# LinkIt 7686 HDK Power Measurement Guide

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# Document Revision History

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# 1. Introduction

MediaTek LinkIt 7686 HDK provides a low quiescent current development platform to design, prototype, evaluate and implement Internet of Things (IoT) applications. This document guides you on how to measure the LinkIt 7686 HDK's power consumption.

The front view of the HDK is shown in Figure 1.

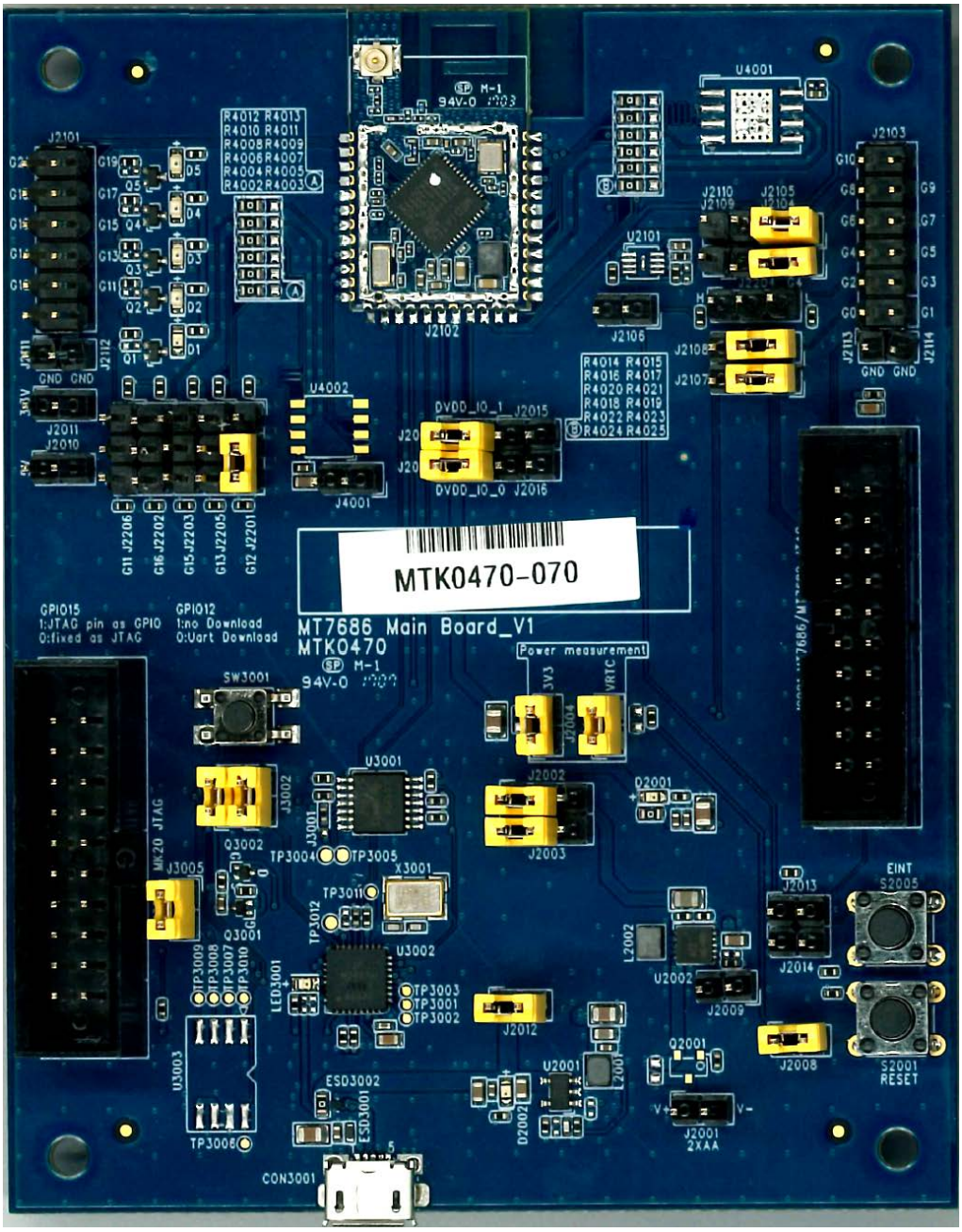


*Figure 1. Front view of MT7686*

# 2. Hardware Configuration

## 2.1. Connecting the power source

LinkIt 7686 HDK power supply is provided either through a micro-USB cable or 2xAA battery. Before connecting the power source, consider the following:

