

Wisenet Addon Module

General Description

This Wisenet Addon Module is an expansion to the CC1010 Evaluation Module from Chipcon. It is designed for environmental monitoring applications. The addon module was developed to be used with the Wisenet software.

Board connections

The Wisenet Addon Module connects to the CC1010 Evaluation module through the P2 connector on the board. The pin descriptions of this connector are listed in Fig 1

Features

The Expansion board features 4 major components. One component is a voltage regulator with low battery detection provided by a chip from Maixm, the Max1676. Another is a CMOS to RS-232 converter chip with autoshtutdown. There are also 2 sensor modules. One monitors temperature and humidity, the Sensirion SHT11. And the other, the TAOS TSL 2550, monitors light.

Pin#	CC1010 Pin	Pin Description	Input / Output	Addon Board description
1	RSSI_AD2	RSSI / ADC CH2	INPUT	NC
3	AD1	ADC CH1	INPUT	NC
5	AD0	ADC CH0	INPUT	TEST_POINT
7	TEST_N	SET THIS TO VDD	INPUT	VDD
9	RESET_N	RESET THE CC1010	INPUT	NC
11	PROG_N	FLASH PROGRAM	INPUT	NC
13	P2.7	General IO	I/O	INVALID' of Max3221 (RS-232)
15	P2.6	General IO	I/O	LBO' of Max1676 (low batt)
17	P1.7	General IO	I/O	S_CK of SHT11 (serial clock)
19	P1.6	General IO	I/O	S_DATA of SHT11 (serial data)
21	P1.5	General IO	I/O	SMB_DATA of TSL2550
23	P0.3	General IO	I/O	SMB_CLOCK of TSL2550
25	P0.2	MISO	I/O	NC
27	P3.0	RXD0	I/O	RX -> Max3221 (RS-232)
29	P3.1	TXD0	I/O	TX -> Max3221 (RS-232)
31	P3.2	INT0 – level/edge trig.	I/O	Green LED
33	P2.5	General IO	I/O	Yellow LED
35	P2.4	General IO	I/O	Red LED
37	P2.3	General IO	INPUT	Enable Serial (EN' of Max3221) active low
39	3.3V_RF	VDD	Power	VDD (regulated from Max1676)

Fig 1 – Pin descriptions of TFM-D connector.

Jumpers

There is a jumper on the board, JP1. JP1 has two purposes, one is to indicate to the microcontroller that the serial converter chip, the Max 3221, is enabled through pin P2.3. This pin is an input and is used only to monitor the status of the jumper.

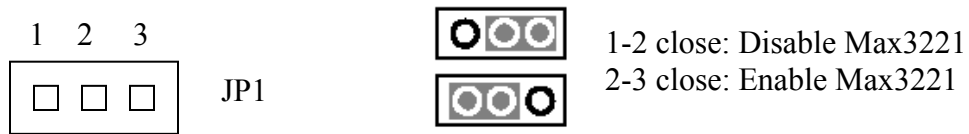


Fig 2 – Jumper JP1 description

The enable pin of the Max3221 is active low, so position 2-3, connects pin 2 to ground and grounds P2.3 of the microcontroller thus indicating that the Max3221 is disabled.

Test pins

Several test pins are available on the addon module. They are listed in the Fig 3.

Test pin #	Name	Purpose
TP1	Vin	Voltage in connection Min = 1.1V, Max = 5.5V
TP2	Gnd	Ground connection
TP3	TX	RS-232 TX pin for serial communication
TP4	RX	RS-232 RX pin for serial communication
TP5	ADC0	Analog to digital converter input

Fig 3 – Test pins available