

# **AX99100 Product Introduction**

Revision 0.10  
Apr. 21<sup>st</sup>, 2016

## Revision History

Revision	Date	Description
0.10	2016/04/21	Preliminary release

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## 1. Introduction

The AX99100 is a single chip solution that fully integrates PCIe 2.0 Gen 1 end-point controller and SerDes with a variety of peripherals such as four High Speed Serial Ports, one Parallel Port, I<sup>2</sup>C Master, High Speed SPI, Local Bus (ISA-Like), and GPIOs. It consists of four main configurations such as 4S (PCIe to Quad Serial), 2S+1P (PCIe to Dual Serial and Single Parallel), 2S+SPI (PCIe to Dual Serial and SPI), and LB (PCIe to Local Bus/ISA-Like) for different kinds of applications.

The AX99100, in 68-pin QFN, are available with RoHS compliant package and supports commercial grade operating temperature range from 0 to 70°C and industrial grade from -40 to 85°C.

This document provides an overview of AX99100 PCIe to Multi I/O Controller product.

## 2. Block Diagram

The following is AX99100 block diagram,

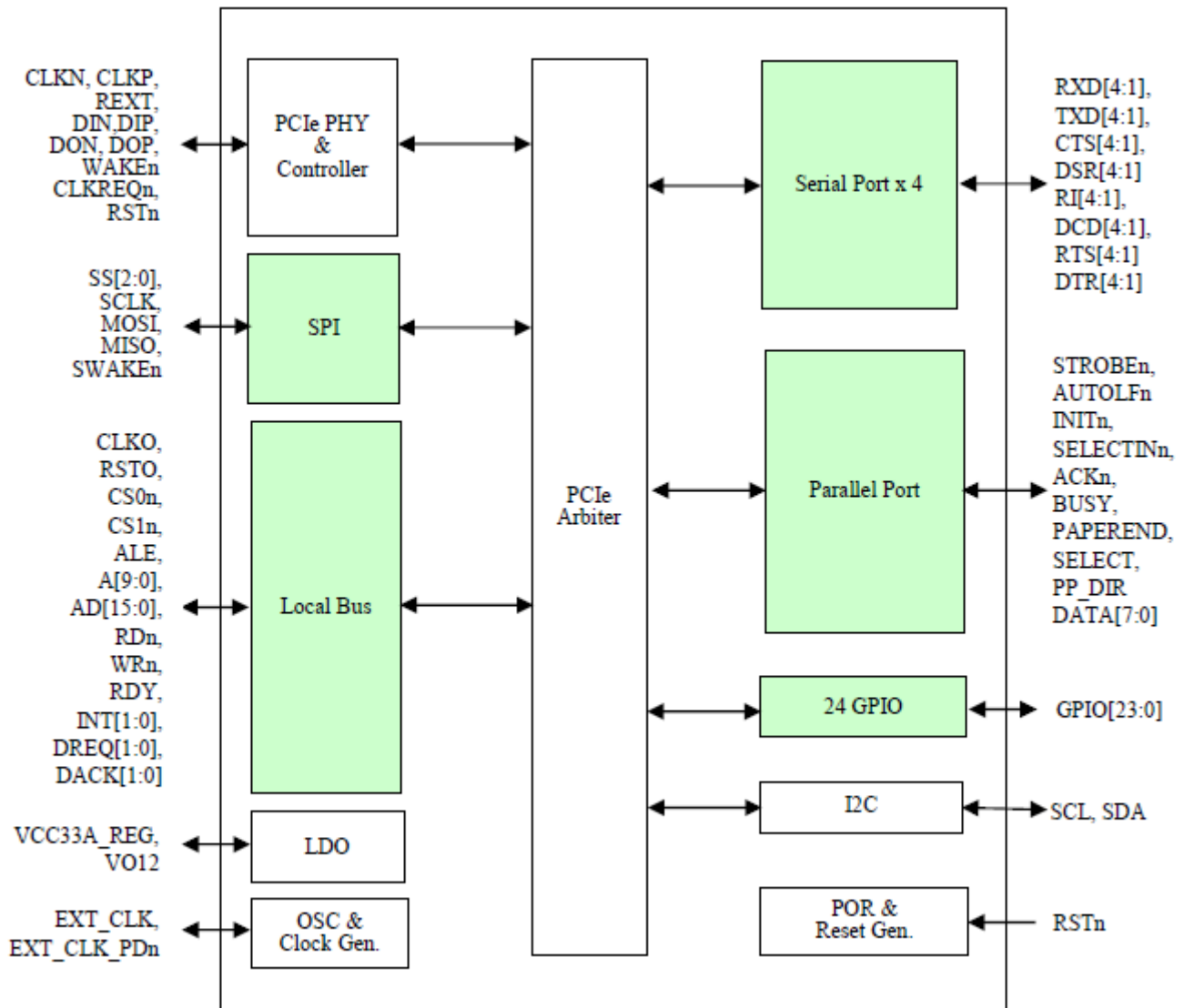


Figure 1. AX99100 Block Diagram

## 3. Selection Guide

The following is the selection guide of ASIX PCIe Bridge family for different requirement applications. Please visit ASIX PCIe Bridge products web pages

<http://www.asix.com.tw/products.php?op=ProductList&PLine=74&PSeries=110> and contact ASIX's Sales ([sales@asix.com.tw](mailto:sales@asix.com.tw)) for details.

