



SONiX Technology Co., Ltd.

SN8F5940 Series Starter-Kit User Manual

**8051-based
Microcontroller**

1 Overview of Starter Kit

SN8F5949 Starter-Kit provides easy-development platform. It includes SN8F5940 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 SN8F5940 family integrates embedded ICE in-circuit debugger circuitry.

1.1 Development Environment

SN8F5949 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 SN8F5000 Debug Tool 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 SN8F5940 family chip will be connected to power when power (VDD) is switched on.

2 Table of Contents

1	Overview of Starter Kit	2
2	Table of Contents	3
3	Revision History.....	4
4	SN8F5940 Starter-Kit.....	5

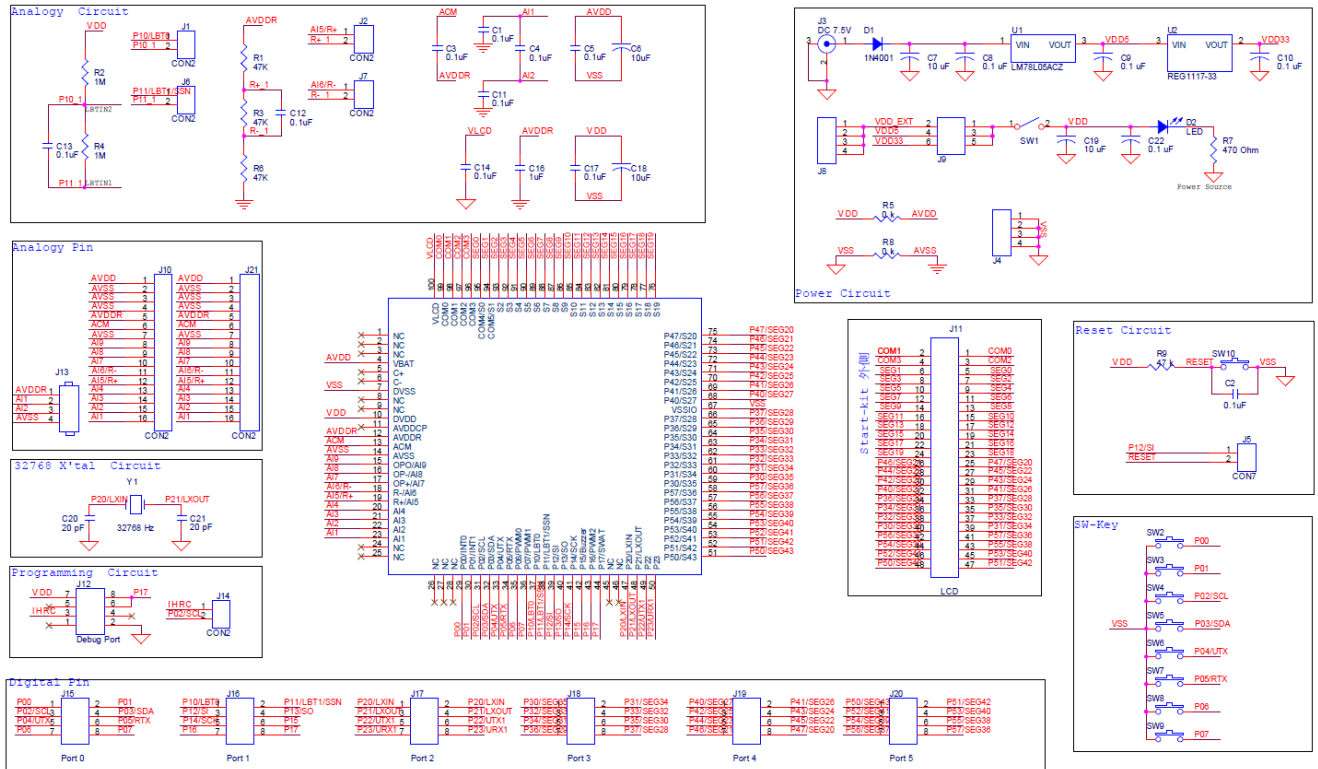
3 Revision History

Revision	Date	Description
1.0	Oct 2024	First issue.

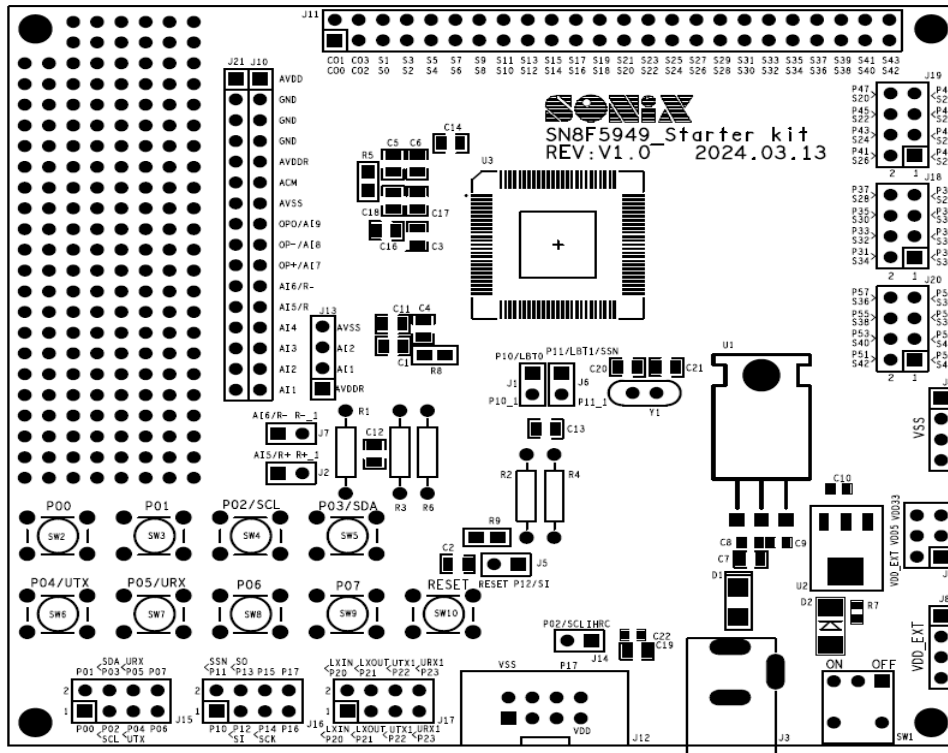
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4 SN8F5949 Starter-Kit

4.1 Schematic



4.2 Floor Plan of PCB layout



4.3 Component Description

Number	Description
C1,C4,C11	ADC capacitors.
C3 ,C16	Capacitors of regulator.
J1,J6	LBT function connector.
R2,R4,C13	LBT capacitor and resisters.
J2,J7	External Vref source connector.
R1,R3,R6,C12	External Vref capacitor and resisters.
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 resister.
J15-J20	I/O connector.
SW2-SW9	I/O button.
J11	LCD SEG/COM.
R5,R8	0 ohm resisters.
SW1	Target power (VDD) switch.
Y1,C20,C21	External crystal/resonator oscillator components.

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