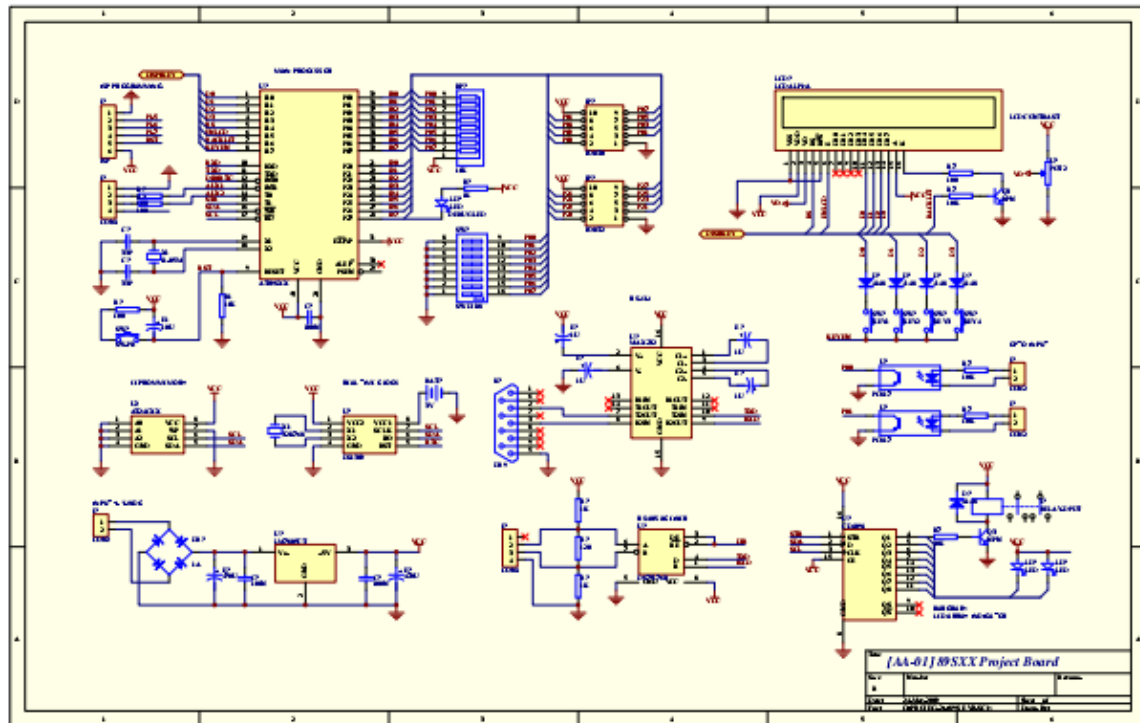




6 1

2 3 4 5 DISP/KEY

MAIN PROCESSOR

ISP PROGRAMMING

U?

RP?

LCD? LCD ALPHA

D

J?

D0 D1 D2 D3

1 2

P10 P11

P00 P01

39

P00 38

P01

P00

9 P01

8

VCC

JP?

1 2

P1.5

3 4 5

P1.6 P1.7 RST

3 4 RS

5 ENLCD

6 BACKLIT

P12 P13 P14 P15

KEYEN

P02

37

P02 P03

P02

7

P03 P04 P05

36 35

P04 34

P05 P06

P03

6 P04

5 P05

4 P06

P06

10

9 P07

P04 P02

6

P07

P07

1

PORT0 ISP

RXD

P20 VCC

TXD

P21

VCC 10K DIR/RTC

P22

VCC P23 P24 STR

P25 P26

DEBUG LED

2

1 D

EA/VP

RST

C

AT89SXX

8 6

7 5 P05 LCD CONTRAST

P03 VCC P01 7 8

P16 P17

P06 P07

33

3 32

2

P00

4 2

3 1 S S V

D D V

O V

S R

W / R

E

0 B D

1 B D

2 B D

3 B D

4 B D

5 B D

6 B D

7 B D

A

K

J?