Part No.	Local Bus	Serial	Parallel	USB 2.0 Host	Other Interfaces	Temp Range (°C)	Cascade	Package
AX99100	PCIe 2.0 Gen 1	2/4-port	1-port	-	ISA-Like, SPI	0 ~ +70/ -40 ~ +85	-	QFN-68
MCS9900	PCIe 1.1	2/4-port	1-port	-	-	0 ~ +70	✓	LQFP-128
MCS9901	PCIe 1.1	2-port	1-port	-	-	0 ~ +70	✓	LQFP-128
MCS9904	PCIe 1.1	4-port	-	-	-	0 ~ +70	✓	LQFP-128
MCS9922	PCIe 1.1	2-port	-	-	-	0 ~ +70	✓	LQFP-128
MCS9990	PCIe 1.1	-	-	4-port	ISA	0 ~ +70/ -40 ~ +85	-	LQFP-128

Figure 2. PCIe Bridge Selection Guide

## 4. Ordering Information

The following are the ordering information of AX99100 silicon and AX99100 4S/2S1P/2S1SPI/Local Bus demo boards. Please contact ASIX's Sales ([sales@asix.com.tw](mailto:sales@asix.com.tw)) for more details.

Part Number	Description
<b>AX99100 QF</b>	68-pin QFN lead Free package, commercial temperature range: 0 to 70°C.
<b>AX99100 QI</b>	68-pin QFN lead Free package, Industrial temperature range: -40 to 85°C.

AX99100 Demo Board	Description
AX99100 4S Demo Board	This is a PCIe to 4S adapter for AX99100 PCIe to 4S applications
AX99100 2S1P Demo Board	This is a PCIe to 2S1P adapter for AX99100 PCIe to 2S1P applications
AX99100 2S1SPI Demo Board	This is a PCIe to 2S1SPI adapter for AX99100 PCIe to 2S1SPI applications
AX99100 Local Bus + Async SRAM Demo Board	This is a PCIe to Local Bus + Async SRAM adapter for AX99100 PCIe to Local Bus applications

Figure 3. Ordering Information

## 5. Typical Target Applications

The following are AX99100 typical target applications.

