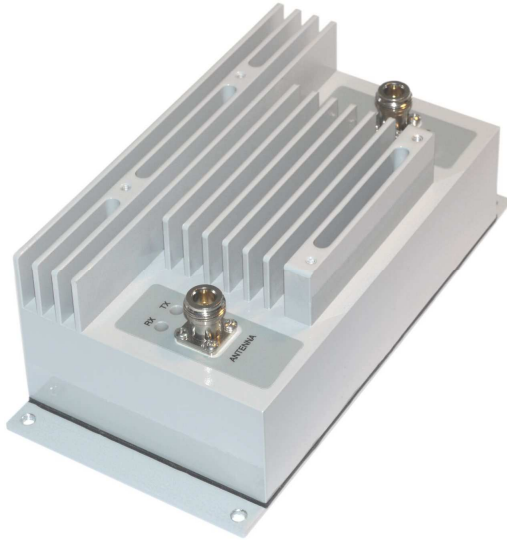


Bidirectional RF Amplifier

TULS - MQ, compatible with IEEE 802.11a OFDM radios as well as others



Dimensions
78 x 108 x 220 mm

Key Features

- frequency range 4.9- 5.0 GHz ('- 2') or 5.0- 5.3 GHz ('- 3') (other frequencies on request)
- 3 Watt transmit power (programmable from 0.5 W to 5 W)
- 12 dB receive signal gain
- compatible with IEEE 802.11a OFDM
- WLAN radios
- 12 VDC power supply through the antenna cable
- tracking antenna power & control
- signal through the antenna cable
- TWINS protocol compatible

Description:

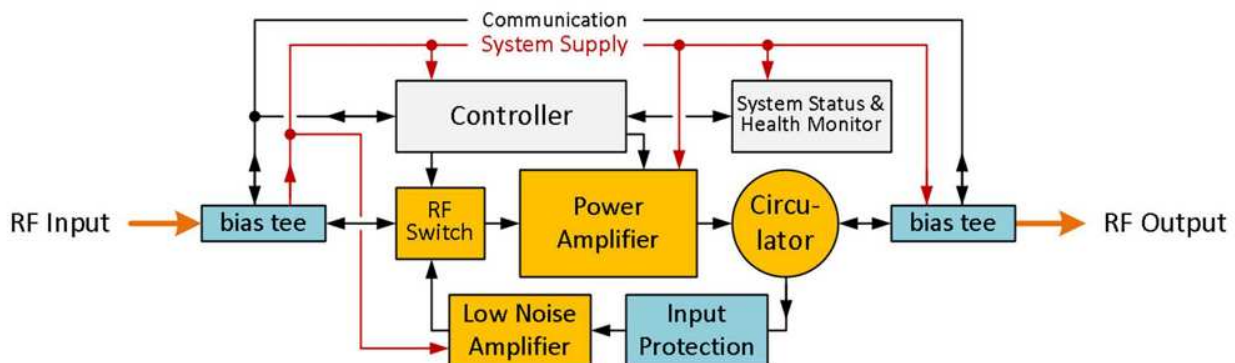
The bi-directional RF amplifier TULS-MQ is compatible with IEEE 802.11a OFDM radios as well as radios using Direct Sequence or Frequency Hopping Spread Spectrum modulation.

The integrated automatic power control circuit adjusts the amplifier's transmit gain to provide a constant output power regardless of cable length and input power. The receive gain compensates for cable losses and actually increases the receive sensitivity of most wireless LAN radios. The unit can be configured to deliver up to full transmit power with as little as 5 mW of input power. This feature permits long cable runs with no degradation in operating range.

The TULS - MQ amplifier series features an all-metal weather-proof enclosure machined from a single billet of aluminum, making it suitable for demanding commercial and military applications. For outdoor applications, the TULS - MQ improves range and reliability by placing up to full transmit power as well as 12 dB of low-noise receive gain directly at the antenna where it is most effective.

Power and control signals are supplied through the coaxial connections. They are both for controlling the power amplifier and for driving a tracking antenna. The control protocol is compatible with TWINS, the modular IP transmission system.

Functional bloc diagram:



Specifications:

Model	TULS - MQ
Frequency Range	4.9 to 5.0 GHz (TULS - MQ- 2) 5.0 to 5.3 GHz (TULS - MQ- 3) other frequencies on request
Output Power	3 Watt (programmable from 0.5 to 5 * Watt)
Input Power	5 mW (7 dBm) to 100 mW (20 dBm)
Receive Gain	12 dB nominal
Noise Figure	3 dB
Operating Mode	Bi-directional, half-duplex Time Division Duplex. Senses RF carrier from input and automatically switches from receive to transmit mode.
OFDM Compatibility	up to 5 Watt output power
Supply Voltage	11.5 - 13 VDC
Current Draw	3 Amps Peak Tx and 0.15A Peak Rx
Temp. Range *	- 30°C to + 70°C (* max. +50° @ output power > 3 Watt)
Humidity	≤ 95% RH
Vibration	10g (sine 20Hz- 2kHz)
Shock (½ sine)	100g peak (11ms)
Dimensions (standard version)	78 x 108 x 220 mm
Dimensions (slimmed version)	TBD
Weight (standard version)	1.6 kg
Weight (slimmed version)	TBD
RF Input Connector (J1)	N - female (RF & DC & control signals from ULS - N - 2)
RF Output Connector (J2)	N - female (RF & DC & control signals to tracking antenna TATS- M)

Outline drawing:

