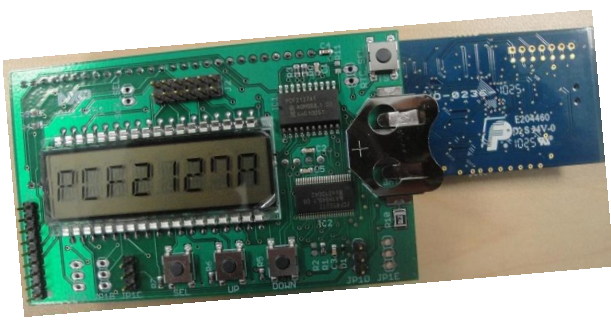




**THE DATASHEET OF  
OM11051,598**





# OM11051

## Accurate Real-Time Clock Evaluation Kit

1. At power up (after connecting the USB cable to the LPCxpresso Board), the word "CLOCK" flashes on the screen for one second and then the time is displayed on the screen in the format: HH--MM--SS. This is the **Clock Mode**.
2. At any time, pressing the TS button will initiate the MCU to read the timestamp information from the RTC and display it on the LCD. This is the **Timestamp Mode**. Thereafter, pressing the TS button again will initiate the MCU to read the new time stamp information from the RTC and update the screen with the new timestamp information. However, if SEL, UP or DOWN switch is pressed, when the time stamped data is displayed on the screen, the word "CLOCK" will flash on the screen for one second and then the current time will be displayed on the LCD and the unit will return to the **Clock Mode** (Step 1).
3. Pressing UP or DOWN will cycle through the different operational modes.
  - In the **Clock Mode**, the word "CLOCK" flashes on the LCD for one second and then the time is displayed on the LCD in the format: HH--MM--SS.
  - In the **Date Mode**, the word "DATE" flashes on the LCD for a second and then the date is displayed on the LCD in the format: MM/DD/YY.
  - In the **Alarm Mode**, the word "ALARM" flashes on the LCD for a second and then the alarm time is displayed on the LCD in the format: HH--MM--SS.
  - In the **Countdown Mode**, the word "COUNTER" flashes on the LCD for a second and then the countdown time is displayed on the LCD in the format: HH--MM--SS. The countdown begins and the display is updated every second. The user may program the countdown time from 00--00--00 to 00--04--15 in increments of 1 second. Once the user is done programming, the countdown begins. If the countdown reaches zero (00--00--00), the display flashes and toggles between the words "COUNTER" and "FINISH".



- In the **Format Mode**, the word “FORMAT” flashes on the screen for a second and then the selected time format is displayed on the LCD. The different time formats to select from are 24H (Default at power up), 12H / PM, and 12H / AM.

- In the **Power Mode**, the phrase “PWR ON” is displayed on the LCD. The user may switch to LOW PWR Mode (LCD driver off but MCU on), by:
  - i. Pressing SEL to display the phrase “LOW PWR?” on the LCD.
  - ii. Pressing the UP switch for LOW PWR and then SEL to enter **Low Power Mode**.
  - iii. After pressing SEL the first time and the phrase “LOW PWR?” is displayed on the LCD, if the user presses the DOWN switch, the phrase “PWR / ON” is displayed again on the screen and pressing SEL will return to the starting point in the Power Mode.

In the **LOW PWR Mode** (LCD driver off but MCU on), pressing SEL, UP, or DOWN wakes up the MCU, flashes the word “CLOCK” on the screen for one second, reads the current time from the RTC, and displays it on the LCD. This puts the unit back in the **Clock Mode** (step 1).

In the **Low PWR Mode**, pressing the TS switch wakes up the MCU, reads the timestamp data from the RTC and displays it on the LCD. This puts the unit back in the **Timestamp Mode**

(step 2).

- In the **Advertising Mode**, the following words flash on the LCD for a second and cycle through continuously: WELCOME, NXP, LOW PWR, CLOCK, PCF2127A, LCD, PCF8562.

