User Manual

Access Touch 2.0

Version	Date	Author	Description
1.00	19.07.2010	Jpo	First version
1.01	21.12.2010	Jpo	FET output descriptions made clearer
1.02	04.02.2011	Jpo	Reset button added

Idesco Oy | Teknologiantie 9, FIN-90590 OULU | Tel +358 20 743 4175 | info@idesco.fi | www.idesco.fi

Idesco Oy | Teknologiantie 9, FIN-90590 OULU | Tel +358 20 743 4175 | info@idesco.fi | www.idesco.fi

1. Purpose of this user manual

The purpose of this manual is to guide you in installing Access Touch 2.0 screen terminal. After having completed the installation you can start creating your own customer specific applications with this multi-use device.

2. Description of Access Touch 2.0

Access Touch 2.0 is a touch screen terminal that:

- Enables you to manage a wireless identification system
- Can also be used as an independent control unit

Access Touch 2.0 consists of an integrated computer module and an RFID reader. It can be used for management of a wireless system or as an independent unit, for e.g. time and attendance, payment applications, alarm control or as an info screen, etc. Access Touch 2.0 operates on the Linux operating system, however Windows is also optional. Access Touch 2.0 includes a fully operating integrated computer on module with good performance offering a variety of options for different types of customised solutions. Access Touch 2.0 also has an integrated RFID reader unit, available with a variety of technologies in 125 kHz and 13,56 MHz frequencies. The device can manage wireless access control readers and wireless UHF readers, also offered by Idesco. The front panel is fully customisable to your needs. The device consists primarily of a screen module with embedded electronics and a back plate for installation.

3. Package content

- a fully integrated computer deploying Idesco Embedded Linux operating system or with Windows XP operating system
- an RFID reader unit with one of the following modules:
    1. Access 7 C, supporting the following technologies (for UID reading): Philips Mifare®, I-Code®, Inside PicoTag®and PicoPass®, HID iClass®, LEGIC Advant® and most of the existing and forthcoming ISO15693 tags like Tag-it®, ST, Fujitsu, Infineon etc.
    2. Access 8 CM t, supporting Mifare® technology with multi-application options
    3. Access 8 CD, supporting Mifare® DESfire multi-application options
    4. IR 6090B, supporting Idesco Microlog technology with read/write functions
    5. Other RFID reader modules available optionally
- Other optional equipment depending on specific order requirements:
    1. WLAN USB module
    2. Idesco Cardea USB-stick (for wireless communication).
    3. Additional SSD memory
    4. NOTE! Two additional USB ports available with default HW-configuration

4. Notes

- Handle the unit, especially the front cover, with care.
- Handle the electronics with care to avoid any electrostatic discharges
- Keep all sharp or pointed objects (pens, screwdrivers, etc.) away from touchscreen surface
- Use a soft towel when cleaning the front panel
- It is strongly recommended to deploy a power back up (UPS) in tandem with Access Touch 2.0

Idesco Oy | Teknologiantie 9, FIN-90590 OULU | Tel +358 20 743 4175 | info@idesco.fi | www.idesco.fi

5. Installation

NOTE! Power must be turned off from your VDC feeding device when making connections!

5.1. Installation, mechanics

Feed all necessary wires through the insert holes in the middle of the back cover (picture 1). Install the back cover to the wall using the four mounting tracks show below (picture 1).

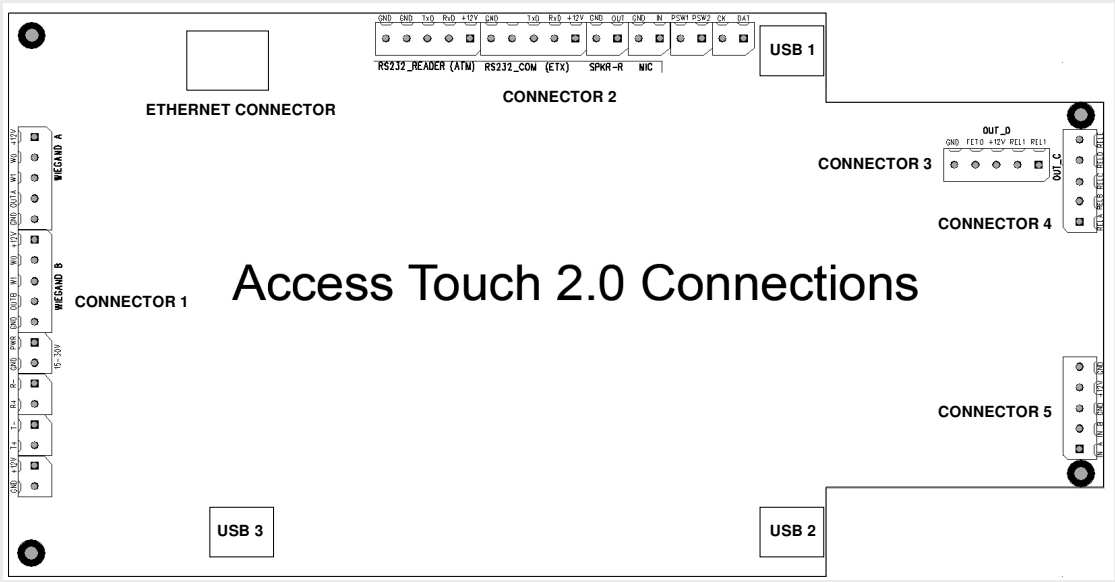
Picture 1: Note two cable egress ports provided in the middle of the back cover and the four mounting tracks provided in the corners