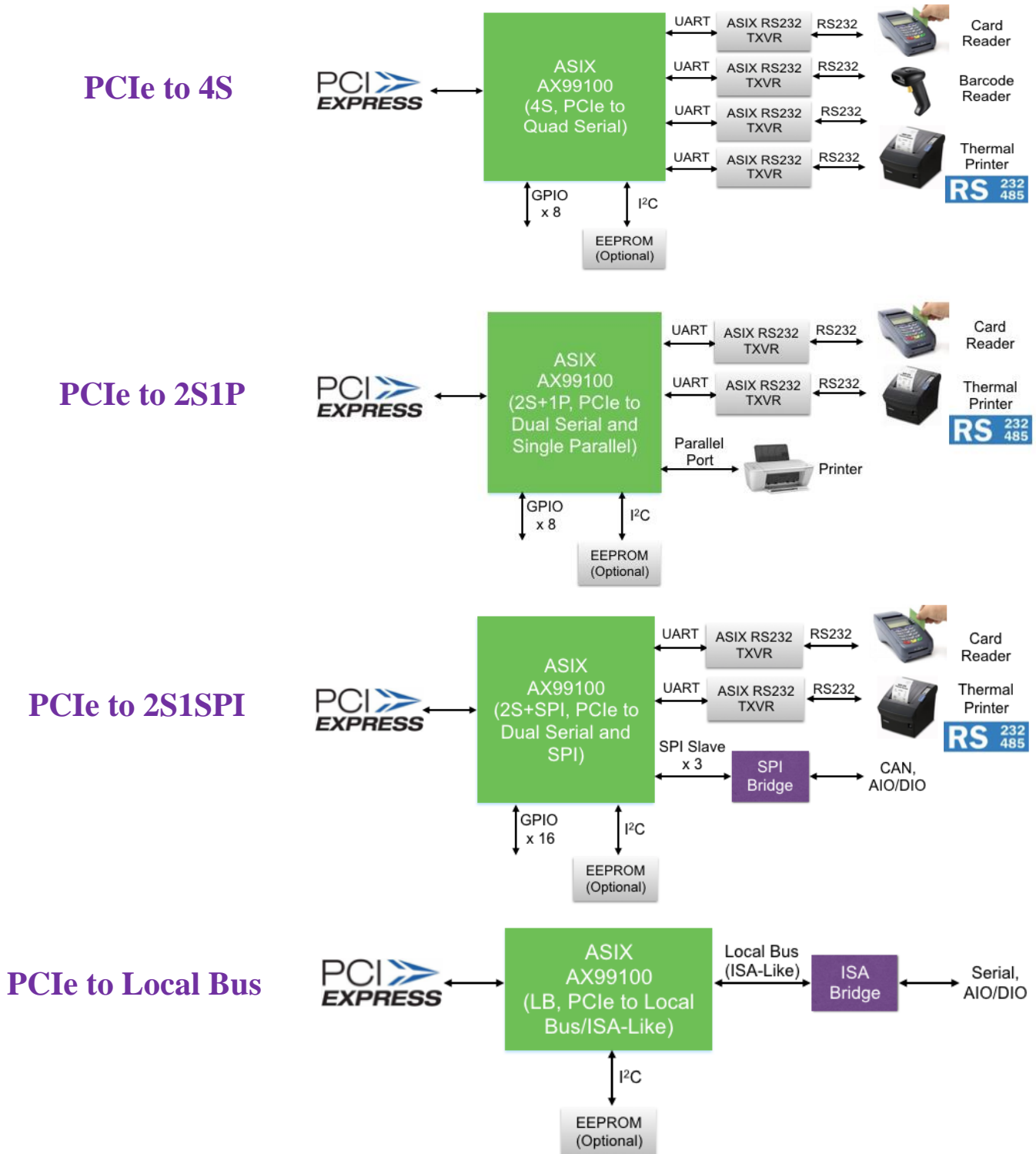


Figure 4. AX99100 Typical Target Applications



### 6. AX99100 Demo Boards

ASIX Electronics provides AX99100 4S/2S1P/2S1SPI/Local Bus + Async SRAM demo boards for users to evaluate the basic functions of AX99100 on different 4S/2S1P/2S1SPI/Local Bus target applications. If you need to purchase the AX99100 demo boards, please contact ASIX's Sales ([sales@asix.com.tw](mailto:sales@asix.com.tw)) for more details.