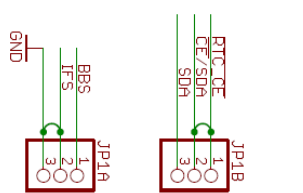
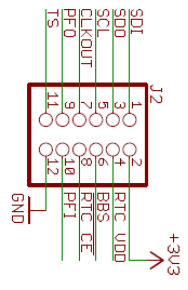
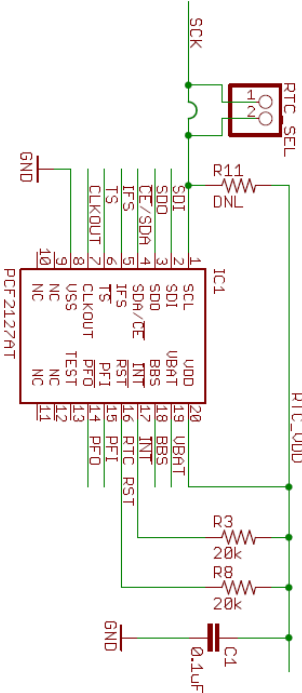
4. In the **Clock, Date, Alarm, Countdown, Format, and Power Modes**, pressing SEL will put the unit into the respective **Programming Mode**. In the **Programming Mode**, the variable being programmed will blink as the user sets the desired value. While the variable is blinking, pressing UP once will increment the variable to the next step and pressing DOWN once will decrement the variable to the previous step. If the user holds the UP or DOWN switch, the scroll speed increases.

After the desired value is set and the user presses the SEL switch, the next variable to be programmed will blink. When all variables have been programmed, the word “FINISH” flashes on the LCD three times and then the display returns to the previous mode prior to entering the **Programming Mode**.

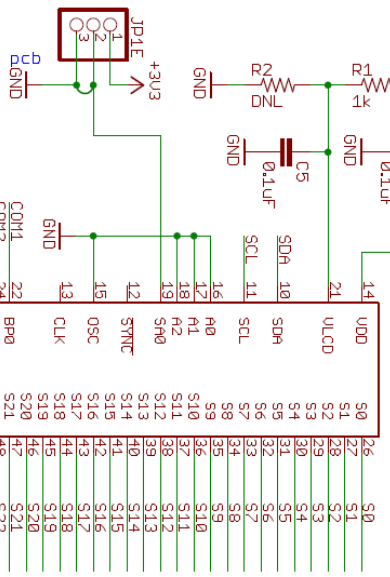
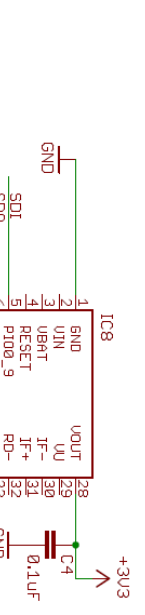
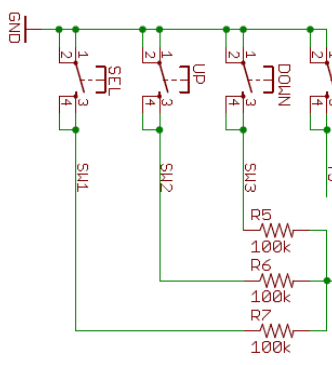
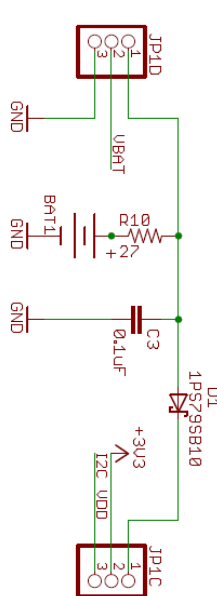
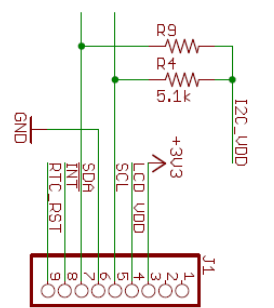
5. At anytime, if there is an alarm, the word “ALARM” flashes on the screen until the user presses SEL, UP, or DOWN switch. At which time, the interrupt will be cleared and the blinking will stop.
6. During operation, the unit may be powered via the USB connector (cable included) or a coin-cell battery (included).
7. This demonstration kit may also be used to evaluate the PCF2129A or the PCA2129 accurate real-time clock devices by swapping the device under evaluation with the PCF2127A device on board.



