Handheld Computer Silicone-Rubber Keypad

WHY (Reason to Build This Technology)

Why Handheld Computer Silicone-Rubber Keypad

Many unitech handheld users are the field workers for stocktaking and logistics applications. Their main job to operate the handheld computer is to press keypads, input and count inventory numbers or text information. That's a heavy duty job to do when every stocking task has come. That means the keypad durability must be very rugged and strong. Not only the wear resist capability must strong, but also the printing texts on the keypad must longevity. In general, consumer handheld computers use normal rubber keypad. This type of keypad soften, easy to produce and very cheap. However, the most weakness of general rubber keypad been criticize is the longevity of print text on the surface of rubber keypad. In the rugged, IPC vertical, our user circumstances always been in heavy duties in using keypads. That means the prints is easily to weary out afterward millions times of usages.

When the prints been weary out, customer need to pay for exchange of that, in another way, that means cost or budgets raised up when key prints out too often. The unitech cares about our customer's pain point, therefore, our technical team to source and research different type of materials of rubbers, as well as technologies for keeping the print text to sustain with long period after heavy duties weary. Besides the longevity of print text, there's one key factor is to let the backlight been perfectly display on a new survey of keypad. The laminated keypad is also getting become a must feature in a nowadays. Introducing a new type of rubber keypad, the silicon rubber keypad technology is possibly to fulfill what IPC handheld computer needs.

Handheld Computer

Silicone-Rubber Keypad

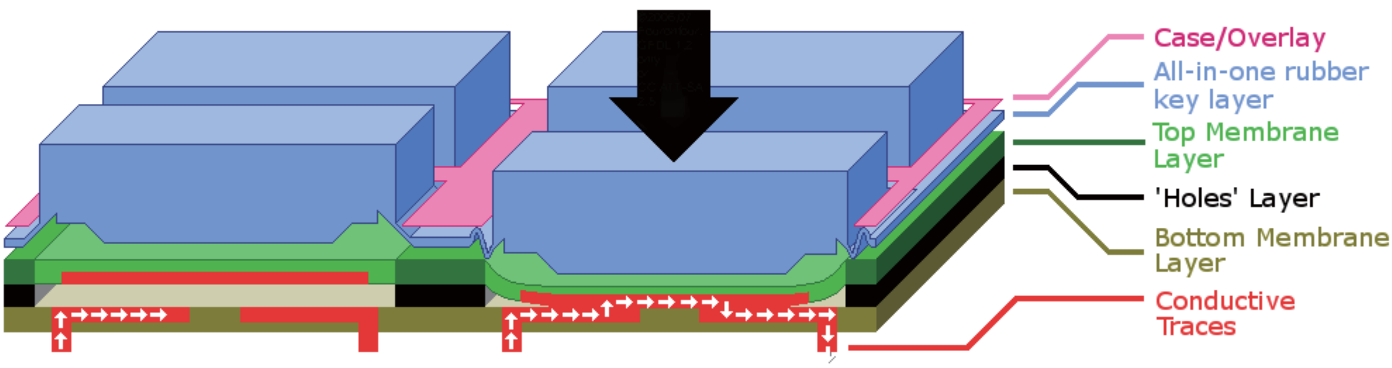
HOW (Concept of This Technology)

Silicone keypads are made with a process called compression molding. The process basically uses a combination of pressure and temperature to create pliable (yet durable) surfaces around central electronic contacts. Silicone keypads are designed to produce a uniform tactile response across the entire surface. They are designed to be electronically neutral so interference from the material is not a factor in the use of the device.

One important consideration of silicon keypads is the ability to make the entire keypad a single piece of silicone webbing, rather than having individual keys produced separately. For handheld computer, this allows for greater ease of production (and lower costs) since the keypad can be inserted as a single piece underneath a plastic holding device. This also increases the resistance of a device to fluids and environmental damage. For example, if you spill a liquid on a silicon keypad that is made of one solid piece of silicone, the fluid can be wiped off without infiltrating the device and causing damage to the internal components.

Silicone Keypad Inner Workings

Underneath each key on a silicone keypad is a relatively simple series of electronic contacts that help deliver electronic impulses when keys are depressed. When you press a key on the keypad, it depresses that section of the silicone web. When pressed enough that the carbon/gold pill on the key touches the PCB contact underneath that key to complete a circuit, the effect is completed. These switch contacts are extremely simple, which means they are cost-effective and VERY durable. Also, the text prints been protected underneath of silicone surface, it is hard to wipe out afterward weary. Unlike many other input devices e.g. computer mechanical keyboards the effective life of a silicone keypad is effectively infinite.



unitech because we care

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WHAT (Case Study Benefits)

The unitech light weighted handheld computer – HT1 keypad made of high-grade rubber and silicone materials, they are designed to withstand the extremely wear and tear of mission critical use. Whether it's stocktaking, inventory check task forces, manufacturing plant, hospital, retail, etc., you can rest assured knowing that HT1 silicone-rubber keypads will hold up stress. Of course, this is just one of the many benefits they offer.

Waterproof and Dustproof

HT1 silicone-rubber keypads are naturally waterproof and dust proof. The ultra-durable membrane of silicone-rubber keypads will prevent the intrusion of moisture, dust, and micro-particles, protecting the respective device from damage. This makes them a popular choice in busy commercial settings such as factories where moisture and dust run rampant.

Comfort

Let's face it, comfort is a key selling point when choosing keypads. If a keypad is excessively hard, rough, or isn't designed in an ergonomic manner, it's not going to serve its intended role. Thankfully, HT1 silicone-rubber keypads offer an exceptional level of comfort, featuring soft and smooth keys that are enjoyable to press.

Cost-Effective

This alone should be reason enough to choose HT1 in silicone-rubber keypads over other types. While there's some initial investment required in all types of keypads, silicone-rubber are generally less expensive than others. This means you can save cost in maintain without breaking the bank.

Supports HMIs With or Without Back Lighting

Another key benefits offered by silicone-rubber keypads is their ability to support Human Machine Interfaces (HMI) with or without back lighting. Some HMIs use back lights to illuminate the interface, whereas others rely strictly on external lighting. Regardless of whether or not your HMI uses back lighting, silicone-rubber keypads will continue to function as intended. Silicone-rubber keypads are capable of supporting HMIs with or without back lighting.

Note: " Silicone-Rubber Keypad" supports models – HT1