

# SAMR Setup Guide For Microchip LoRaWAN Stack

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**MICROCHIP**

Microchip Technology, Inc.

REV	DATE	ORIGINATOR	DESCRIPTION OF CHANGE
0.1	17 02 2017	Team	Initial draft
0.2	19-05-2017	Team	Added SAMR34 part-pack installation information
0.3	08-09-2017	Team	Replaced connection image with SAMR34 Rev B board

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## 1 Introduction

Microchip® LoRaWAN stack for SAMR34 provides a solution for the LoRaWAN end-device that can be used for Internet-of-Things applications. Typical LoRaWAN network is composed of end-devices, gateways, network servers and application servers.

This document provides information and guidelines on changes on SAMR34 Application Setup.

## 2 Test Setup Details

### 2.1 Hardware Requirements:

- SAMR34 Board (MCU-ATSAMR34J18B)
- ATSAM4L-XPRO (MCU-ATSAM4LC4C)
- Atmel-ICE Debugger
- MCHP EU and NA Gateways/Mutlitech GW

### 2.2 Software Requirements:

- Atmel Studio 7.0.1417
- SAM4L Serial Bridge Firmware

**Note: Serial bridge firmware for SAM4L Xplained Pro is given here as an example. User can use serial bridge code from ASF with other supported Platform.**

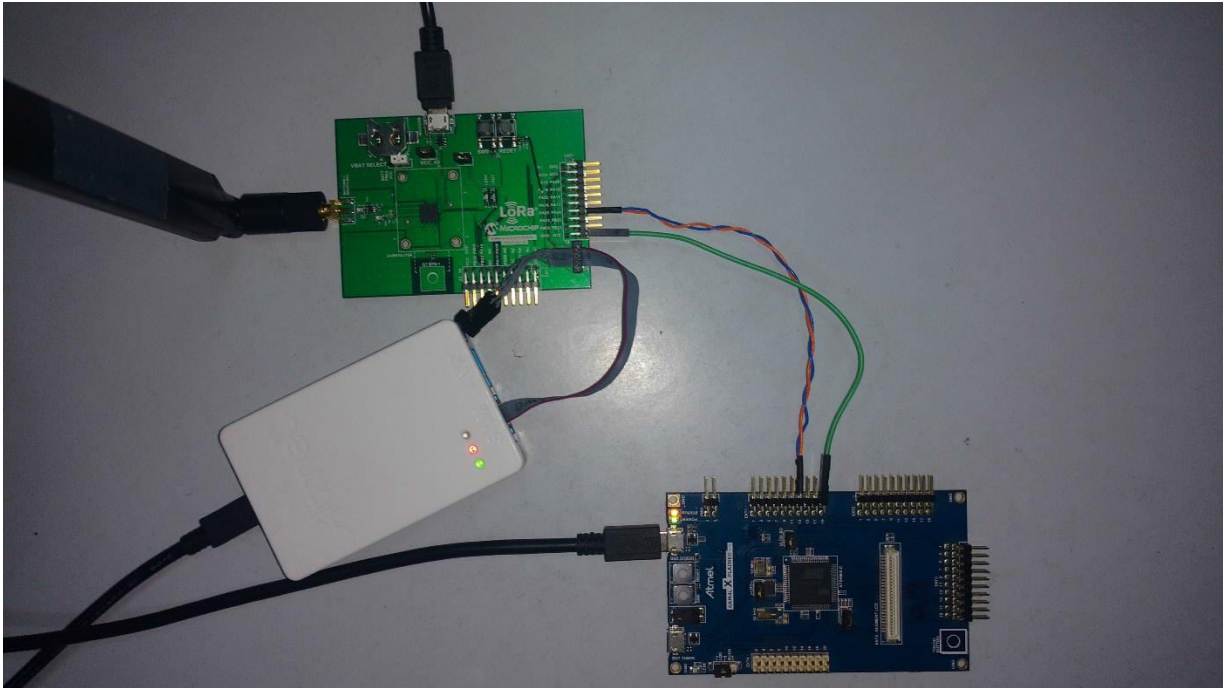
### 2.3 Connectivity Details:

- In SAMR34-XPRO board, EXT1 Interface PA4, PA5 and GND is connected to ATSAM4LC4C EXT1 Interface PB00,PB01 and GND correspondingly for UART communication
- In SAMR34-XPRO board, CORTEX DEBUG is connected to Atmel-ICE SAM Interface for debugging and flashing

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- USB Power to be connected for SAMR34 EDBG USB/TARGET USB
- USB power to be connected for ATSAM4LC4C for UART communication
- USB Power to be connect for Atmel-ICE for UART communication, debugging and flashing

## 2.4 Test Environment details:



**Fig: SAMR34-XPRO Board EXT1 interface PA4, PA5 and GND is connected to SAM4L-XPRO EXT1 interface PB00, PB01 and GND**

## 3 Application Setup

Please refer the Microchip LoRaWAN Stack Quick Start Guide and 2.4 Test Environment details.

## 4 Example Application

Please refer the Microchip LoRaWAN Stack Quick Start Guide.

## 5 ATPack installation

SAMR34 is not released in Atmel Studio. So in order for SAMR34 to be detected, “*Atmel.SAMR34\_DFP-0.1.7.atpack*” has to be installed in the PC.

- Double click “*Atmel.SAMR34\_DFP-0.1.7.atpack*” provided in the release.
- Click Install once window pop-up.
- Re-start the Atmel studio if already opened.

**Note: Installation is only required once. If it’s already installed, avoid installing again.**

## 6 References

- Microchip LoRaWAN Stack Quick Start Guide.

