

Dijital TANIMA Sistemleri

DRT43- NFC reader terminal

Web document



1. Overview

DRT43 is a smart Linux terminal with NFC and contactless card reader, 4.3" color TFT LCD, capacitive touch screen and a vast set of communication capabilities. It supports all parts of ISO14443A/B and ISO18092 (NFC).

DRT43 **areas of use** are as follows:

- Smart Access Control Terminal
- Payment Terminal for vending machines
- HMI terminal

Thanks to its integrated HMI peripherals (LCD, speaker, touch screen) DRT43 offers a convenient way for user interaction.

DRT43 integrates rich communication options, allowing for easy integration to other existing or new centralized systems.

DRT43 is housed in a special enclosure, manufactured from plastic material, highly resistive to vandalistic actions – impact, scratching, flaming. Instead of conventional mechanical buttons, prone to misuse, DRT43 incorporates capacitive touch panel with special tempered, very durable front glass, capable of withstanding scratching. DRT43 operates reliably even in harsh outdoor conditions down to -20C° and is IP65 rated for dust and water protection.

DRT43 incorporates a system control MCU (SysMCU) - 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. SysMCU 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, DRT43 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 of DRT43 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 DRT43 is being repowered.

DRT43 is designed and manufactured in full compliance with ISO9001:2008 and ISO9002 quality and manufacturing standards. 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.

DRT43 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

- Smart Access Control Terminal
- Payment Terminal for vending machines
- HMI terminal

3. Specifications

OS	: Linux
CPU	: ARM Cortex A7, Single Core, 1.2GHz
RAM	: 128GB 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	: 24 bits, 800x480pixels 4.3" TFT color LCD with white LED backlight, 400 nits
Touch Screen	:Capacitive Touch Screen
Audio	: 2W speaker
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 : 2 x UART - RS-232 : Wi-Fi (802.11n) : BT 4.0
Digital Inputs	: 2 x digital input with optical isolation
Digital Outputs	: 1 x Digital Outputs (Over-current protected)
Sensors	: Ambient Light Sensor : Temperature sensor, measures cabinet temp.
Supply	: Operating Voltage: 9 ~ 36VDC, Max 7 Watt : Overvoltage and overcurrent protections
Dimensions	: 150 x 110 x 30 mm
Operating t°	: -20 C° ... + 60 C°
IP grade	: IP65