

Touch-screen technology and RONBEN elite touch digital picture photo frame

As touch-screen technology evolves year in year out, the cost of touch panels has been continuously falling down over the past years, thus, touch-screen digital displays have become more and more affordable and commonplace, especially in this era when digital photo picture frame is booming.

RONBEN employs resistive system to recognize a user's touch in its elite digital picture photo frames. This resistive system is made up of a normal glass panel which is covered with a conductive and a resistive metallic layer as shown in below layout pictures. These two layers are held apart by dot spacers, and a scratch-resistant layer is placed on top of the whole setup. There is an electrical current running through the two layers while the LCD is operational. When a user touches the screen (LCD covered with touch control panel), the two layers make contact in that exact spot. That changes the electrical current, and thus, the change in the electrical field is noted and the coordinates of the point of contact are calculated by the touch control driver, which is embedded in a small PCB connected to the mother board of our [touch screen digital frame such as DPF-7007DT](#). Once the coordinates are known, the touch control driver then translates the touch into some instruction that the digital frame firmware can understand. The whole process is very similar to a PC mouse driver translating a mouse's movements into a click or a drag.

4-wire resistive touch panel specification:

Environmental	Operating Temperature	0°C ~ 50°C 20%RH ~ 70%RH
	Storage Temperature	-20°C ~ 70°C 20%RH ~ 70%RH
	Thermal Shock	-20°C for 1hour & 70°C for 1hour by 25 cycles
	Accelerated Aging	240 hours continuous exposure at 60°C 90%RH
Durability	Point Activation	Over one million times
Transportation Test	Static Loading Test	45 Newton presses on the square 25 cm ² for 30 sec.
	Package Drop Test	Depending on the weight of package
	Steal Ball Drop Test	φ9mm steel ball
FPC / RA Test	Pulling-off force Test	0.5 kg/cm peeling upward by 90 deg.
	Bending Resistance Test	10 times or more by bending radius R1mm 500g. Each left and right side 135° deg.