High Speed & High Power

Multichannel Transceiver

XTR VF 2.4 HP/H-AI

P.N. 650201342G

Since MAY 2014 Aurel produce this version.
Previous family PA-LNA versions are totally replaced in term of pinout, overall dimension, technical features, performances and user command.

DESCRIPTION

Long range transceiver XTR VF 2.4 HP is pin-to-pin compatible with previous model XTR VF 2.4 LP, representing an extension suitable to reach a RF output power (ERP) increate up to 20 dBm (compared with the 4 dBm of the XTR VF 2.4 LP). In this way it's possible to cover, in open space outdoor conditions, a radio link of 200 meters.

Radio transceiver embeds an integrated PIFA (Planar Inverted F Antenna) antenna.

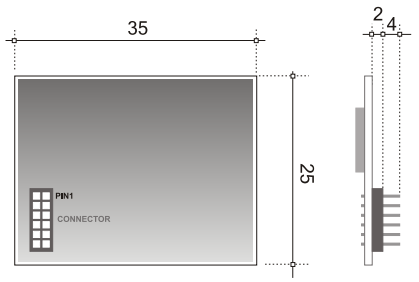
It uses a DSSS (Direct Sequence Spread Spectrum) technique that allows operation in disturbed environments and that reduces the interference caused by traditional narrowband signals.

This technique also allows coexistence with Bluetooth and Wi-Fi as well as all other wireless technologies that utilize the 2.4GHz ISM Band.

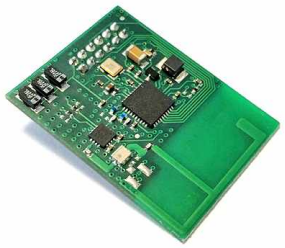
Transceiver embeds a power amplifier (PA) for transmission, and a Low Noise Amplifier (LNA) to clear up the signal received.

Module can be connected to a microcontroller via SPI Interface. This makes possible full transceiver programmability: in particular, possibility is given to set RF channel, data transmission speed and RF radiated power level.

DIMENSIONS



COMPONENT SIDE



PIN-OUT

TECHNICAL SPECIFICATION

Ta = 25 °C

CHARACTERISTICS	CARATTERISTICHE	MIN	TYP	MAX	UNIT
Power supply	Alimentazione	2		3.6	Vdc
Supply current (Rx mode)	Corrente assorbita (RX)		31		mA
Supply current (TX mode step 7)	Corrente assorbita (TX step 7)		160		mA
Supply current (TX mode step 4)	Corrente assorbita (TX step 4)		55		mA
Supply current (Standby)	Corrente assorbita (Standby)		2		µA
Modulation	Modulazione		GFSK		
Sensibility@250kbit/s (BER 1x10^{-3})	Sensibilità@250kbit/s (BER 1x10^{-3})		-100		dBm
ERP RF Power [1]	Potenza irradiata RF [1]	-10		+20	dBm
RF Channels frequencies [2] [3]	Frequenze canali RF [2] [3]	2400		2497	MHz
Operating temperature	Temperatura di lavoro	0		+70	°C

[1] To be in compliance with the European ETSI standard requirements maximum output power level is 10mW. This condition is satisfied with step n°4 of 0x03 register. Instead to be in compliance with USA FCC standard there are no limits in power settings (step n°7 of 0x03 register may be used). Using step n°7 of that register, will obtained the max output power +20dBm.

[2] To be compliant with European ETSI standard requirements it is mandatory to use channels in the range from 2404MHz (channel 4) to 2480MHz (channel 80).

[3] To be compliant with USA FCC standard requirements it is mandatory to use channels in the range from 2401MHz (channel 1) to 2482MHz (channel 82).

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