

 **SONiX Technology Co., Ltd.**

SN8F5000 Starter-Kit User Manual

8051-based Microcontroller

1 Overview of Starter Kit

SN8F5000 Starter-Kit provides easy-development platform. It includes SN8F5000 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 SN8F5000 family integrates embedded ICE in-circuit debugger circuitry.

1.1 Development Environment

SN8F5000 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 User Manual (download on www.sonix.com.tw).

1.2 Configurations of Circuit

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 "RST" pin needs to connect pull high resistor to VDD when external reset is chosen to use.
6. The "XIN" pin and the "XOUT" pin need to connect crystal/resonator oscillator components when system clock is setting crystal or RTC mode.
7. The "XIN" pin needs to connect external clock source when system clock is setting external clock input mode.
8. The Debug Port can connect SN-LINK Adapter for emulation or download code.
9. The MCU LED will light up and SN8F5000 family chip will be connected to power when power (VDD) is switched on.

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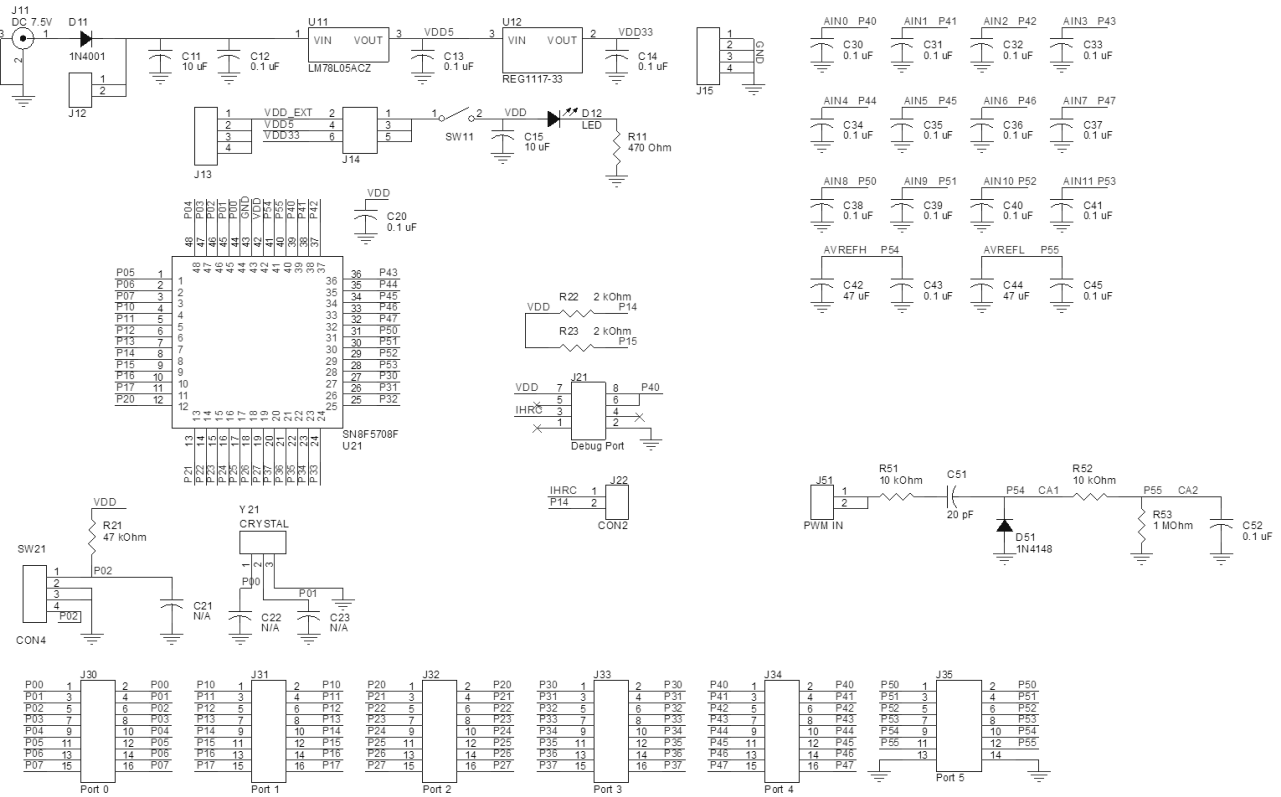
3 Revision History

Revision	Date	Description
1.0	Nov 2015	First issue
1.1	Sep 2016	Add SN8F5804 Starter-Kit information.

