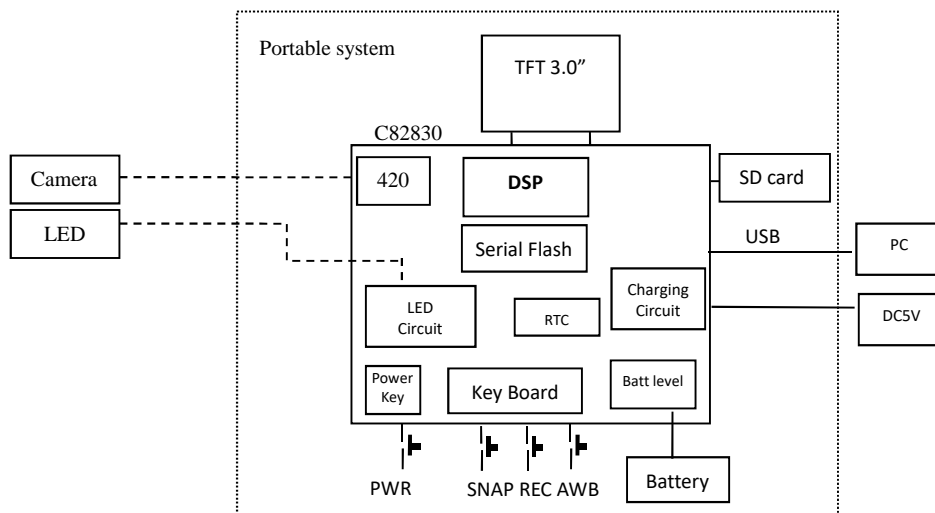**COMedia Ltd.**
**康大科技有限公司**

## Description

This C82830 is a portable handheld solution. It has built in high resolution 3" IPS display panel, interface to micro camera module muC30x series. Together with LED control circuit, it is good for medical and industrial application.

## Features

- ✓ Image display in center of panel with 480x480 pixels
- ✓ Built in 3.0" high resolution display (640x480RGB)
- ✓ Snapshot and recording
- ✓ Max 30 min video clip
- ✓ Support SDHC to 32G
- ✓ Low power consumption
- ✓ 3.7v battery operation
- ✓ OSD to display battery status
- ✓ Built in RTC for date time display on screen
- ✓ Auto power off after idle for 30min
- ✓ Built in battery charging circuit
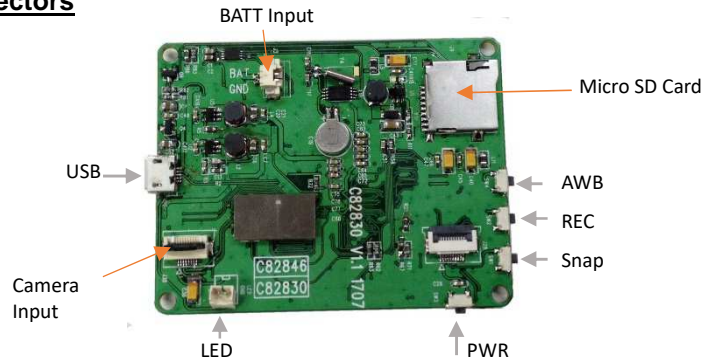- ✓ USB Mass storage

## Block Diagram



## Electrical Characteristics (at room temperature 25C)

| Parameter | Condition | Min | Typ. | Max | Unit |
|---|---|---|---|---|---|
| Operation Voltage | | 3.5 | 4.2 | 5.5 | V |
| Operation Current | With camera connected but no LED on | | 240 | | mA |

LED Output Voltage: same as input, battery or DC
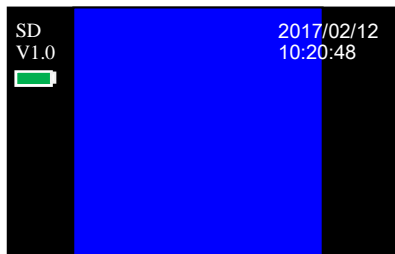LED Current source: depends on LED forward voltage, limited with 10Ohm resister

