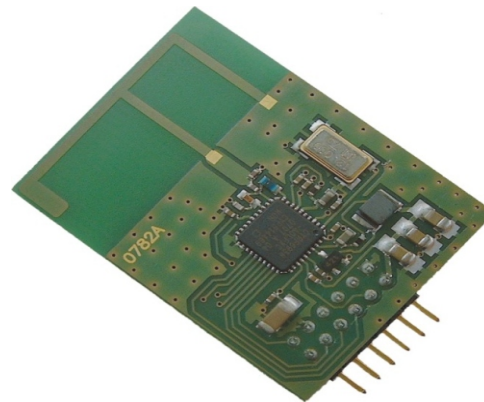# XTR VF 2.4 LP

Very Fast Low Power Multichannel Transceiver

Description

XTR VF 2.4 LP transceiver, pin to pin compatible with Aurel module XTR CYP 2.4GHz and Cypress module CYWM6935 LR 2.4GHz DSSS Radio SoC, represents an extension suitable for data transfer at 1Mbit/sec (from 64Kbit/sec available from previously available modules), with reduced current consumption and wide supply voltage range (from 1.8 to 3.6V), as supplied with an internal switching power supply with programmable start threshold. Due to the high transmission speed, with short burst to send data packet and with the increased supply voltage range, the module is ideally suitable for battery operated applications. It operates in the License Free Industrial, Scientific and Medical (ISM) band at 2.4GHz and it offers a complete radio module solution for integration into existing or new 2.4GHz products. 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. Radio transceiver embeds a PIFA (Planar Inverted F Antenna) and can be connected to a microcontroller and one or more external devices via SPI Interface. This last facility makes possible full transceiver programmability: in particular, possibility is given to set RF channel, data transmission speed and RF radiated power level. RF channels available are 98 (1 MHz wide channels, from 2.400 to 2.497GHz), available, for usage compliant to national requirements, in the ISM band of 2.400 to 2.4835GHz Band. Transmission range is selectable from 16Kbit/sec to 250Kbit/sec according to the used spreading code. It can be increased to 1Mbit/sec if spread spectrum technique is not used.
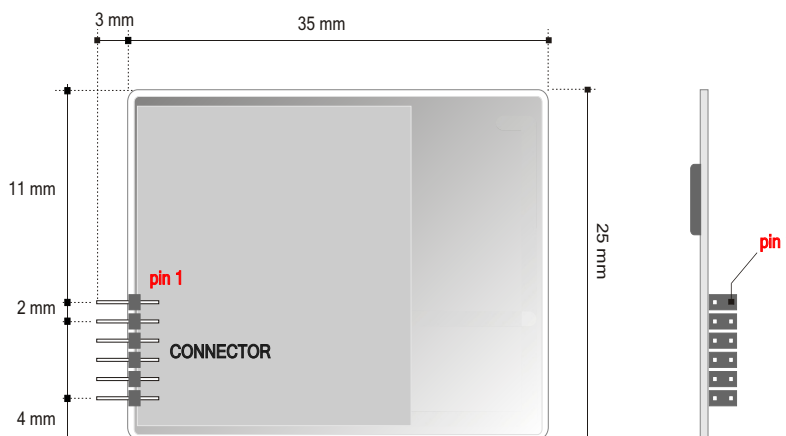
At lower speeds, the Aurel XTR VF 2.4 LP module is radio compatible with Aurel XTR CYP 2.4GHz.

Improved capabilities are available. For example, automating packet framing is available to insert number of bytes detail and CRC error control code. ACK packet can be automatically retransmitted.
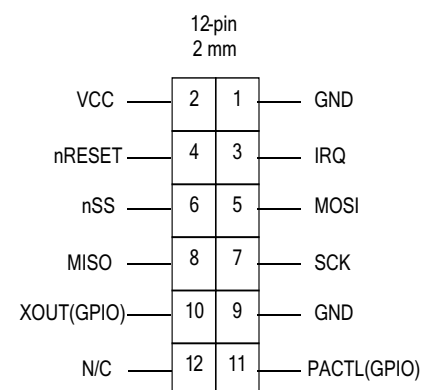
Applications

Industrial automation, Radio modems, Access Control.

