

SONiX SONiX Technology Co., Ltd.

SN8F5930 Series Starter-Kit User Manual

8051-based
Microcontroller

1 Overview of Starter Kit

SN8F5930 Starter-Kit provides easy-development platform. It includes SN8F5930 family real chip and I/O connectors to input signal or drive device of user's application. It is a simple platform to develop application as target board not ready. The Starter-Kit can be replaced by target board, because SN8F5930 family integrates embedded ICE in-circuit debugger circuitry.

1.1 Development Environment

SN8F5930 debug tool cooperate with Keil C51 which includes integrated development environment (IDE, Keil μ Vision), C51/A51 compilers and BL51 linker. See detailed documentation of SN8F5930 Debug Tool User Manual (download on www.sonix.com.tw).

1.2 Development Environment

These configurations must be setup completely before starting Starter-Kit developing.

1. Confirm to the circuit board whether elements are complete.
2. The power source of Starter-Kit circuit is chosen from 5.0V, 3.3V or external power via jumper.
3. The power source comes from 5.0V or 3.3V which must be connect to DC 7.5V power adapter.
4. If the power source is chosen from external power, then external power source connects to EXT pin.
5. The "XIN" pin and the "XOUT" pin need to connect crystal/resonator oscillator components when timer clock is setting X'tal or T0 Timer setting RTC mode.
6. The Debug port can connect SN-LINK adapter for emulation or download code.
7. The MCU LED will light up and SN8F5930 family chip will be connected to power when power (VDD) is switched on.

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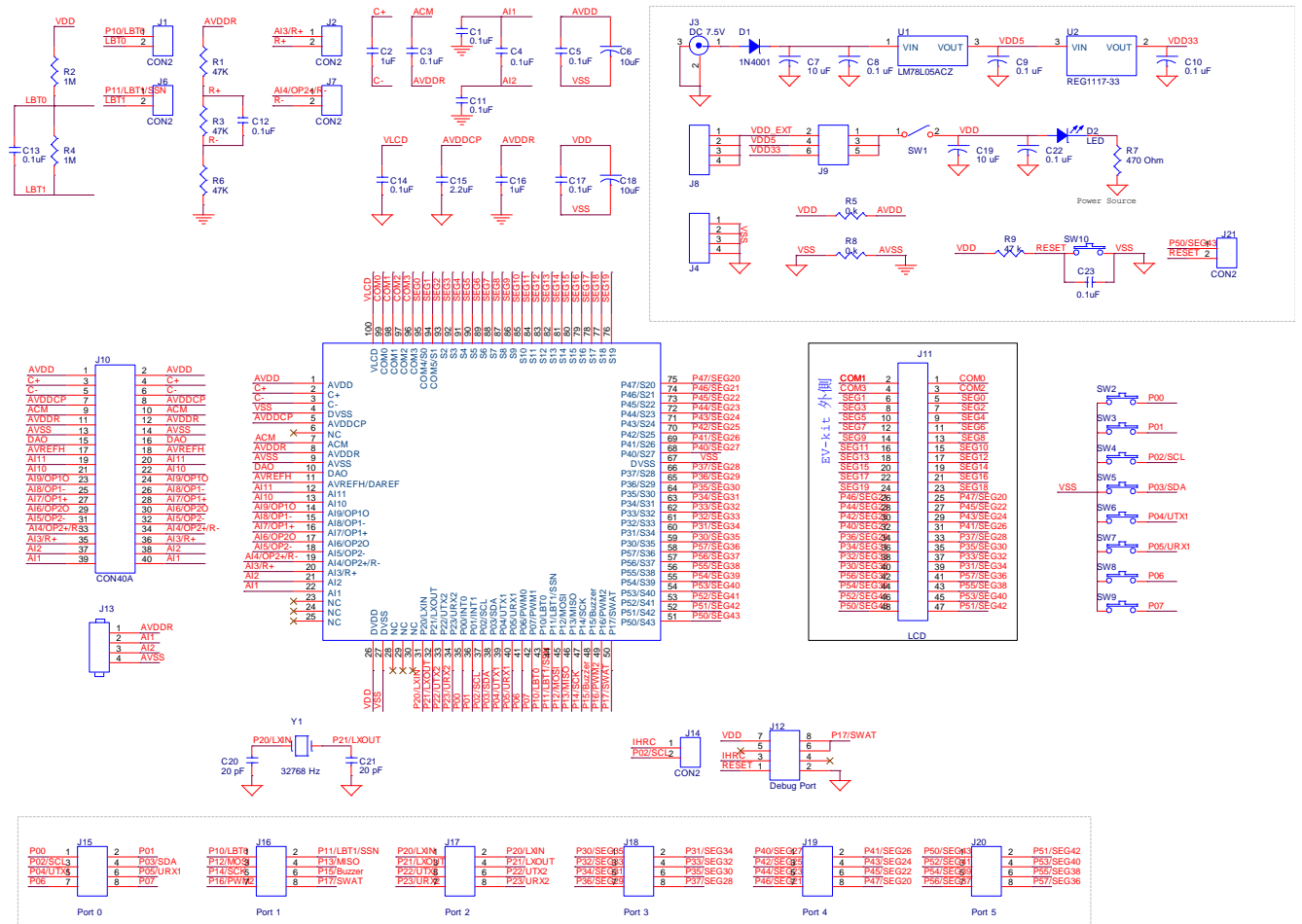
3 Revision History