1) Using a micro–USB cable
   a) Jumper J2012 should be short.
   b) Jumpers J2002 & J2003 should be short at pin 1 and pin 2 (see Figure 2).
2) Using 2xAA battery.
   a) Verify the direction of the electrode (J2001) on the HDK (see Figure 2).
   b) Jumper J2009 should be short.
   c) Jumpers J2002 and J2003 should be short at pin 2 and pin 3.

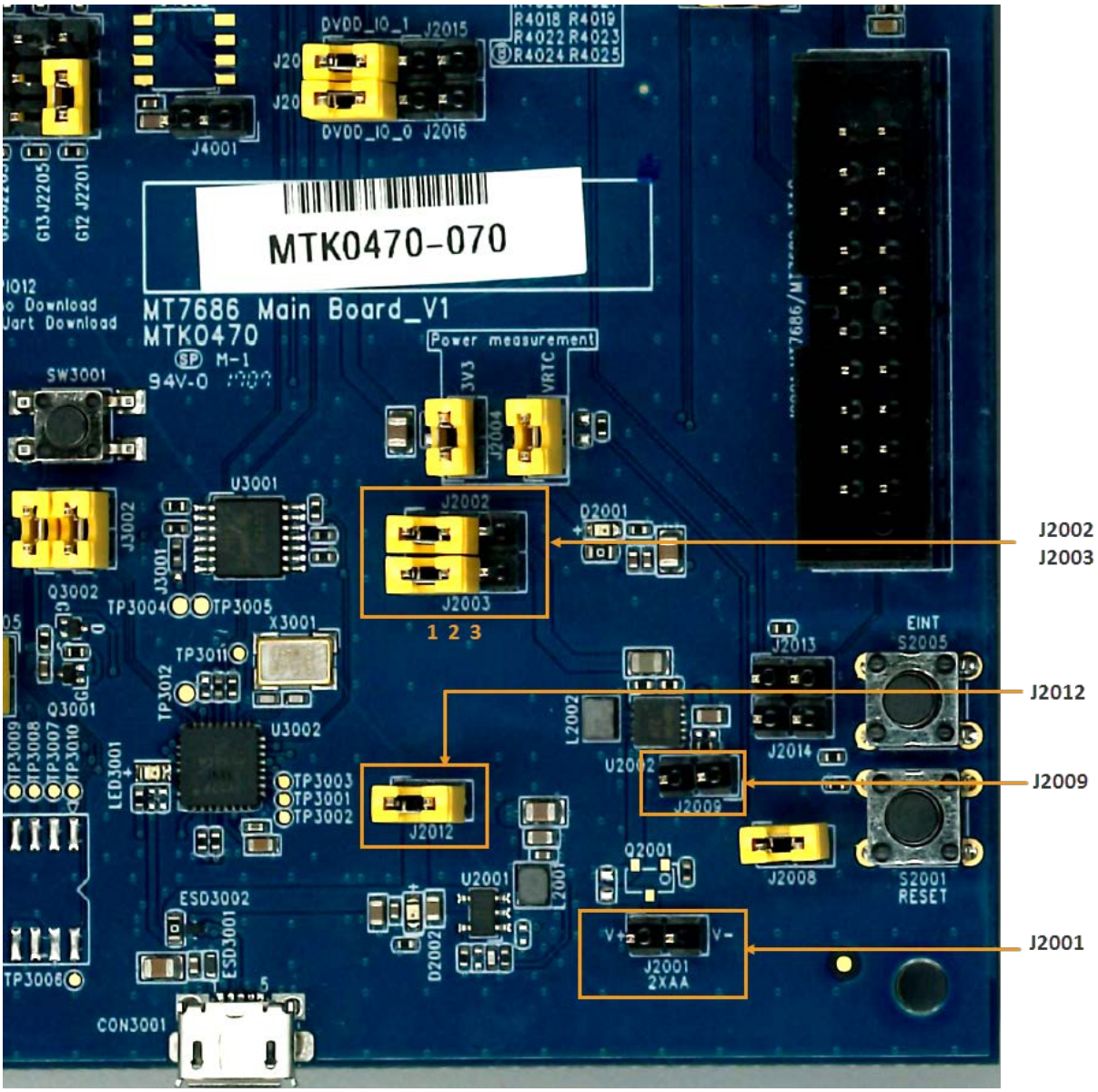


*Figure 2. Power source connection*

## 2.2. Measuring the power consumption

The power consumption is measured at 3V3 power domain and for the real-time clock (RTC), as shown in Figure 3. Remove the corresponding jumper, either J2004 (for the chip power domain) or J2007 (for RTC) and attach a current meter. A typical current meter is shown in Figure 4 that measures RTC current.
Note, that before measuring the current consumption, remove the jumpers J2201, J3002 and J3003. These jumpers are used for download or debug purposes and might add extra current consumption on chip domain.