5.2. Installation, electronics

Connect all necessary wires to the Access Touch 2.0 PCB (e.g VDC, GND, Relay control…)

Follow diagram in picture 2 below for locating different connector hubs. Each connector's functions are described separately in the following chapters. **NOTE: It is highly recommended that you deploy an independent power supply as a backup in the event of power interruptions.**

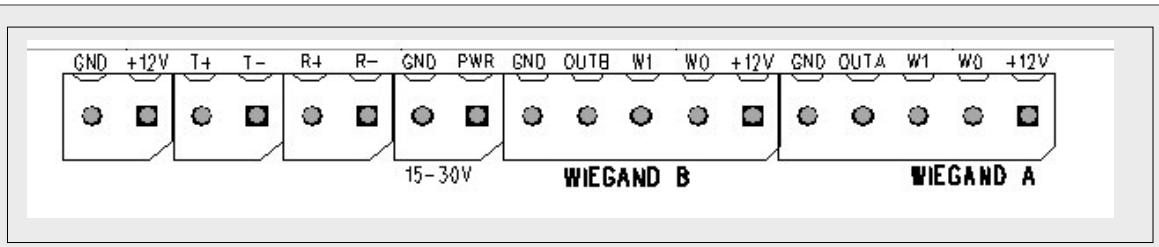
Idesco Oy | Teknologiantie 9, FIN-90590 OULU | Tel +358 20 743 4175 | info@idesco.fi | www.idesco.fi



Picture 2: Access Touch 2.0 connections

5.2.1. Connector 1

Connector 1 includes the power supply, RS485, and wiegand hubs



Picture 3: Connector 1

5.2.1.1. Power supply

Input voltage: 15...30 VDC

Power requirements / average current consumptions:

850 mA @ 15 VDC
520 mA @ 24 VDC
Choose a power supply that meets the above power requirements.

5.2.1.2. Wiegand hubs A and B

Two wiegand readers can be connected with the wiegand A and wiegand B hubs. Two open collector outputs OUT A and OUT B may be used for controlling wiegand reader inputs (e.g. reader LED control)

Idesco Oy | Teknologiantie 9, FIN-90590 OULU | Tel +358 20 743 4175 | info@idesco.fi | www.idesco.fi

Data from wiegand hubs is routed through the Access Touch 2.0 application controller. Consult the separate Access Touch 2.0 Protocol Description for wiegand output / input controls.

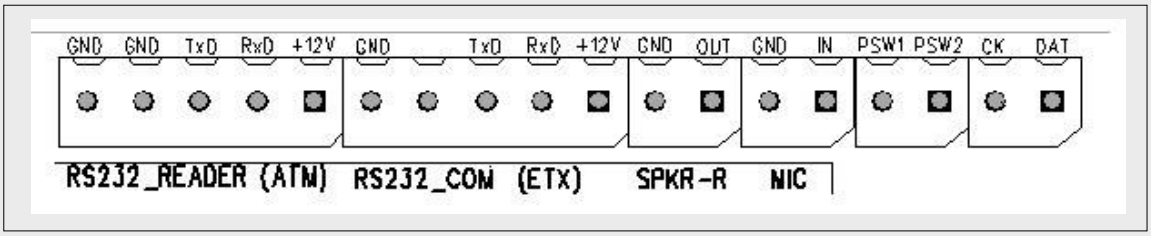
Port data is read through the **/dev/ttyS1** port in the Access Touch 2.0 Embedded Linux Operation System.

5.2.1.3. RS485

T+, T-, R+ and R- connectors are used for connecting RS485 readers to the Access Touch 2.0. **Note: An RS485 application control protocol must be implemented in the Access Touch 2.0 operating system for RS485 readers to be detected by the Access Touch 2.0.** For two wire RS485 usage connect T+ and R+ pair and T- and R- pair together.