| Revision | Date | Description |
|----------|----------|--------------|
| 1.0 | Apr 2018 | First issue. |

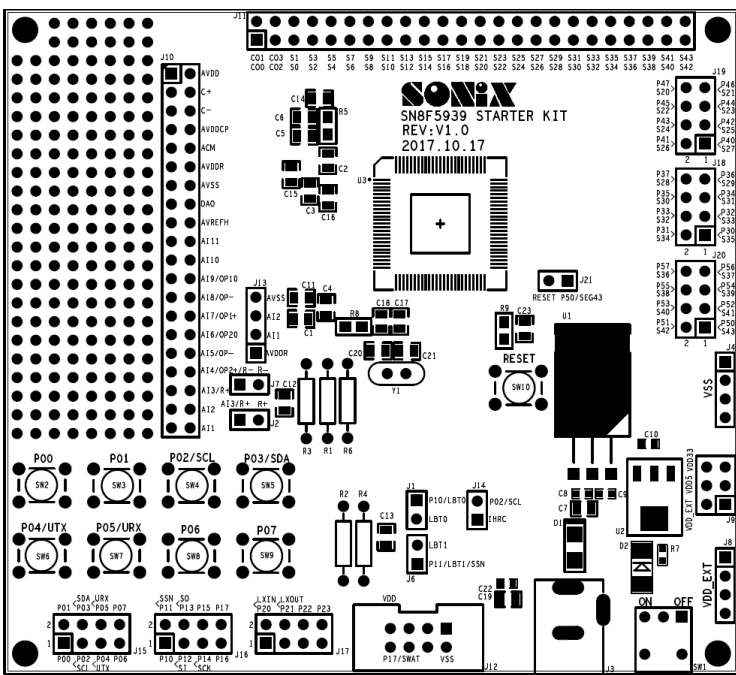
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4 SN8F5939 Starter-Kit

4.1 Schematic



4.2 Floor Plan of PCB layout



4.3 Component Description

| Number | Description |
|----------------------|--|
| C1,C4,C11 | $\Delta\Sigma$ ADC capacitors. |
| C2,C3,C15,C16 | Capacitors of charge pump regulator. |
| J1,J6 | LBT function connector. |
| R2,R4,C13 | LBT capacitor and resistors. |
| J2,J7 | External Vref source connector. |
| R1,R3,R6,C12 | External Vref capacitor and resistors. |
| C5,C6 | AVDD power regulators capacitance. |
| C17,C18 | DVDD power regulators capacitance. |
| J3 | DC 7.5V power adapter. |
| C7,C8,C9,C10 | DC 7.5V power source regulators capacitance. |
| J8/J4 | External power source. |
| C19,C22 | External power source regulators capacitance. |
| J10,J13 | ADC function pin. |
| J12 | Debug Port. |
| J14 | IHRC calibration pin (refer to chapter 28.3 of datasheet). |
| J9 | VDD power source is 5.0V, 3.3V or external power. |
| D2,R7 | MCU LED and resistor. |
| J15-J20 | I/O connector. |
| SW2-SW9 | I/O button. |
| J11 | LCD SEG/COM. |
| R5,R8 | 0 ohm resistors. |
| SW1 | Target power (VDD) switch. |
| Y1,C20,C21 | External crystal/resonator oscillator components. |
| SW10 | External Reset switch. |
| R9,C23, | Reset capacitance and resistor. |

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