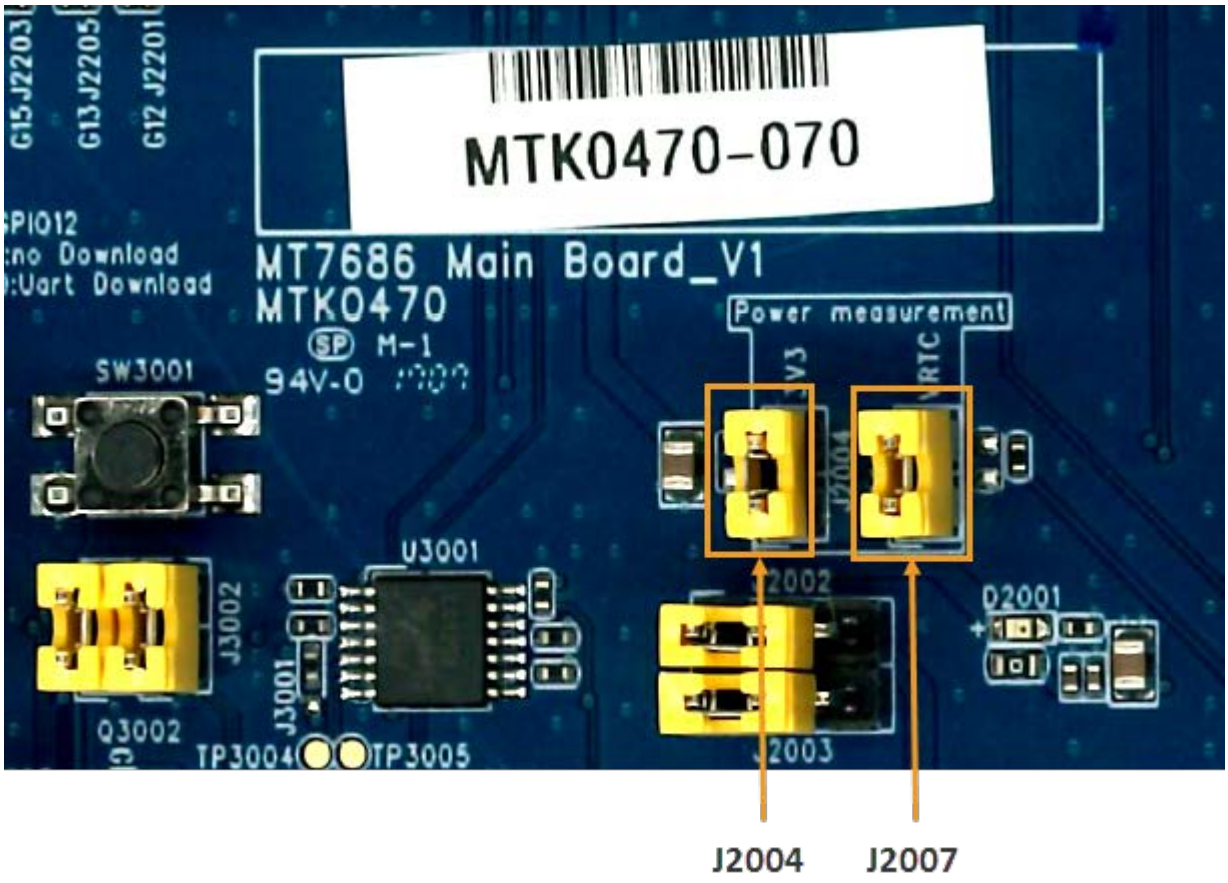


*Figure 3. Power domain of the chip (J2004) and RTC (J2007)*

