



Safe Inputs with touch screen

SelectTrust

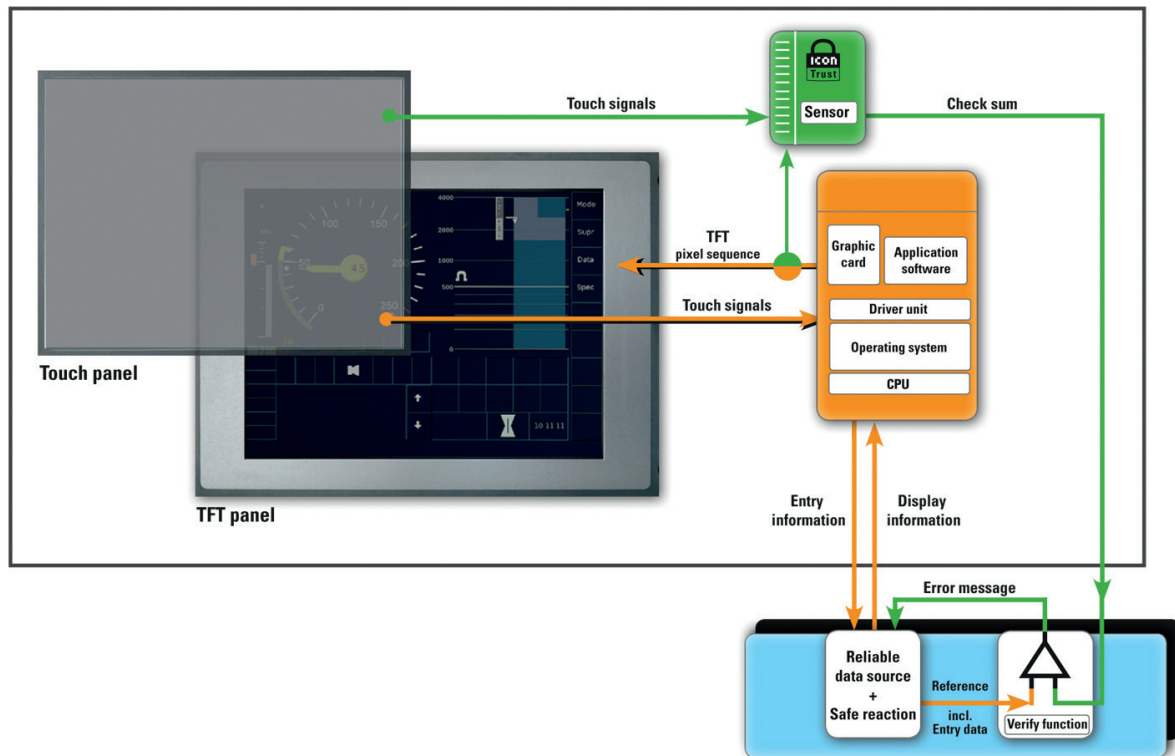
SelectTrust

SelectTrust is the first technology worldwide which guarantees a verifiably correct manual data entry using a touch screen.

In addition to the 'classical' handling of touch events within complex HMI structures, SelectTrust generates, directly from the displayed image data stream, reference information which is independent of the first information path. By means of this reference information, the safe computer can check the correctness of the first information path.

The unique SelectTrust technology allows for the input and output of safety relevant and non-safety relevant information to be realised within the same HMI unit. In this way, SelectTrust permits the use of more powerful standard PC technology and its associated advantages, e.g. cost-effectiveness, ergonomics, flexibility and variability also for the safety critical area.

SelectTrust is the technology for the safeguarding of TFT-based control panels and display devices



This is how SelectTrust works:

In a processing chain - from the touching of a graphical element on a touch screen, to the allocation of corresponding information content from the determined coordinates, through to the transmission of the information to a control computer - various errors can occur.

Due to the complexity of the process, it is not always possible to expose these errors. This, however, is a vital precondition for the inputting of safety relevant information on the touch screen. Alternatively, such operating functions are stored on additional, external control elements, adding considerably to cost and space requirements.

In order for the safe computer to be able to check information which has been created in the 'classical' way and to determine if errors exist, SelectTrust creates in parallel, a reference information which is independent of the classical touch event handling and which is generated directly from the displayed image data stream.

At the same time, via the IconTrust® Display Monitoring System, the selected graphical element is allocated a signature directly and a corresponding check sum is generated. This check sum clearly represents the contents of the graphical element selected by the user.

In this way, the safe computer receives the information which has been determined by the HMI PC and in addition, the signature generated by SelectTrust. Both sets of information can be compared with each other using previously determined reference tables thereby ensuring reliability of the information.