10 11

RXD TXD

P20

21

P21

1

AUX1

P22

22

1

2

3

4

5

6

7

8

9

0 1

1 1

2 1

3 1

4 1

5 1

6 1

R7

U? POT2 12 13

INT0 INT1

23

P23

24

R?

VCC

JP?

100

VO

R? 2 3

R? 100 4

100

AUX2

SDA

14 15

T0 T1

SCL

P24

25

1K

10

9 P27

T

R7

Q3 NPN

CON4

16

WR

P25 P26

26

LD?

P26

8 7 P25 27

VO

D

VCC

I L

10K

P27

P20

R

B

PORT2

DISP/KEY

V

D? 4148

SW?

SW-PB

REAL TIME CLOCK

R2IN

RTC

B

R? 1K

DB?

R? 120

1A

+

R? 1K

A

Title

Size

Number Revision B

Date: 24-May-2009 Sheet of File: C:\PROJEC~2\..89S_EVB.SCH Drawn By: LED

P24 P22

6 4 5 3 P23 17

RD

28

P27

P21 VCC

S

C L N E

0

1 D

2 D

3 D

K C A

C?

SW?

33P

19 18

X1 X2

31

C?

PSEN 33P

SW DIP-8

GND

VCC

8 7

9

P00 10

P01 X1

6

11

P02 11.05M

P03 9

RESET

C C

D N

ALE/P

30 29

5

12

P04 P05

0 D

1 D

2 D

3 D

G

4

13 3

14

D?

D?

D? 2

15

P06

4148

4148

4148

VCC

R1

0 4

0 2 10K

1

16

P07

R?

VCC

C?

RS232

100

VCC

VCC

SW? KEY1 100N

+

OPTO INPUT

U?

1 6

PC817 2 7

U?

3 8

GND

E1 10U

SW?

SW?

W? +

KEY2

KEY3

KEY4 E?

+

1U

U?

6 1 MAX232

E?

KEYEN

E?

+

2

V+

C

C1+

1

V

C1-

1U C

3

J? 6

V-

EEPROM MEMORY

BAT?

K?

1U

C2+ C2-

4 5

E?

+

P00

R7

10K

1 2

VCC

VCC

CON2 1U U2

3V AT24CXX

U? 1

8

1

8

SCL

SCL SDA

4

G SDA

9

13 14 7 8

R1IN

R1OUT T1OUT

T1IN T2OUT

T2IN R2OUT

12 11 10 9

TXD

P01 RXD

R7

J?

23

A0 A1 A2

VCC WP SCL

76

X1 32K768

2

VCC2 X1

VCC1 SCLK

7

X2

I/O

D N

10K

12

3

64

SDA

5

4

RST

5

5 DS1302

51

PC817

CON2

DB9

VCC

VCC

R7 STR

10K

LD? LED

VCC

VCC

? INPUT 9-12VDC J?

4148

J? 6 1

U?

RELAY-DPDT

1 2

RS485 XCEIVER J?

U?

CD4094

CON2

U? LM7805CT

VCC

1 2

6

DE RE

3 2

DIR

STR SDA SCL

Q3 NPN 1

Vin

+5V

3

3

C? 100N

1 2

C

D

Q1

4

4

7

A B

D

4

TXD

CON4

VCC DS75176B

G

LED ARRAY INDICATOR 3 15

C V

CLK OE

Q2

5

Q3 Q4

6 7

VCC

+

E? 470U

G D N

E? C?

470U R

Q5 RXD

LD? LED

100N

1

VCC

14

5

GND

8

Q6 Q7

2

13

Q8

12 11

D

QS

9

QS

8

N

10

BARGRAPH

[AA-01] 89SXX Project Board

1 2 3 4 5 6

D

C

B

A

uc_sbc.BOM

Bill of Material for C:\PROJEC-2\MICROS-1\SCH&PC-1\UC_SBC.PCB
On 24-Jul-2008 at 07:03:47

