4-20mA Current Receiver Board Firmware

Operation Manual

1. Operation Environment

Table 1-1 Operation Environment

Environment		Description
Hardware	Main board	4-20 mA current receiver isolated board (REIN) 4-20 mA current receiver non-isolated board (REIN)
Firmware	e² studio	Ver 7.6.0
	GCC compiler	Ver 8.3.1
	FSP	Ver 0.8.0
	Firmware project	US110_4_20mA_Rcvr_20200306.zip

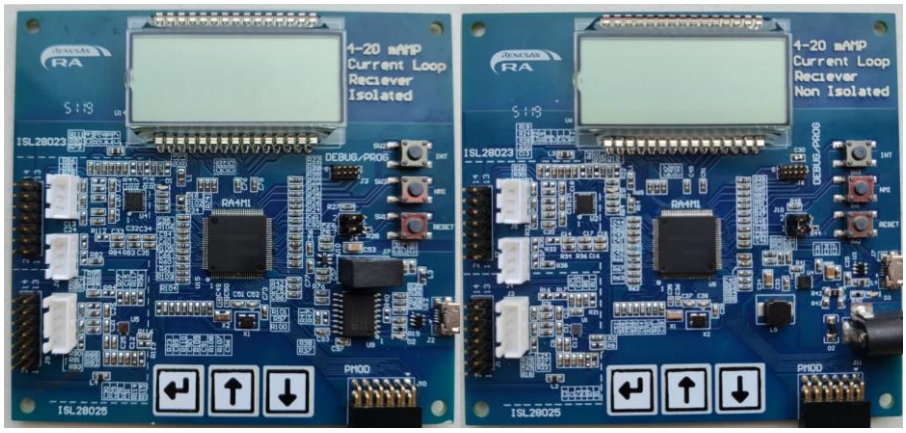

Figure 1-1 Operation Board

2. Operation Procedure

2.1 Import firmware project “US110_4_20mA_Rcvr” to e² studio and download executable file to 4-20 mA current receiver board by J-Link debugger (J3 connector for Isolated version or J6 connector for Non-isolated version).

2.2 Connect a current measurement circuit.
e.g.

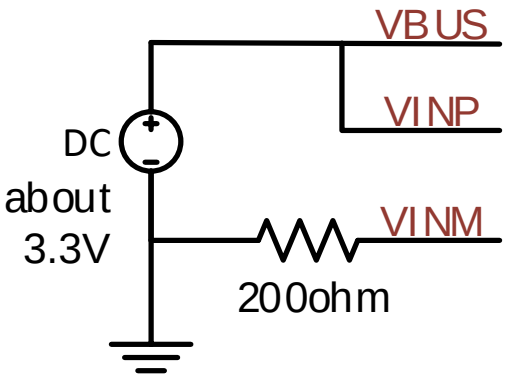

Figure 2-1 Current Measurement Circuit Example

2.3 Power on the board when DC source is off. The LCD will display “On” for one second.

2.4 And then, “NoV” is displayed on the LCD because the bus voltage is less than 3V.

2.5 Turn on the DC source. The LCD will display the current value in mA.

3. LCD Display Instructions

Table 3-2 LCD Display Instructions

Display Content		Description
On		The system is powered on.
NoV		No bus voltage status
OV		Overvoltage status
UU		Undervoltage status
OC		Overcurrent status
Ot		Over-temperature status
Err1		Communication with DPM over I2C fails.
Err2		The current is out of the range (4mA ~ 20mA).
Err3		Other errors