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## XR111 Radar Sensor Board Product Brief



XR111 Product Radar Sensor Board Product Brief

Proprietary and Confidential

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Version 1.5: 2018-08-10



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# 1 Introduction

This document briefly describes the Acconeer XR111 Sensor Board. It has been designed with the purpose of demonstrating and debugging Acconeer A111 Pulsed Coherent Radar Sensor. XR111 should be used together with the XC111 Connector board. This combination is referred to as the XC111-XR111 Evaluation Kit (EVK). The EVK will also require a Raspberry Pi3 for secure processing and power supply.

For More information please read:

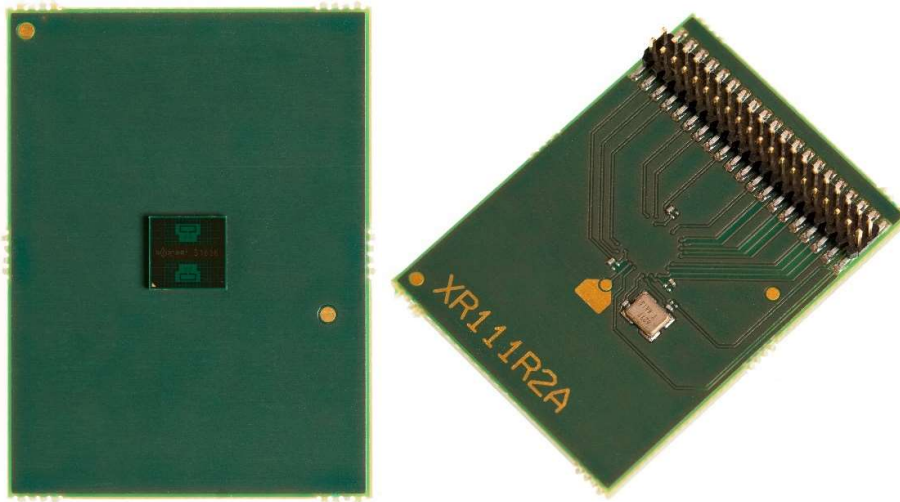
- [A111 Data Sheet](#)
- [XC111-XR111 User Guide](#)



## 2 XR111 Radar Sensor Board

### 2.1 Overview

The pictures below show the XR111 Radar Sensor Board. The leftmost picture shows the front side of the XR111, with the A111 Radar Sensor mounted centrally, and the rightmost picture shows the reverse side of the XR111.



### 2.2 Power

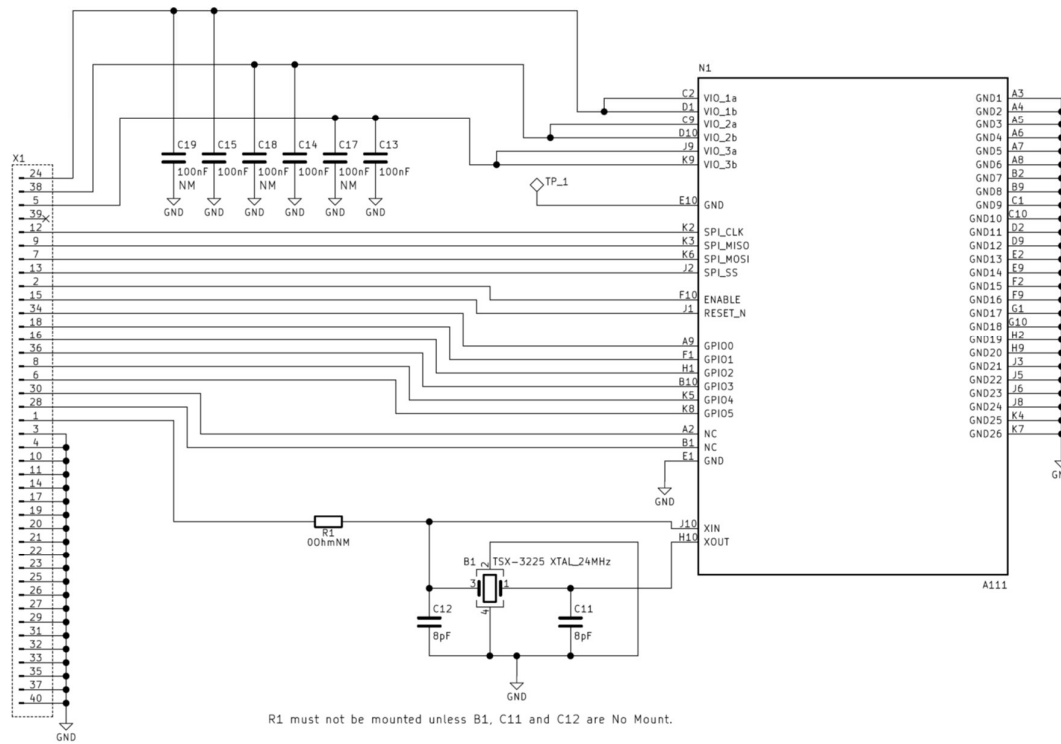
The XR111 Evaluation Kit is powered through the Raspberry Pi. When the power LED on the Raspberry Pi is lit, the Evaluation Kit is powered on and ready for use.