#### 6-1. AX99100 4S (with RS-232 cable) Demo Board

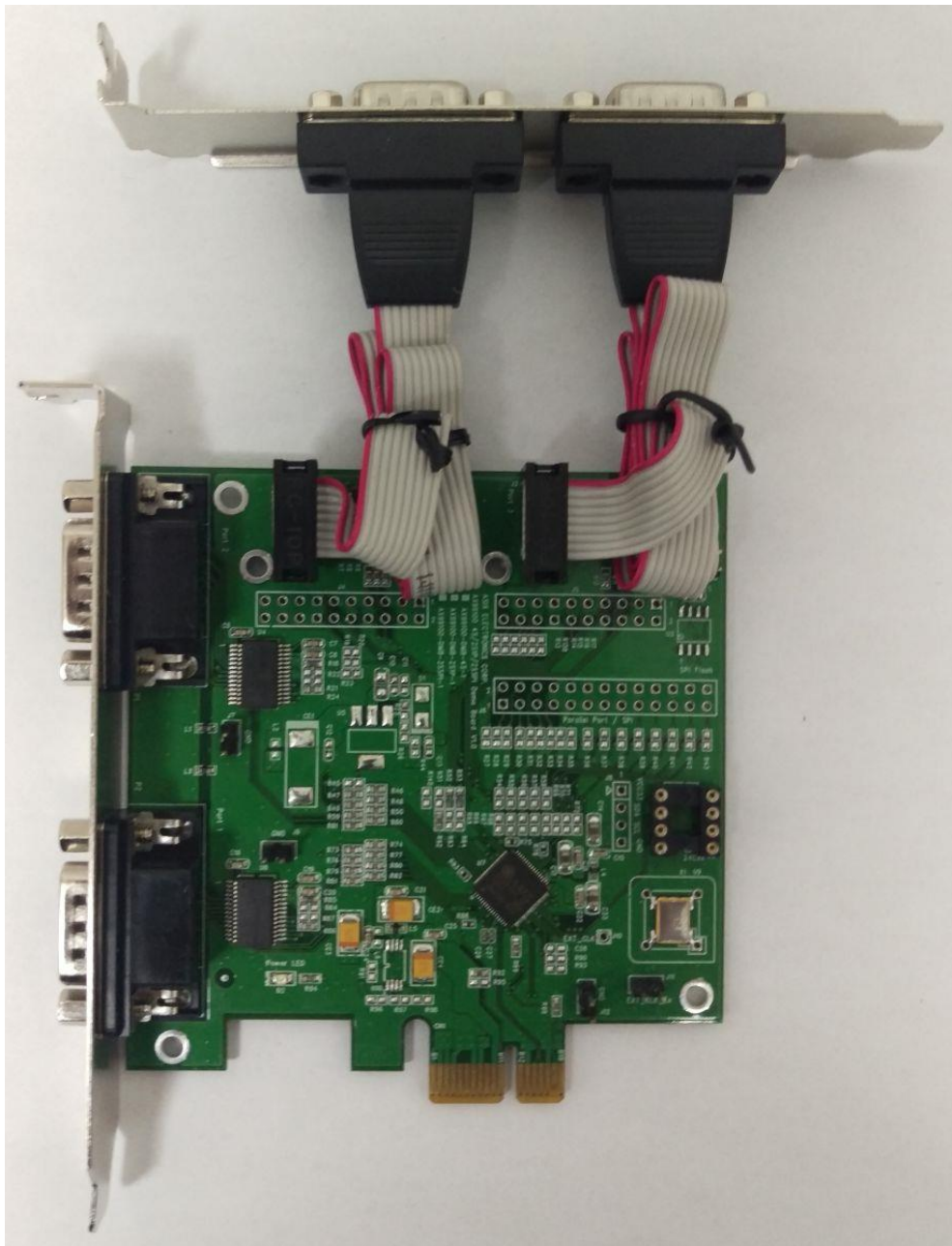


Figure 5. AX99100 4S (with RS-232 cable) Demo Board

## 6-2. AX99100 2S1P (with Parallel Port cable) Demo Board