5.2.2. Connector 2

Connector 2 includes the RS232, speaker, microphone, power switch and I2C connections.



Picture 4: Connector 2

5.2.2.1. RS232_Reader (ATM)

RS232 ATM connection may be used to connect RS232 devices to the Access Touch 2.0. **Note:** By default, any pre-installed Access Touch 2.0 internal reader uses this connection, Therefore you should connect devices to this port only after any internal reader has been disconnected from it.

Data from this RS232 connection routes through the Access Touch 2.0 application controller. Consult the separate Access Touch 2.0 Protocol Description for RS232 ATM device output.

Corresponding data routes through the **/dev/ttyS1** port in the Access Touch 2.0 Embedded Linux Operation System.

5.2.2.2. RS232_COM (ETX)

The RS232 ETX connection may be used when connecting a second RS232 device to the Access Touch 2.0. This connection may also be used if the primary RS232 ATM port is unavailable. This hub is connected directly to the ETX- e COM module.

Data from this connection may be routed through the **/dev/ttyS0** port in the Access Touch 2.0 Embedded Linux Operation System.

5.2.2.3. Speaker

A speaker may be attached using the SPKR- R connection. By default any built-in speaker also connects to this hub.

5.2.2.4. Microphone

Microphones can be connected via the MIC connection.

Idesco Oy | Teknologiantie 9, FIN-90590 OULU | Tel +358 20 743 4175 | info@idesco.fi | www.idesco.fi

5.2.2.5. Power switch

Access Touch 2.0 may be used in manual power on / off mode. In this mode Access Touch 2.0 is powered up by pressing the power button. Access Touch 2.0 can also be powered down by pressing the power button.

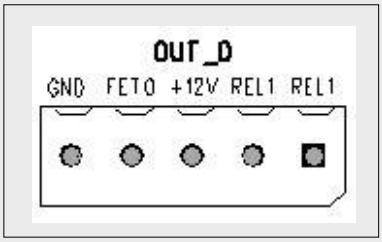
The Manual / automatic power mode is selected using Access Touch 2.0 DIP switches. Please contact Idesco for DIP settings.

5.2.2.6. I2C

Optional I2C interface may be used to connect external I2C devices to Access Touch 2.0. **Note: I2C devices require separate control software.**

5.2.3. Connector 3

Connector 3 includes OUT_D relay connections. GND and +12 VDC may be used as an external power source.



Picture 5: Connector 3

5.2.3.1. OUT_D relay control

OUT_D connections may be used to drive Access Touch relays. By default this connection is open and when an output command is sent to the application controller a relay can subsequently be controlled. See Access Touch 2.0 Protocol Description for relay control commands.

5.2.4. Connector 4

Connector 3 includes OUT_C relay connections.

5.2.4.1. OUT C relay control

OUT_C connections may be used to drive Access Touch relays.

OUT C relay functions:

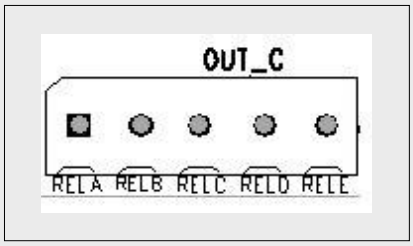
RELA and RELB: default closed

RELA and RELC: default open

RELD and RELE: default closed

See separate Access Touch 2.0 Protocol Description for output control command

Idesco Oy | Teknologiantie 9, FIN-90590 OULU | Tel +358 20 743 4175 | info@idesco.fi | www.idesco.fi



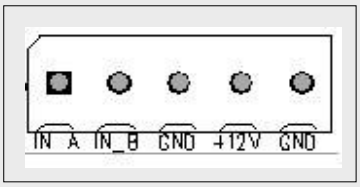
Picture 5: Connector 4

5.2.5. Connector 5

Connector 5 includes two general purpose inputs. GND and +12 VDC may be connected to an external power source.

By default these two inputs are in “high” state. Their state reverts to “low” upon being grounded.

Consult the separate Access Touch 2.0 Protocol Description for more information about these input controls.



Picture 6: Connector 5

5.2.6. Ethernet Connection

Access Touch 2.0 possesses one Ethernet connection. This device supports the 10 / 100 Mbit Ethernet protocol.

Consult picture 2 to locate the Ethernet connection.