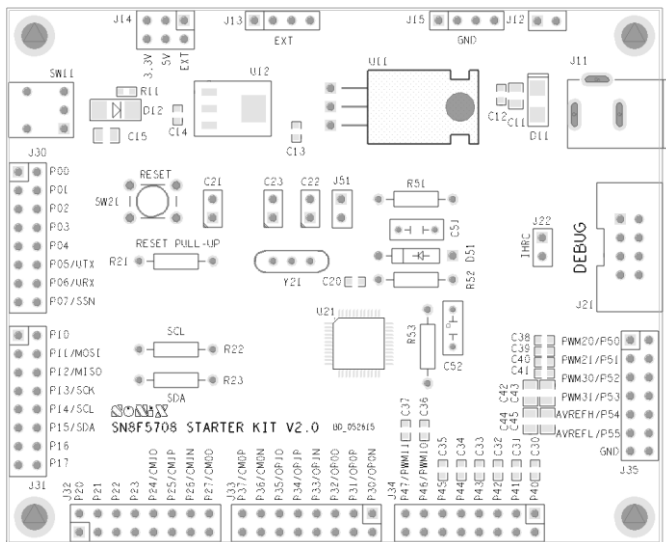
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4 SN8F5708 Starter-Kit

4.1 Schematic



4.2 Floor Plan of PCB layout

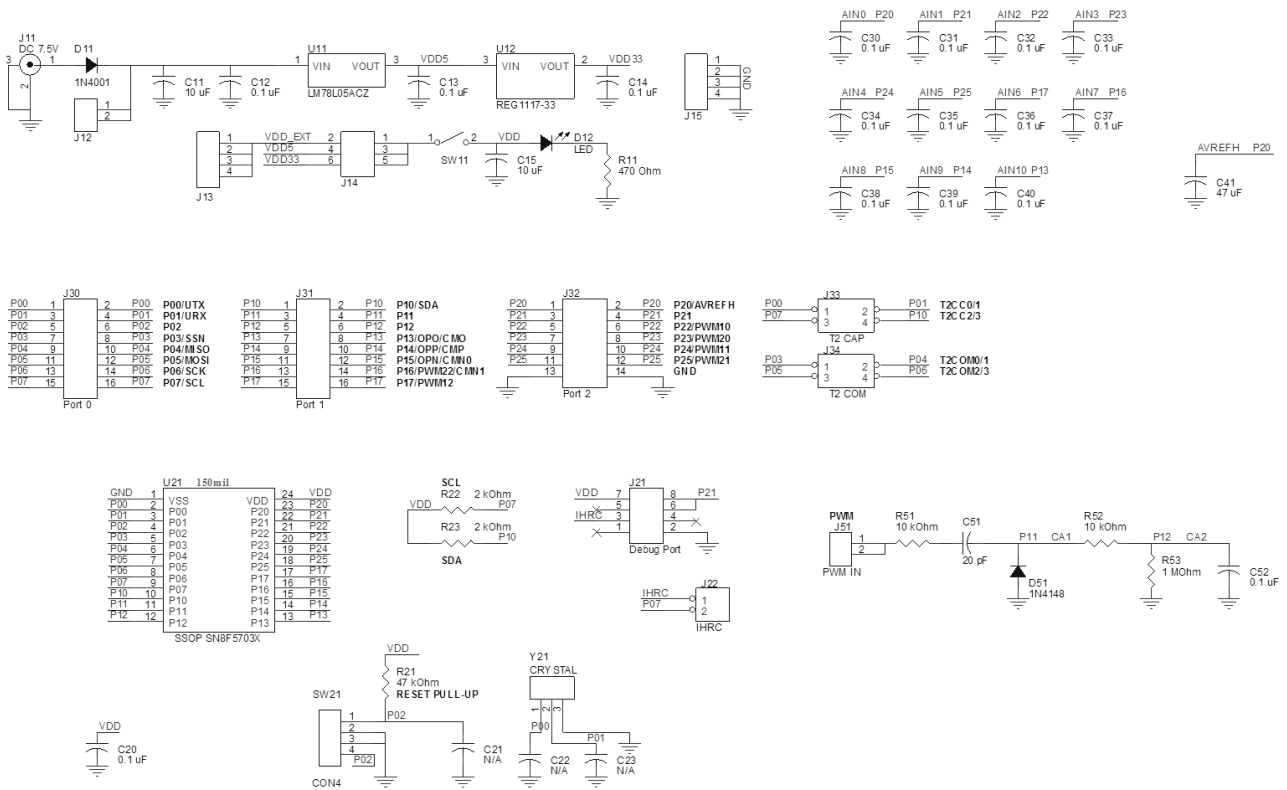


4.3 Component Description

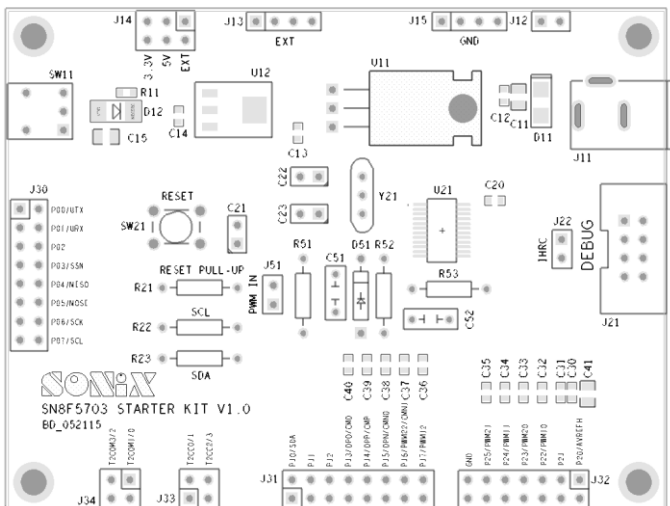
Number	Description
C30 – C41	12-ch ADC capacitors.
C42 – C45	AVREFH/AVREFL capacitors.
D12	MCU LED
J11	DC 7.5V power adapter
J13/J15	External power source.
SW21	External reset trigger source
J14	VDD power source is 5.0V, 3.3V or external power.
J21	Debug Port
J30 – J35	I/O connector.
R21, C21	External reset pull-high resistor and capacitor.
R22, R23	I2C pull-high resistors.
SW11	Target power (VDD) switch
U21	SN8F5708F real chip (Sonix standard option).
Y21, C22, C23	External crystal/resonator oscillator components.