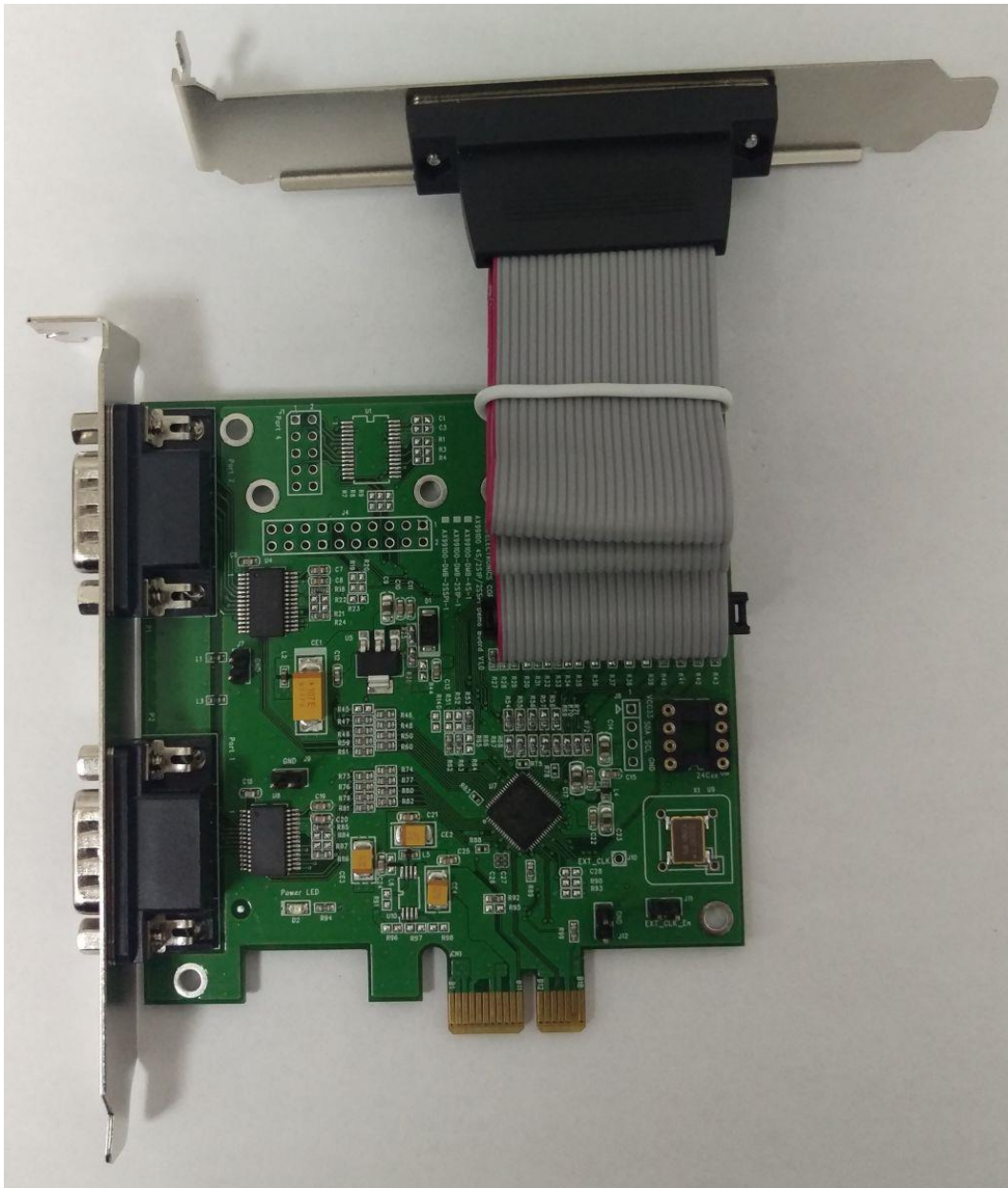


Figure 6. AX99100 2S1P (with Parallel Port cable) Demo Board

## 6-3. AX99100 2S1SPI Demo Board

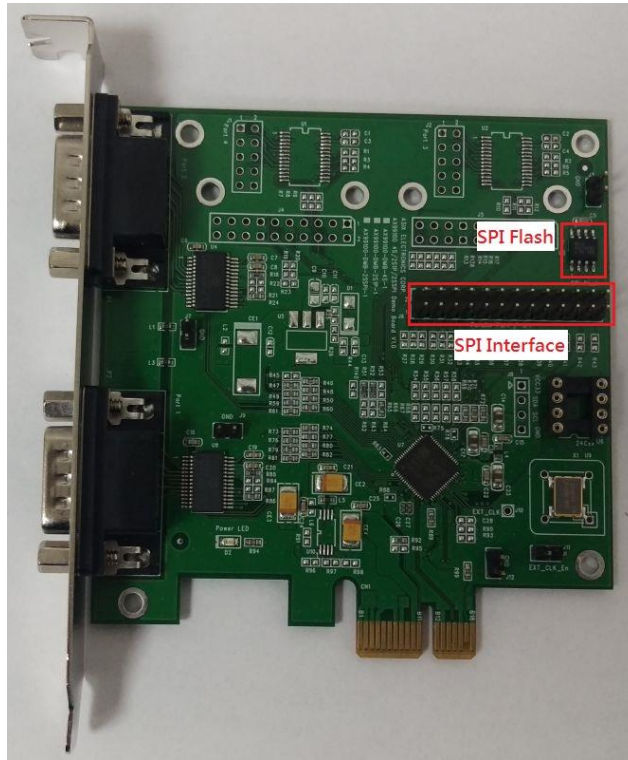


Figure 7. AX99100 2S1SPI Demo Board