## Board Layout and Connectors



**Operation**
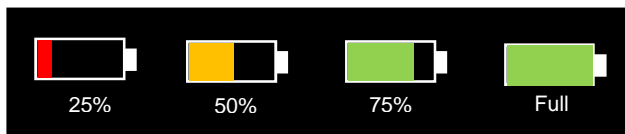
1   Connect camera in position, apply battery, note the polarity.

2   Power on off the unit
    2.1   Press PWR key and hold for 1sec to turn on. The screen will show the real time video as well as battery level status and SD card presence. If SD card is not installed, SD Icon will become grey.
    2.2   To turn off the unit, press PWR key for a sec, it will show POWER OFF and cut off the power.



3   Capture JPG or AVI
    3.1   Take a snap shot - Press **Snap** key to take a photo. Relevant icon will be shown on screen.
    3.2   Take a video clip - Press **REC** to start recording. During recording a dot will be flashing on the screen. Press **REC** again to stop recording. Max recording time is 30 minutes.
    3.3   All files are saved as IMGxxxxx.JPG or IMGxxxxx.AVI (xxxxx starts from 00001 to 09999). If there is the same file name existed, the old file will be overwritten by the new file.

    **Note: this module has no on-board memory, so it needs external SD card to store files. User needs to insert SD card before it can perform a snap shot or video capture**

4   AWB: point camera tip to white paper, press **AWB** key to do white balance calibration. This value will be stored in the memory. In other words, color balance will be kept for next time power up.

5   Battery detect
    5.1   Battery level will always display on the left of the screen. It will display 4 levels of battery as below



    5.2   If the battery is less than 10%, "**BATT LOW**" will pop up and flashing for several seconds and then turn off the device automatically.

6   Playing files in PC
    6.1   User can pull out SD card to view files in other device or using USB cable to connect between the device and view directly in PC
    6.2   If play files in PC, turn on the device, in preview mode, connect USB cable to PC. A USB logo will be popped up to indicate the connection, as shown in right
    6.3   Using browser to view the SD card, all files are in the folder DCVD.

6.4 During USB connection, don't remove SD card from the machine, otherwise, it may cause machine hang problem.

7 Reset of files number
Press and hold SNAP button for 3 sec, wording "Reset Number…" will be pop up and disappear after few sec. Such case, file number will be reset to IMG00000

8 Date time setting
8.1 Press and hold AWB key to enter date/time setup mode:
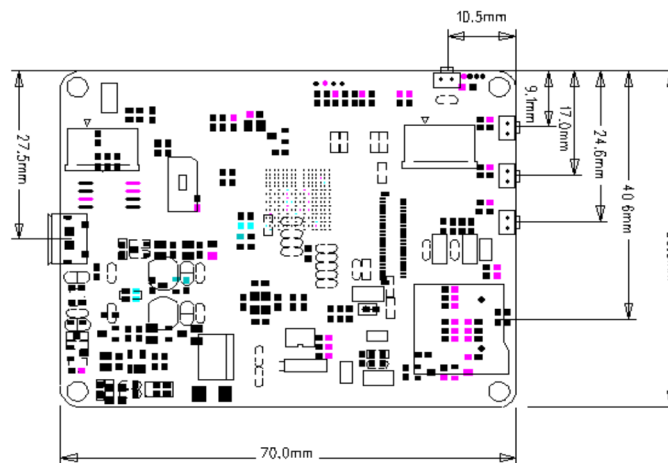
2017/02/12 11:12:43

8.2 Press SNAP/REC key to increase/decrease digit, press AWB Key shift to next field until ending. Settings will be save before quit. The range of year is 2017-2027.

9 External LED control
9.1 Connect external LED thru 2-pin connector, note the polarity
9.2 LED will be on only when preview mode, it will be off when connected to PC thru USB port.


**Mechanical size for module**




**Mechanical Dimension for TFT**