PCA8561

Parameter	Value
Width	5.0 mm
Length	5.0 mm
Height	0.85 mm
Pitch	0.5 mm
Soldering	wettable flanks

Small displays integrated in the knobs:

The TSSOP package is to big to be mounted inside the knob of a climate control
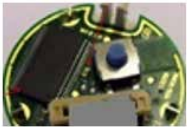
Small displays integrated in the clusters in combination with the big TFT display: The MCU is advanced for TFT controller and does not encompass any LCD driver.

Wettable flanks:
The exposed edge of each terminal contains a small plated cavity, ensuring the solder flows into it and adheres to the side of the terminal. Non-wetting of the sides can be detected easily, allowing a cost-effective optical inspection process.

PCF8551 AND PCF8553

Main features	PCF8551 and PCF8553
Resolution (max)	PCF8551: 4 x 36 = 144 segments PCF8553: 4 x 40 = 160 segments
VDD range [V]	1.8V ÷ 5.5V
VLCD external [V]	1.8V ÷ 5.5V
Mux rates	1:1, 1:2, 1:3, 1:4
Bias configuration	static,1/2, 1/3
Oscillator	Internal or external selectable through command
Frame Freq.	32 Hz ÷ 128 Hz programmable
Reset	POR circuit with POR enable input pin (PORE) plus Software reset command and reset pin
Interface	PCF8551ATT: 2-line I²C; PCF8551BTT: 3-line SPI PCF8553DTT: selectable 2-line I²C or 3-line SPI
Power consumption	<<100nA in power down; ~4uA typ. in operation mode, default, display attached and all segments ON
Operating Temp Range	-40°C to +85°C
Package	PCF8551: TSSOP48 (12.5 x 6.1 x 0.95) PCF8553: TSSOP56 (14.0 x 6.1 x 0.95)
ESD	HBM ± 5 kV; CDM ± 500 V
Qualification	Automotive versions available

On request, PCF8551 and PCF8553 could be released with QFN48 and QFN60 packages respectively
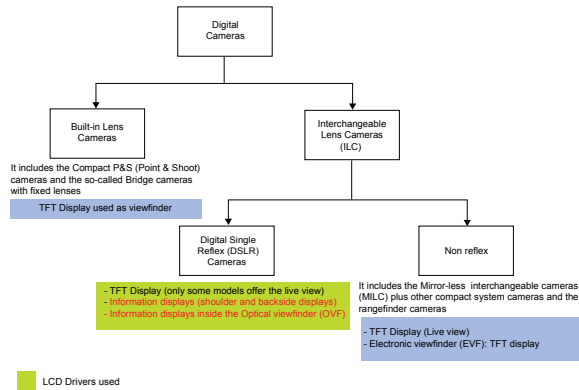
Key Values:

- Low voltage / Low power
- High reliability
- Ease of use
- Low cost

DSLR CAMERA STN LCD DISPLAY DRIVERS

LCD DISPLAY FOR DIGITAL CAMERAS

It includes the Compact P&S (Point & Shoot) cameras and the so-called Bridge cameras with fixed lenses

TFT Display used as viewfinder

- TFT Display (only some models offer the live view)
- Information displays (shoulder and backside displays)
- Information displays inside the Optical viewfinder (OVF)

LCD Drivers used

It includes the Mirror-less interchangeable cameras (MILC) plus other compact system cameras and the rangefinder cameras

- TFT Display (Live view)
- Electronic viewfinder (EVF): TFT display

1. Backside Information Display
   - Display at backside to indicate different mode settings
2. Shoulder Information Display
   - Display on shoulder to indicate general camera status, flash adjust mode, B/W mode, metering mode, shots remaining, etc.
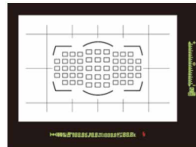3. Finder Information Display
   - Display inside the optical viewfinder (OVF) that displays some settings such as shutter speed, iris, magnification, etc.
4. Finder Focus Point Display (superimpose)
   - Display inside the optical viewfinder (OVF) that overlays the mirror and displays the auto focus points, gridlines, icon warnings, etc
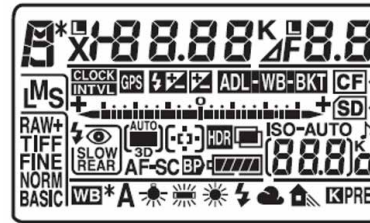
BACKSIDE INFORMATION DISPLAY

- Display Information and settings such as file type, file size, file number, connectivity, etc.
- Estimated ~100+ segments

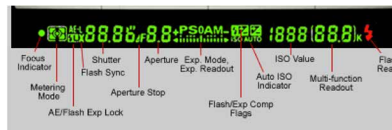Information and settings such as image quality, image size, ISO sensitivity, WB settings, etc

SHOULDER INFORMATION DISPLAY

- Display status information about most of the shooting settings
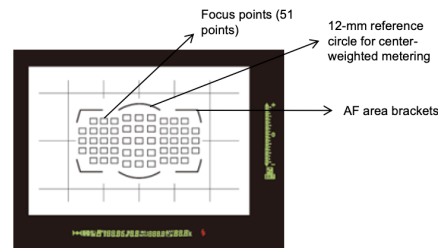- Estimated ~ 140+ segments

FINDER INFORMATION DISPLAY

- Display status information about the basic shooting settings
- Estimated ~ 120+ segments

FINDER FOCUS POINT DISPLAY

- Display the AF points
- Estimated ~ 120+ segments

LCD DRIVERS RECOMMENDATIONS FOR DSLR CAMERAS

DSLR Product Type	Backside Information Display	Shoulder Information Display	Finder Information Display	Finder Focus Point Display
High-end	Y	Y	Y	Y
Medium-end	-	Y	Y	Y
Low-end	-	-	Y	Y
Min Resolution	100+ segments	140+ segments	120+ segments	120+ segments
Max Resolution	140 segments	200 segments	140 segments	200 segments
PWM channels ?	No PWM	No PWM	No PWM	3 PWM/LED (?)
IDD	Ultra-LOW (display ON in standby)	Ultra-LOW (display ON in standby)	LOW (display is off in standby)	LOW (display is off in standby)
LCD Driver Proposal	PCF8551 (4x36) in QFN48 package (TBD)	PCF8553 (4x40) in QFN56 package (TBD)	PCF8551 (4x36) in QFN48 package	PCF8553 (4x40) in QFN56 package

PCA8561

Main features	PCA8561
Resolution (max)	4 x 18 = 72 segments
VDD range [V]	1.8V ÷ 5.5V
VLCD external [V]	1.8V ÷ 5.5V
Mux rates	1:1, 1:2, 1:3, 1:4
Bias configuration	static, 1/2, 1/3
Oscillator	Internal or external selectable through command
Frame Freq.	32 Hz ÷ 256 Hz programmable
Reset	Input reset pin (RST); software reset command; POR circuit with POR enable input pin (PORE)
Interface	PCA8561AHN: 2-lines I²C PCA8561BHN: 3-lines SPI
Others	A0, A1 pins for I²C slave address selection
Operating Temp Range	-40°C to +105°C
Package	HVQFN32 (with wettable flanks)
ESD	HBM ± 3.5 kV
Qualification	AEC-Q100 grade 2