## 6-4. AX99100 Local Bus + Async SRAM Demo Board

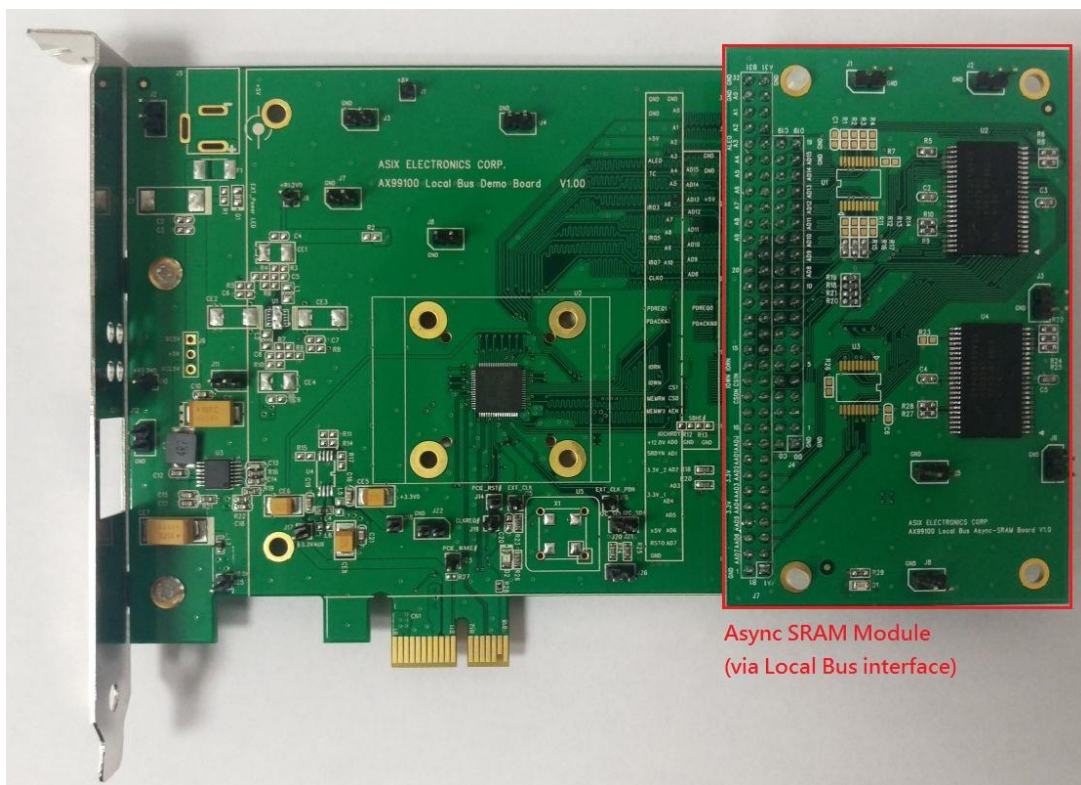


Figure 8. AX99100 Local Bus + Async SRAM Demo Board



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