5 SN8F5703 Starter-Kit

5.1 Schematic



5.2 Floor Plan of PCB layout

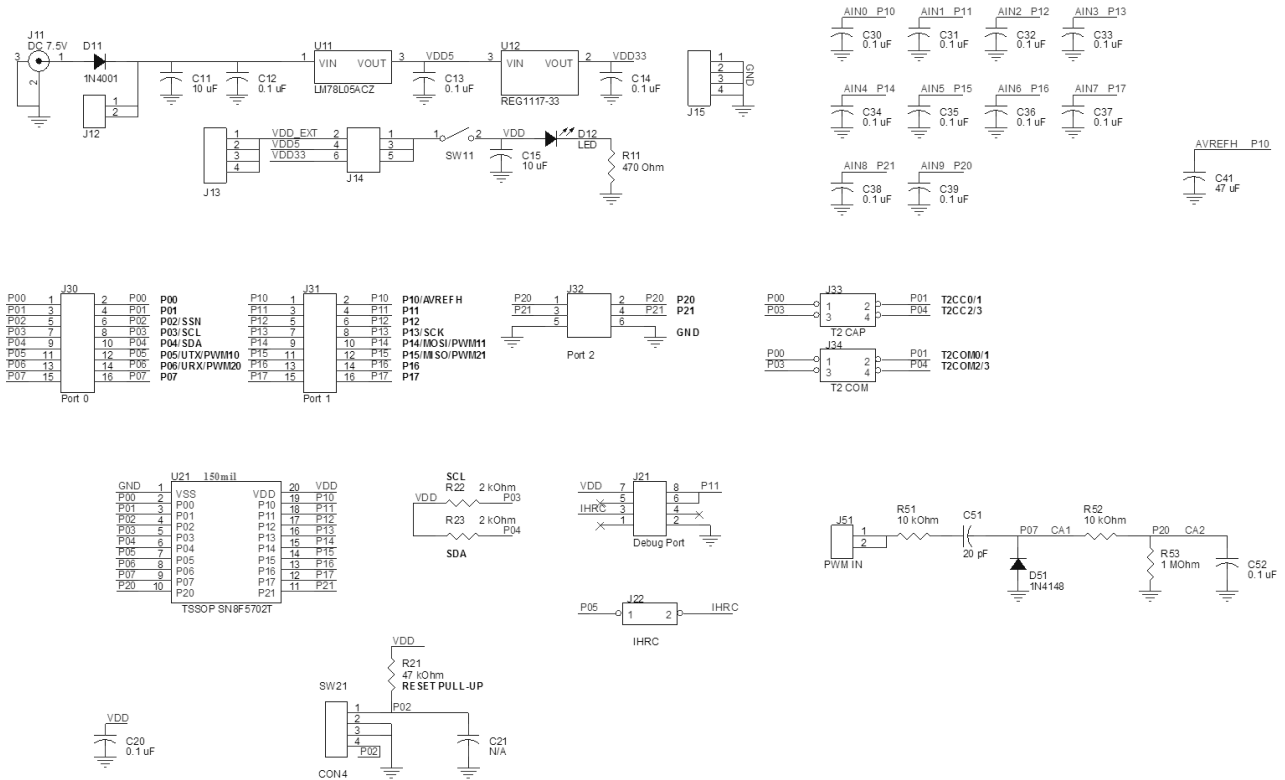


5.3 Component Description

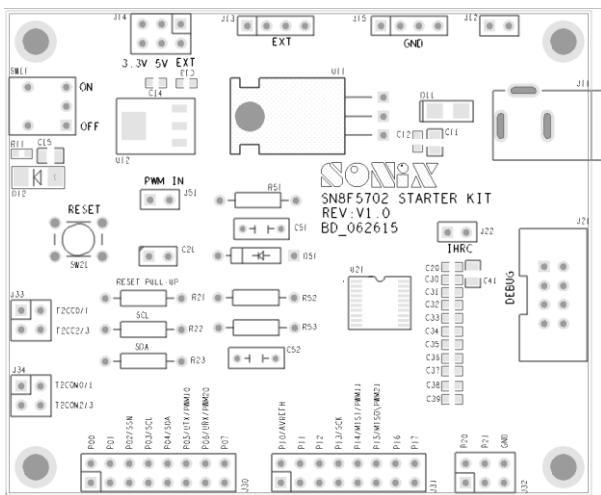
Number	Description
C30 – C40	11-ch ADC capacitors.
C41	AVREFH capacitor.
D12	MCU LED
J11	DC 7.5V power adapter
J13/J15	External power source.
SW21	External reset trigger source
J14	VDD power source is 5.0V, 3.3V or external power.
J21	Debug Port
J30 – J32	I/O connector.
J33	Timer 2 capture connector.
J34	Timer 2 compare connector.
R21, C21	External reset pull-high resistor and capacitor.
R22, R23	I2C pull-high resistors.
SW11	Target power (VDD) switch
U21	SN8F5703X real chip (Sonix standard option).
Y21, C22, C23	External crystal/resonator oscillator components.