Machanical dimensions (Rear view)

Pin-out

	12-pin 2 mm		
VCC	2	1	GND
nRESET	4	3	IRQ
nSS	6	5	MOSI
MISO	8	7	SCK
XOUT(GPIO)	10	9	GND
N/C	12	11	PACTL(GPIO)

AUREL S.p.A. • Via Foro dei Tigli, 4 • I 47015 Modigliana (FC) Italy • Phone : +39-0546.941124 • Fax : +39-0546.941660
http://www.aurelwireless.com • email: rfcomm@aurel.it

XTR VF 2.4 LP

Very Fast Low Power Multichannel Transceiver

Reference documentation

For information on technical details of 'XTR VF 2.4 LP such as register settings, timing, application interfaces, clocking and power managing, refer to the data sheet of the CYRF6936 Radio SoC on Cypress internet site: www.cypress.com.

Pin description

Pin		Descrizione
1,9	GND	Ground connection.
2	VCC	Positive voltage supply connection.
3	IRQ	Interrupt signal from the radio module to an external microcontroller.
4	nRESET	Reset signal (active low) from an external microcontroller to the radio module.
5	MOSI	Master Out Slave In. SPI signal from an external microcontroller to the radio module.
6	nSS	Slave Select signal (active low) from an external microcontroller to the radio module.
7	SCK	SPI clock from an external microcontroller to the radio module.
8	MISO	Master In Slave Out. SPI signal from the radio module to an external microcontroller.
10	XOUT(GPIO)	GPIO usable pin.
11	PACTL(GPIO)	GPIO usable pin.

Technical specifications

Ta = 25 °C

Caracteristics	Min	Typ	Max	Unit
Voltage supply	1.8		3.6	Vdc
Current supply (RX mode)		21		mA
Current supply (TX mode Max Power)		34		mA
Current supply (Stand-by mode)		0.8		µA
Modulation type		GFSK		
Receiver sensitivity @250kbit/s		-93		dBm
RF power out (ERP)	- 35		4	dBm
RF channels frequencies[1]	2400		2497	MHz
Number of channels[1]		98		
RF bandwith		1		MHz
Operating temperature[2]	0		+70	°C

[1] To be used in compliance with national requirements.

[2] At min. and max. temperature limits, the maximum usable packet lenght is 40 bytes for speed of 250Kbit/sec and 16 for lower speed.

Part Number / Model

650201025 / mod.XTR VF 2.4 LP
Information subjet to change without notice

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for RF Modules *category:*

Click to view products by Aurel *manufacturer:*

Other Similar products are found below :

HMC-C009 HMC-C011 nRF24L01P-MODULE-PCB HMC-C021 HMC-C024 XB9XT-DPRS-721 XBP9B-DMUTB022 nRF24L01P-MODULE-SMA CMD-KEY2-418-CRE XM-C92-2P-UA XB9XT-DPUS-721 V640-A90 HMC-C583 MAAM-008818-TR3000 MTSMC-H5-U SIMSA868-PRO SIMSA915C-PRO SIMSA868C-PRO SIMSA433C-PRO SIMSA915-PRO XBP9B-DMUT-042 HMC-C582 HMC-C022 XBP9B-DPST-041 XBP9B-DMWT-042 SM-MN-00-HF-RC HMC-C031 MT-02 M1002GB 702-W SIMSA868C-N-PRO SIMSA433C-N-PRO SIMSA915C-N-PRO ADP-R202-00B PEPPER WIRELESS C1 USB S2-10732-Z1T61 S2-107XB-Z2356-Z2352 S2-10672-Z1L85 S2-10686-Z1L1D S2-10688-Z1L1T S2-106BA-Z1P20 S2-1060C-Z1F0A S2-106R4-Z1Q6F-Z1Q6Q S2-106R4-Z1Q6J-Z1Q6Q S2-106RB-Z1Q6V-Z1Q6Q S2-107DR-Z1Y5B SU60-2230C-PU RC-TFSK3-868 NANO RFID POE RFID USB POCKET