Comment	Pattern	Quantity	Components

100	R. 4	3	R3, R4, R5
100N	CAP	3	C1, C4, C5
10K	R. 4	5	R1, R2, R6, R7, R8
10K	SIP9	1	RP1
10U	EL2	1	E1
11MD592	XTAL-3	1	X1
120	R. 4	1	R13
1K	R. 4	2	R10, R11
1N4148	DK	6	D1, D2, D3, D4, D5, D7
1N4148	DK3	1	D6
1U	EL2	4	E3, E4, E5, E6
24CXX	IC8	1	U1
32.8k	XTAL-2	1	X2
330	R. 4	2	R9, R12
4094	IC-16	1	U2
470U	E3A	2	E2, E7
47P	CAP-B	2	C2, C3
5K	VR-COMBO	1	VR1
7805	TO-220	1	U9
AT89SXX	IC40	1	U3
BG	8BARGRAPH	1	DS1
BLUE	LED5MM	2	L1, L2
C3200	TO-92AA	2	Q1, Q2
DB9	DB9RA/F	1	K11
DIPSW8	DIPSW8	1	SW1
DS1302	IC8	1	U6
DS75176	IC8	1	U5
IDC2X5	IDC10	2	K1, K2
INT	CON-4-1A	1	K3
ISP	SIP-6	1	K4
JP	JPR	12	J2, J4, J5, J6, J7, J22, J24, J25, J26, J27, J28, J31
JP	JPR300	11	J1, J3, J8, J9, J10, J13, J15, J21, J23, J29, J30
JP	JPR500	5	J16, J17, J18, J19, J20
JP	JPR600	3	J11, J12, J14
LCD	LCD 16X2 - 2	1	D8
MAX232	IC-16	1	U4
PS	2WAY	5	K5, K7, K8, K9, K10
PS	JUMPER	1	JPR1
REL	RELAY_DPD2	1	RLY1
RJ11	RJ11	1	K6
SW	TACT SW-KE	5	S1, S2, S3, S4, S5
TLP	IC4	2	U7, U8
VBCK	BAT-HLDR	1	BAT1
W01	BRG KEC1 L1	1	DB1

uc_sbc.BOM Bill of Material for
C:\PROJEC~2\MICROS~1\SCH&PC~1\UC_SBC.PCB On 24-Jul-2008 at 07:03:47

Comment Pattern Quantity Components

100 R.4 3 R3, R4, R5 100N CAP 3 C1, C4, C5 10K R.4 5 R1, R2, R6, R7, R8 10K
SIP9 1 RP1 10U EL2 1 E1 11M0592 XTAL-3 1 X1 120 R.4 1 R13 1K R.4 2 R10, R11
1N4148 DK 6 D1, D2, D3, D4, D5, D7 1N4148 DK3 1 D6 1U EL2 4 E3, E4, E5, E6
24CXX IC8 1 U1 32.8k XTAL-2 1 X2 330 R.4 2 R9, R12 4094 IC-16 1 U2 470U E3A 2
E2, E7 47P CAP-B 2 C2, C3 5K VR-COMBO 1 VR1 7805 TO-220 1 U9 AT89SXX IC40 1 U3
BG 8BARGRAPH 1 DS1 BLUE LED5MM 2 L1, L2 C3200 TO-92AA 2 Q1, Q2 DB9 DB9RA/F 1
K11 DIPSW8 DIPSW8 1 SW1 DS1302 IC8 1 U6 DS75176 IC8 1 U5 IDC2X5 IDC10 2 K1, K2
INT CON-4-IA 1 K3 ISP SIP-6 1 K4 JP JPR 12 J2, J4, J5, J6, J7, J22, J24,
J25, J26, J27, J28, J31 JP JPR300 11
J1, J3, J8, J9, J10, J13, J15,
J21, J23, J29, J30 JP JPR500 5 J16,
J17, J18, J19, J20 JP JPR600 3 J11, J12, J14 LCD LCD 16X2 - 2 1 D8 MAX232 IC-16
1 U4 PS 2WAY 5 K5, K7, K8, K9, K10 PS JUMPER 1 JPR1 REL RELAY_DPDT2 1 RLY1 RJ11
RJ11 1 K6 SW TACT SW-KE 5 S1, S2, S3, S4, S5 TLP IC4 2 U7, U8 VBCK BAT-HLDR 1
BAT1 W01 BRG KECIL1 1 DB1