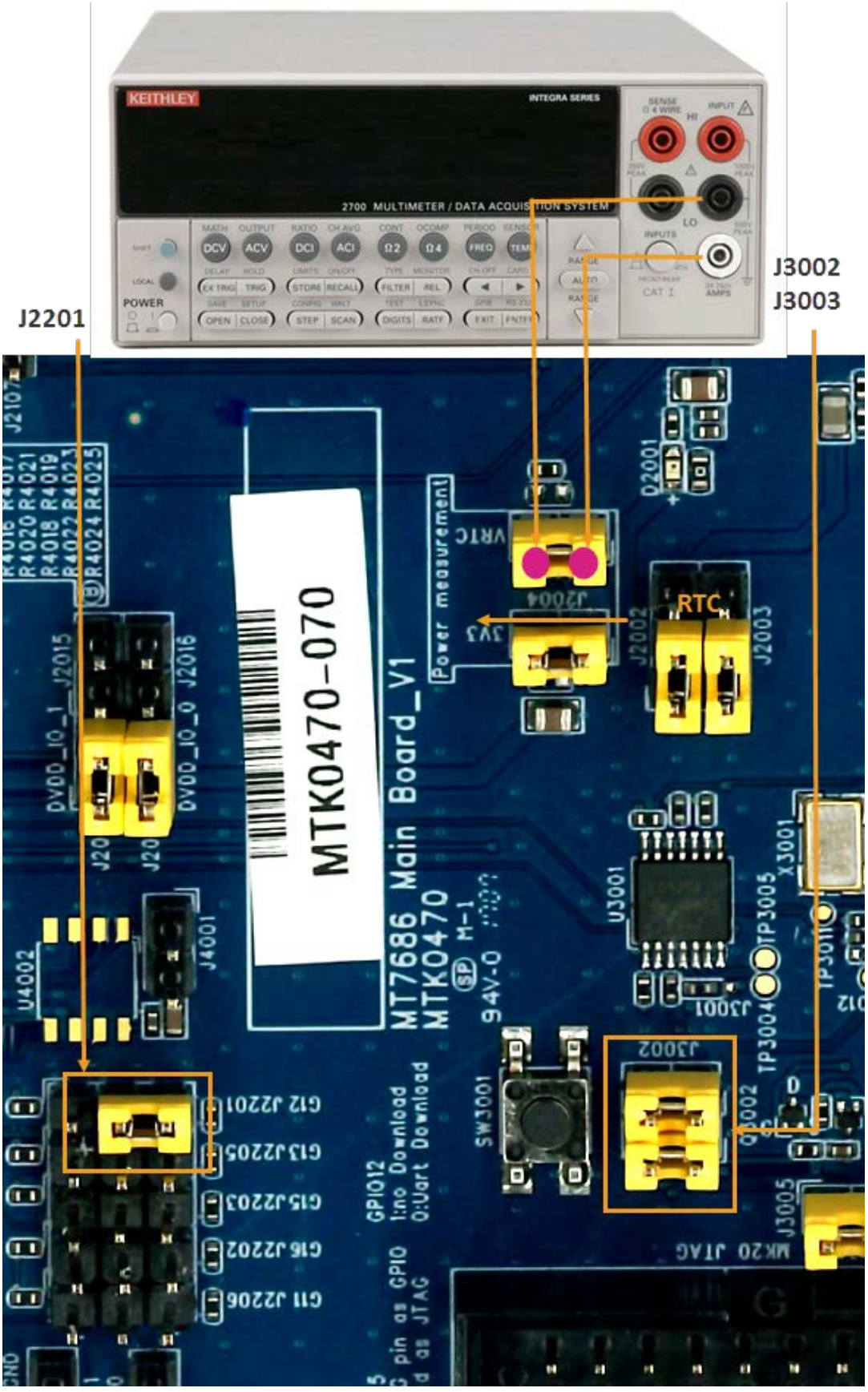


*Figure 4. Example measurement of the RTC current*