at height (e.g., building roof)	3200m (2 miles)

Note: Obstacles such as walls and trees can greatly affect the range

Physical

Module Dimensions	65.5 mm x 48 mm x 22 mm
Operating Temperature	-20°C to +60°C
Storage Temperature	-40°C to +85°C

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Specifications

Input Voltage	8 – 30 V DC
Input Current - Receiving	<200 mA
Input Current - Transmitting	<200 mA
Radio Transmission Power	+19 dBm
Base Station Duty Cycle	< 10%
Frequency Band	ISM 2.4 GHz
Protocol	802.15.4
Interference Immunity	DSSS (Direct Sequence Spread Spectrum)
Radio Data Rate	250 kbit/s
RS232 Data Rate	115,200 bit/s (configurable)
Transceiver Approvals	FCC, IC (NORTH AMERICA), RCM (AUSTRALIA), ANATEL (BRAZIL), KCC (SOUTH KOREA)

Package Contents

RLRTMXB2P – ADAS, Moving Base Radios and DGNSS Rover

Description	Product Code
VBOX Radio 2.4 GHz (High-Power)	RTMXB2P-V1
Magnetic Mount Antenna with low loss CFD-200 cable - 2m	RLACS218
VBOX to VBOX Module PWR/CAN/SER cable (Lemo 5W Plug - Lemo 5W Plug) - 2m	RLCAB005

RLRTMXB2VBT-P – VBOX to PC Telemetry Radios

Description	Product Code
2x VBOX Radio 2.4 GHz (High-Power)	RTMXB2P-V1
Magnetic Mount Antenna with low loss CFD-200 Cable - 2m	RLACS218
20AWG USB Type A to Type C Fast Data Charger Cable - Black 1	TTV1AM20MB31
VBOX to VBOX Module PWR/CAN/SER cable (Lemo 5W Plug - Lemo 5W Plug) - 2m	RLCAB005
Mast Mount Enclosure Assembly for RTMXBx	ACS336
Base Station telescopic mast for radio antenna	RLACS143
2.4 GHz Mast Antenna 5DBI Gain NTYPE	PA0545LMR400
PC to Mast Mount Radio cable (Lemo 2W Socket - 9W D Socket) - 6m cable	RLCAB108
Mains Power Supply (UK) - Lemo 2W Plug	RLVBACS020

RLRTMXB2BS-P – DGNSS Telemetry Base Station Radios

Description	Product Code
VBOX Radio 2.4 GHz (High-Power)	RTMXB2P-V1
2.4 GHz Mast Antenna 5DBI Gain NTYPE	PA0545LMR400
Base Station mast mount radio option for greater range (for RLRTMXB2BS)	RLACS336-24