## 2.3 Electrical Schematics



Below, please find the electrical schematic for the XR111:



R1 must not be mounted unless B1, C11 and C12 are No Mount.





## 2.4 Bill of Materials

Table 1 shows the BOM for the XR111

Component Ref.	Part Number	QTY	Value	Comment
X1	20021121-00040T4LF	1		
N1	A111R2A	1		
C11-C12	CAPM0603_033_1	2	8pF	
C13-C15	CAPM0603_033_1	3	100nF	
C17-C19	CAPM0603_033_1	3		
TP_1	TESTPOINT	1		
B1	TSX-3225	1		24 MHz

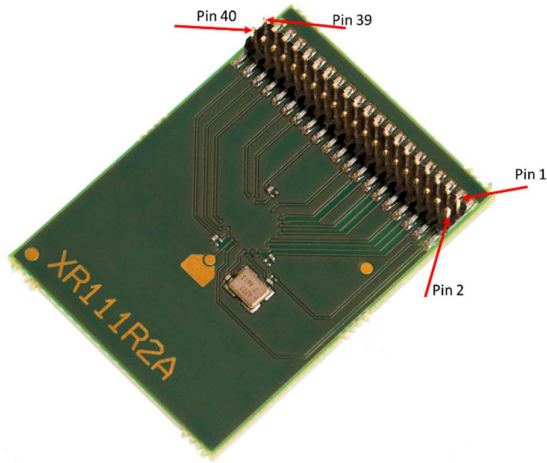


## 2.5 Pinning

Table 2 shows the PIN connections of XR111.

Pin Number	Description
1	External Reference Clock (if used)
2	Sensor Enable
3	GND
4	GND
5	VIO
6	GPIO5
7	SPI_MOSI
8	GPIO4
9	SPI_MISO
10	GND
11	GND
12	SPI_CLK
13	SPI_SS
14	GND
15	RESET_N
16	GPIO2
17	GND
18	GPIO1
19	GND
20	GND
21	GND
22	GND
23	GND
24	VIO
25	GND
26	GND
27	GND
28	Pin B1 (NC)
29	GND
30	Pin A2 (NC)
31	GND
32	GND
33	GND
34	GPIO0
35	GND
36	GPIO3
37	GND
38	VIO
39	Not Connected
40	GND

In the picture below the pinning of the XR111 connector is shown:





### 3 Revision History

Date	Version	Changes
2018-02-07	1.0	Original Version
2018-02-14	1.1	
2018-04-05	1.2	Updated Electrical Schematic for XR111 so that it is possible to zoom.
2018-04-16	1.3	Updated Crystal oscillator frequency from 26MHz to 24MHz. Added a comment to the BOM to clarify that the crystal oscillator frequency is 24 MHz.
2018-05-04	1.4	Updated Chapter 2.4 Table 1, BOM for XR111. X1 part number was updated since it contained a typo.
2018-08-10	1.5	Added a picture of XR111 pinning to chapter 2.5.



## 4 Disclaimer

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