Note: cuttable trace on pcb

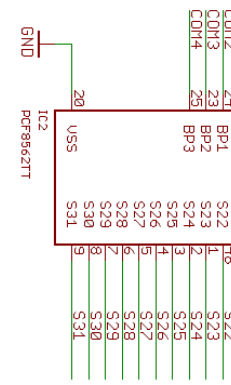


Note: cuttable traces on pcb



IC3	PCF8627T	IC8	APRESSO_MIBED
1	9V/8F/8E/8D	1	SH11
2	8V/8F/8E/8D	2	UP
3	8V/7F/7E/7D	3	DOWN
4	7V/7F/7E/7D	4	SEL
5	7V/6F/6E/6D	5	SH12
6	6V/6F/6E/6D	6	SH13
7	6V/5F/5E/5D	7	SH14
8	5V/5F/5E/5D	8	SH15
9	5V/4F/4E/4D	9	SH16
10	4V/4F/4E/4D	10	SH17
11	4V/3F/3E/3D	11	SH18
12	3V/3F/3E/3D	12	SH19
13	3V/2F/2E/2D	13	SH20
14	2V/2F/2E/2D	14	SH21
15	2V/1F/1E/1D	15	SH22
16	1V/1F/1E/1D	16	SH23
17	..COM1..	17	SH24
18	..COM2..	18	SH25
19	..COM3..	19	SH26
20	..COM4..	20	SH27
21	..COM5..	21	SH28
22	..COM6..	22	SH29
23	..COM7..	23	SH30
24	..COM8..	24	SH31
25	..COM9..	25	SH32
26	..COM10..	26	SH33
27	..COM11..	27	SH34
28	..COM12..	28	SH35
29	..COM13..	29	SH36
30	..COM14..	30	SH37
31	..COM15..	31	SH38
32	..COM16..	32	SH39
33	..COM17..	33	SH40
34	..COM18..	34	SH41
35	..COM19..	35	SH42
36	..COM20..	36	SH43
37	..COM21..	37	SH44
38	..COM22..	38	SH45
39	..COM23..	39	SH46
40	..COM24..	40	SH47
41	..COM25..	41	SH48
42	..COM26..	42	SH49
43	..COM27..	43	SH50
44	..COM28..	44	SH51
45	..COM29..	45	SH52
46	..COM30..	46	SH53
47	..COM31..	47	SH54
48	..COM32..	48	SH55
49	..COM33..	49	SH56
50	..COM34..	50	SH57
51	..COM35..	51	SH58
52	..COM36..	52	SH59
53	..COM37..	53	SH60
54	..COM38..	54	SH61
55	..COM39..	55	SH62
56	..COM40..	56	SH63
57	..COM41..	57	SH64
58	..COM42..	58	SH65
59	..COM43..	59	SH66
60	..COM44..	60	SH67
61	..COM45..	61	SH68
62	..COM46..	62	SH69
63	..COM47..	63	SH70
64	..COM48..	64	SH71
65	..COM49..	65	SH72
66	..COM50..	66	SH73
67	..COM51..	67	SH74
68	..COM52..	68	SH75
69	..COM53..	69	SH76
70	..COM54..	70	SH77
71	..COM55..	71	SH78
72	..COM56..	72	SH79
73	..COM57..	73	SH80
74	..COM58..	74	SH81
75	..COM59..	75	SH82
76	..COM60..	76	SH83
77	..COM61..	77	SH84
78	..COM62..	78	SH85
79	..COM63..	79	SH86
80	..COM64..	80	SH87
81	..COM65..	81	SH88
82	..COM66..	82	SH89
83	..COM67..	83	SH90
84	..COM68..	84	SH91
85	..COM69..	85	SH92
86	..COM70..	86	SH93
87	..COM71..	87	SH94
88	..COM72..	88	SH95
89	..COM73..	89	SH96
90	..COM74..	90	SH97
91	..COM75..	91	SH98
92	..COM76..	92	SH99
93	..COM77..	93	SH100
94	..COM78..	94	SH101
95	..COM79..	95	SH102
96	..COM80..	96	SH103
97	..COM81..	97	SH104
98	..COM82..	98	SH105
99	..COM83..	99	SH106
100	..COM84..	100	SH107

Note: cuttable trace on pcb



# NXP SEMICONDUCTORS

TITLE: PCF2127A

Document Number:

Date: 9/1/2010 8:46:05 AM

Sheet: 1/1

REV: 1.1







## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

 [View OM11051,598 on WIN SOURCE](#)

 [NXP / Nexperia Information](#)

## Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management