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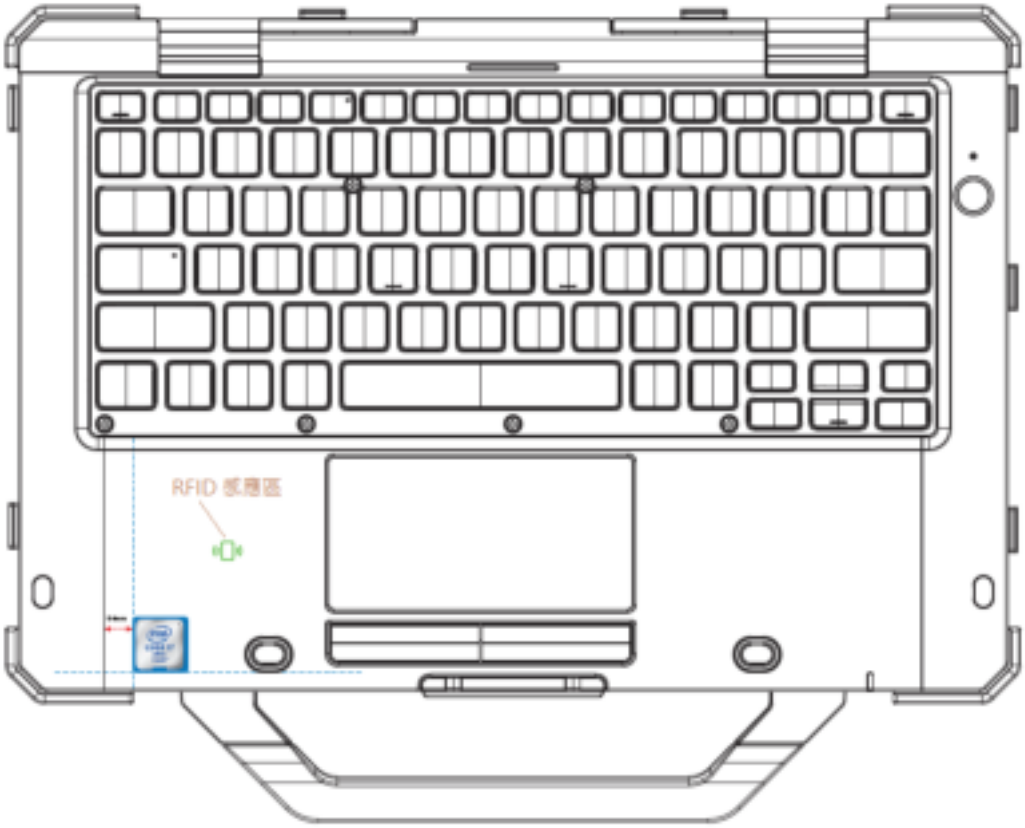

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Overview

The Broadcom BCM58102 secure processor, which supports Windows 7/8/10, follows the ISO14443 Type A and Type B Reader specification. It can be used in PC or other embedded devices, and allows linking ISO 14443 Type A and Type B cards through the air. It supports for the ISO/IEC 18092, ISO/IEC 21481, ISO/IEC 14443 Types A, B, and B', Japanese Industrial Standard (JIS) (X) 6319-4, and ISO/IEC 15693 standards. Both Reader and Card communicate via near-field inductive coupling and load modulation techniques.
The ISO14443 Type A and Type B Reader operate in the globally available 13.56 MHz unlicensed Industrial, Scientific and Medical (ISM) band and uses ASK/BPSK/ALM (Active Load Modulation) with sub-carrier communication techniques.

Functional Description

The BCM58102 system-on-chip (SoC) includes Peripheral I/Os, Baseband, Logic Control, 32-Bit Cortex-M3 CPU, Transmitter & Receiver.

The BCM58202 system-on-chip (SoC) includes Peripheral I/Os, Baseband, Logic Control, 32-Bit Cortex-M3 CPU, Transmitter & Receiver.
1. Tx Mode

Digital signals are converted by Baseband circuits, then modulated and converted to 13.56 MHz RF signals by the RF Transceiver. Finally, the RF signals are transmitted into the air through reader coil via inductive coupling method.
2. Rx Mode

Card modulates signal on to 13.56 MHz carrier frequency via load modulation, this signal is filtered and enters to BCM58202 chip. The received RF signals are demodulated by the Transceiver to analog I, Q signals. The Baseband circuit converts the I, Q signals into digital signals and sends the I, Q signals to DSP and logic for decoding. The analog-front-end (AFE)

adapts receiving signals strength and enhances the Rx sensitivity of BCM58202.

3. Miscellaneous

The crystal provides NFC logic with reference clock frequency of 26MHz.

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Specifications

Power Consumption:

Voltage (VBAT)	3.6Vdc for High Supply Reader Mode 2.8Vdc for Low Supply Reader Mode (VBAT Max Power = 6V*350mA*1.25 = 2.625W)

Environmental:

Operating Temperature	0 to 70°C
Relative Humidity	10 to 90% (non-condensing)

Physical:

Length	10mm
Width	10mm
Depth	1.4mm MAX

Transmission/Reception:

Center Frequency	13.56 MHz
Method	Inductive Coupling/Active Load Modulation

Modulation:

Transmission	ASK/ALM
Reception	ASK/BPSK/ALM with sub-carrier

Antenna Type	Loop Antenna
Antenna Gain	N/A

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台灣: 國家通訊傳播委員會

低功率電波輻射性電機管理辦法
第十二條經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。
第十四條低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。 前項合法通信，指依電信法規定作業之
無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

在 5.25-5.35 秭赫頻帶內操作之無線資訊傳輸設備，限於室內使用。

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Brasil – Aviso da Anatel

Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário.

REGULATORY COMPLIANCE WEBSITE

The Regulatory Compliance website is located at:
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