Dijtital TANIMA Sistemleri

DRT27- NFC reader terminal
"Simple but skillful"

Web document

1. Overview

DRT27 is a smart Linux terminal with NFC and contactless card reader and a vast set of communication capabilities. It supports all parts of ISO14443A/B and ISO18092 (NFC).

DRT27 areas of use are as follows:
- Smart Access Control Terminal
- Payment Terminal for vending machines
- HMI terminal

DRT27 integrates rich communication options, allowing for easy integration to other existing or new centralized systems.

DRT27 operatesreliably even in harsh outdoor conditions down to -20Cº and is IP65 rated for dust and water protection.

DRT27 incorporates a system control MCU - high speed, deterministic microcontroller, taking care of all high speed hardware events, which otherwise could not be kept under control with the means of the main application CPU. A great importance is given to the early self-diagnostics and remote monitoring capabilities, since the uninterruptable functionality is crucial for the mentioned systems. In case of a doubt for failure (out of range parameters, signaling for a potential future problem) DRT27 generates alarms in two levels – warning and critical. All such events are logged to the local database and to the central control office respectively. The mentioned MCU also provides hardware watchdog function, ie: if for some reason the main CPU gets stuck, the MCU will automatically detect it and restart the terminal. In other words, DRT27 never stops working.

The following electrical protections are provided:
- Reverse polarization of the input supply,
- Overvoltage of the input supply,
- Overcurrent,
- Transient voltage suppression,
- ESD protection on all connectors for all signals.

The overvoltage and the overcurrent protections consist of state-of-the-art high speed electronic circuits with precise activation threshold values. Upon violation of the ranges the equipment is being disconnected from the supply no later than 2 microseconds with consequent scanning for returning to the allowed ranges and in those cases DRT27 is being repowered.

DRT27 was designed and manufactured in entire compliance with the quality and manufacturing standards ISO9001:2008 and ISO9002. The product is provided with certificates for EMC, EMI, environmental tests (vibrations, impact, ingress, temperature). Each terminal is being exposed to 2 hours accelerated thorough tests - electromagnetic shocks, mechanical impacts, vibrations and temperature deviations. 24 hours long test of the above mentioned are carried out for %1 of the whole manufactured party.

DRT27 application software runs under a high level OS – Linux, with special countermeasures for unattended use. Along with the ready to use software, well documented development environment and SDK with reliable software libraries and modules are offered, allowing implementation of own software by the integrator companies. In case requested training is offered as well.

2. Application areas

Access control terminal with NFC reader

3. Specifications

OS	: Linux
CPU	: ARM Cortex A7, Single Core, 1.2GHz
RAM	: 128 B DDR RAM
System memory	: 4GB/8GB eMMC Flash Memory
SD Card support	: 1 slot supporting up to 64 GB micro SD cards
Real Time Clock	: With Li backup battery, 10 years maintenance free
Data Security	: SAM Interface – 1 SAM slots
Display	: 2 rows x16 characters monochrome dotmatrix LCD, LED Backlight
Audio	: piezoelectric buzzer
Indicators	: 2 x RGB LEDs
NFC Interface	: ISO14443A/B compliant, up to 6 cm reading distance
Communication	: 1 x 100 Mbps Ethernet : 1 x USB2.0 OTG : 1 x UART - RS-232
Digital Inputs	: 2 x digital input with optical isolation
Digital Outputs	: 2 x Digital Outputs (over-current protected),one relay + one MOSFET
Supply	: Operating Voltage: 9 ~ 36VDC, Max 4 Watt : Overvoltage and overcurrent protections
Dimensions	: 102 x 73 x 30 mm
Operating t°	: -20 Cº … + 60 Cº
IP grade	: IP65