6 SN8F5702 Starter-Kit

6.1 Schematic



6.2 Floor Plan of PCB layout

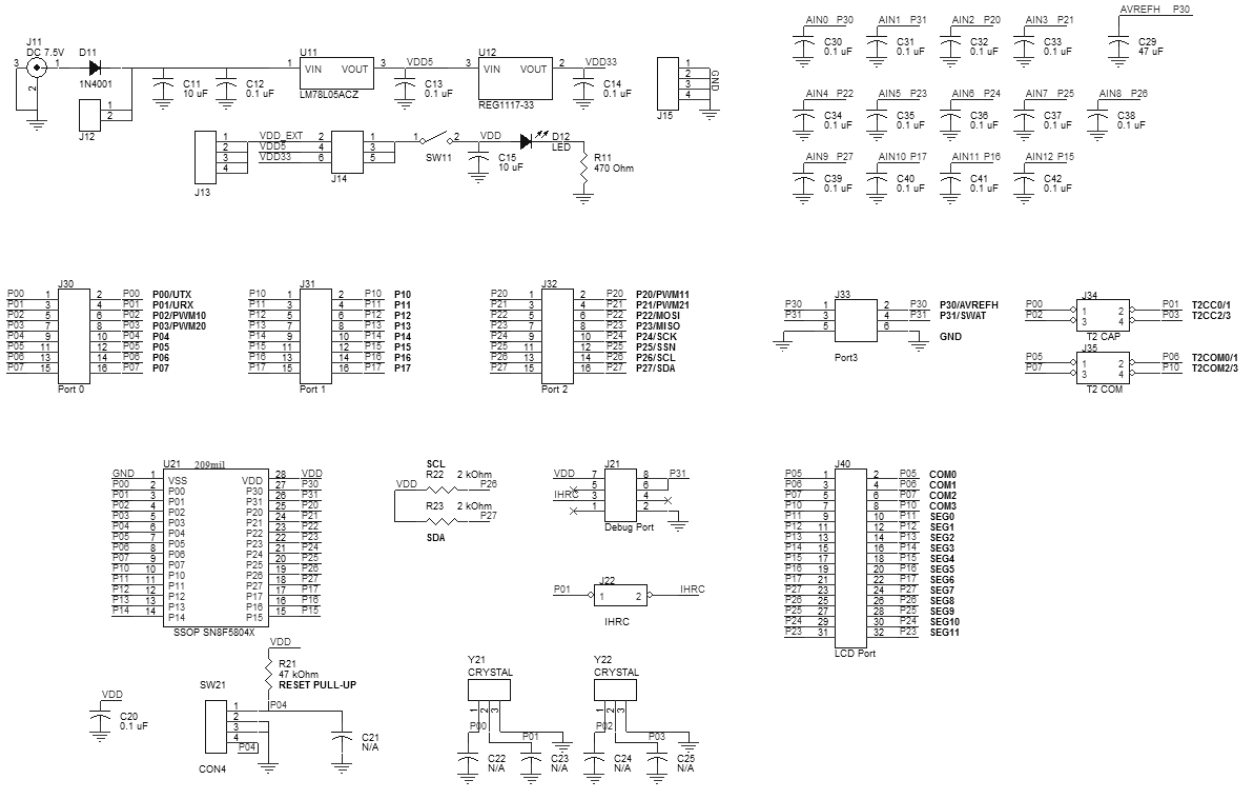


6.3 Component Description

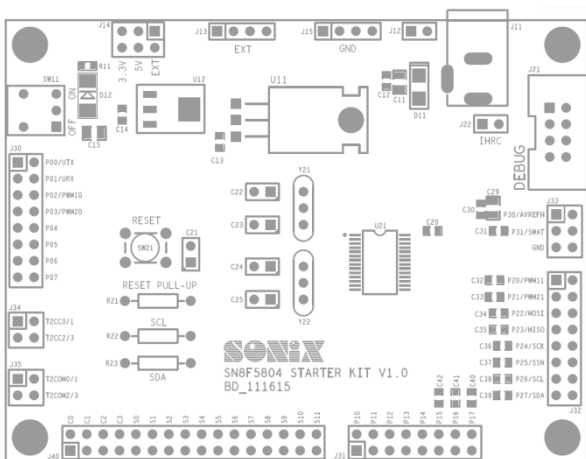
Number	Description
C30 – C39	10-ch ADC capacitors.
C41	AVREFH capacitor.
D12	MCU LED
J11	DC 7.5V power adapter
J13/J15	External power source.
SW21	External reset trigger source
J14	VDD power source is 5.0V, 3.3V or external power.
J21	Debug Port
J30 – J32	I/O connector.
J33	Timer 2 capture connector.
J34	Timer 2 compare connector.
R21, C21	External reset pull-high resistor and capacitor.
R22, R23	I2C pull-high resistors.
SW11	Target power (VDD) switch
U21	SN8F5702T real chip (Sonix standard option).

7 SN8F5804 Starter-Kit

7.1 Schematic



7.2 Floor Plan of PCB layout



7.3 Component Description

Number	Description
C30 – C42	13-ch ADC capacitors.
C29	AVREFH capacitor.
D12	MCU LED
J11	DC 7.5V power adapter
J13/J15	External power source.
SW21	External reset trigger source
J14	VDD power source is 5.0V, 3.3V or external power.
J21	Debug Port
J30 – J33	I/O connector.
J34	Timer 2 capture connector.
J35	Timer 2 compare connector.
R21, C21	External reset pull-high resistor and capacitor.
R22, R23	I2C pull-high resistors.
SW11	Target power (VDD) switch
U21	SN8F5804X real chip (Sonix standard option).
Y21, C22, C23, Y22, C24, C25	External crystal/resonator oscillator components.
J40	LCD connector.

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