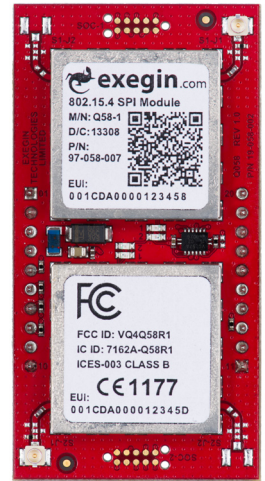




# Q58 802.15.4 SPI Module

MESH NETWORK CONNECTIVITY FOR CORE INFRASTRUCTURE

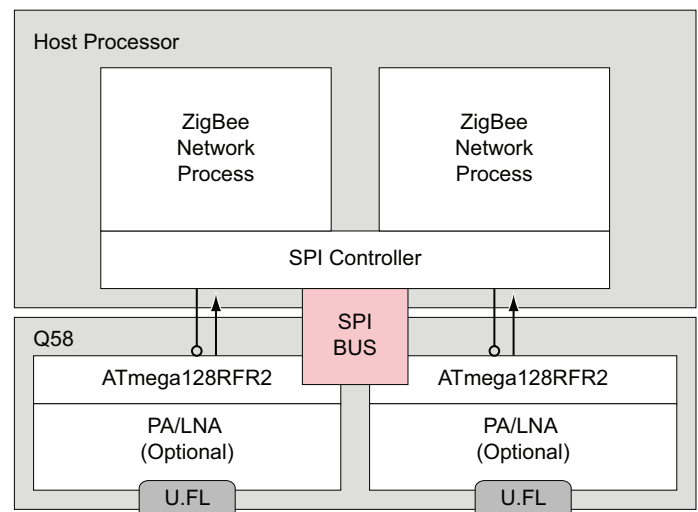


## overview

The Q58 connects your embedded system to two separate mesh networks using only one SPI bus. It's ideal for applications providing core services to two different mesh networks, such as smart energy and home automation. The Q58 gets you to market quickly when combined with Exegin's ZigBee PRO and ZigBee IP stacks for Linux and many real time operating systems.

## benefits

- One module supports two fully independent mesh networks
- Network stack avails itself of host processor resources to provide rich feature set
- Run-time configuration as coordinator, router or end device
- Time critical MAC processing performed within module allows easy integration



• Q58 BLOCK DIAGRAM

## features

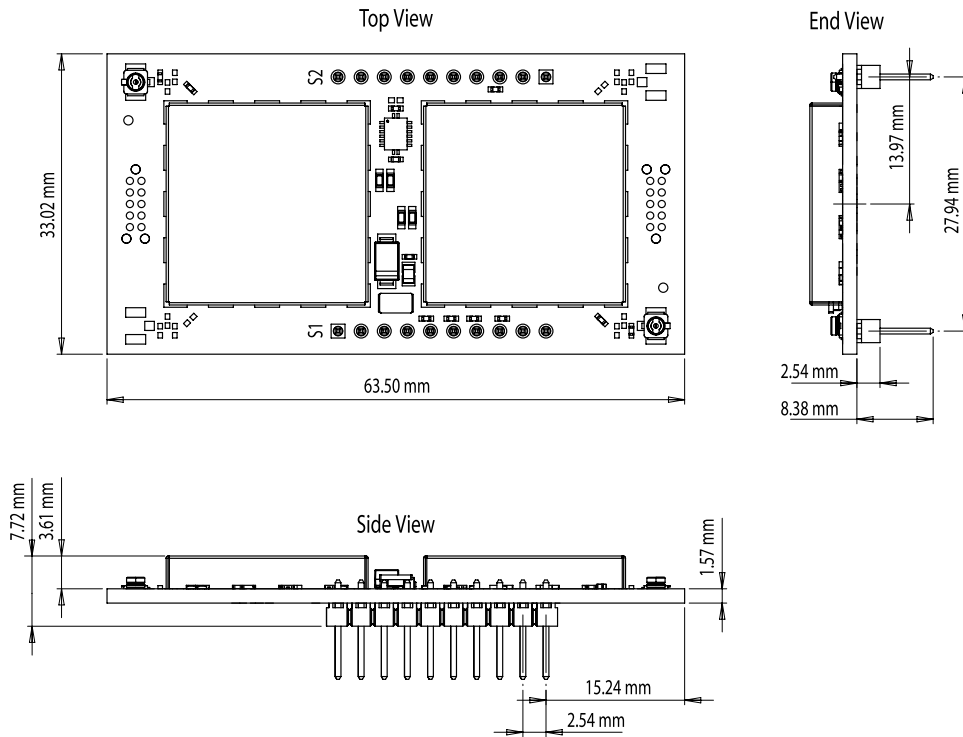
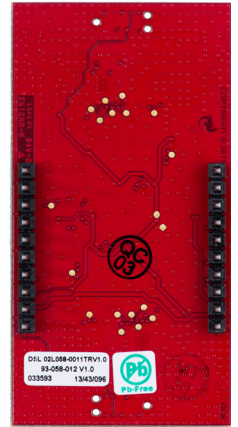
- Two independent microcontrollers with IEEE 802.15.4 transceivers
- Optional power amplifiers and low noise receivers
- Includes Exegin's proven IEEE 802.15.4 MAC firmware
- Generates ID code for Intel® Quark SoC X1000 Industrial/Energy Reference Platform
- Uses only one SPI channel, two chip selects and two interrupts
- Meets Intel® Industrial FFRD SPI Module Interface Specification, document #519705
- Supported by Wind River Linux 5.0 and Wind River IDP 2.0
- Firmware can be field-upgraded over SPI bus





# Q58 802.15.4 SPI Module

## SPECIFICATIONS



### RF

- 2.4GHz worldwide ISM band
- 3dBm (18dBm) Transmit Power (PA)
- -100dBm (-104dBm) Receive sensitivity (LNA)
- U.FL antenna connector
- FCC Class B, IC, and CE Mark

### POWER

- 3.0 - 3.6 VDC, 150mA maximum

### PHYSICAL

- Metric - 33.02mm W x 63.5mm L x 13.56mm H
- Imperial - 1.3" W x 2.5" L x 0.534" D
- 14 g / 0.5 oz.

### ENVIRONMENTAL

- -40°C - 85°C (industrial) operating
- -40°C - 125°C storage
- 95% maximum humidity, non-condensing

### COMPONENTS

- Atmel ATmega128RFR2 MCU/Transceiver
- Skyworks SE2431L Power / Low Noise Amp
- ROHS, WEEE compliant

### ORDERING INFORMATION

P/N	ITEM
98-058-012	Dual 802.15.4 Radios, PA/LNA, EU
98-058-013	Dual 802.15.4 Radios, PA/LNA, US
98-058-014	Dual 802.15.4 Radios, EU
98-058-015	Dual 802.15.4 Radios, US



401 - 2071 kingsway avenue  
 port coquitlam | bc | canada | v3c 6n2

toll free +1.800.665.7798

t +1.604.468.2552

info@exegin.com | www.exegin.com