5.2.7. USB Ports

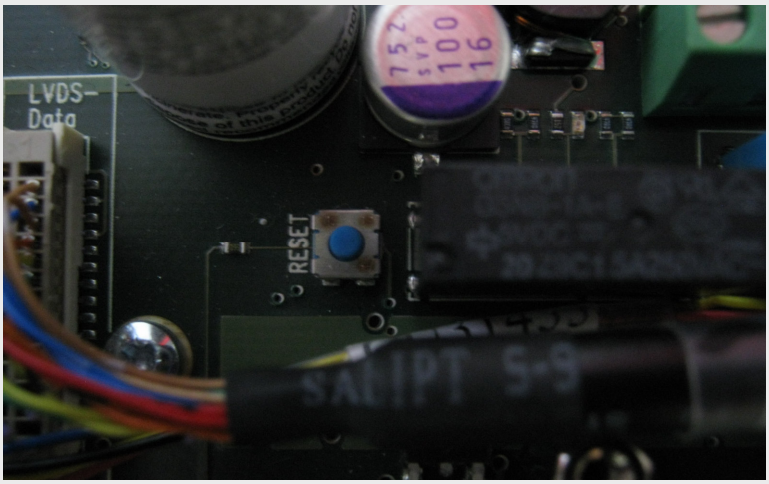
Access Touch 2.0 has two USB ports for external USB device connections. The available USB ports are located in the USB1 connector. USB2 is reserved for connecting a touch sensor. USB3 is not available.

See picture 2 in chapter 5.2 for USB connection locations.

Idesco Oy | Teknologiantie 9, FIN-90590 OULU | Tel +358 20 743 4175 | info@idesco.fi | www.idesco.fi

5.2.8. Reset button

Access Touch 2.0 has one reset button that can be used to shutdown the device without any shut-down procedures. Reset button can be used to force a shutdown.



Picture 7:Reset button

5.3. Mounting

After all connections have been completed, mount the front cover with the assembly plate to the back cover and lock it in place with four nuts in the corners (picture 7).

Picture 8:Front cover and assembly plate installation to the back cover

Idesco Oy | Teknologiantie 9, FIN-90590 OULU | Tel +358 20 743 4175 | info@idesco.fi | www.idesco.fi

5.4. Booting

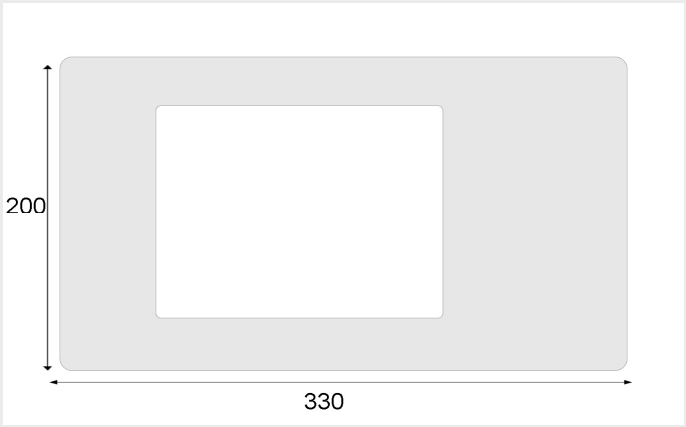
After all mechanical and electronic installations have been completed switch the power supply on. The computer will automatically initiate its boot routine.

Note that the power-up routine may differ depending upon whatever features may have been configured in the device. The device will initiate booting of the installed operating system if no such configurations have been made.

After the power-up routine completes your Access Touch 2.0 is ready for use.

6. Dimensions

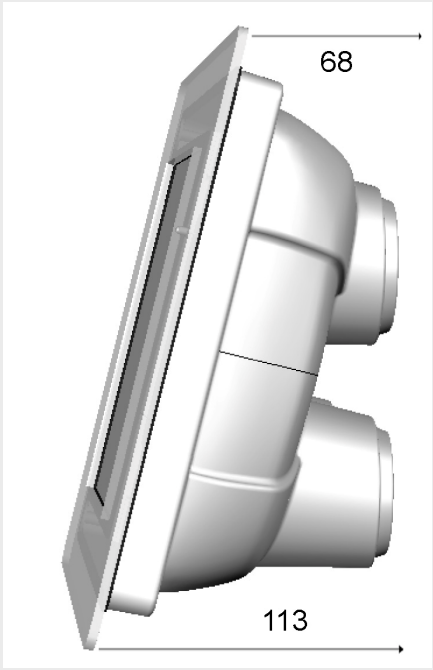
6.1. Front panel



Picture 9: Front panel measures in millimetres

Idesco Oy | Teknologiantie 9, FIN-90590 OULU | Tel +358 20 743 4175 | info@idesco.fi | www.idesco.fi

6.2. Side measures



Picture 10 : Side measures in millimetres

7. Technical data

Operating frequency for RFID / Wireless	RFID 125 KHz and 13,56 MHz. Wireless ommunication 2,4 GHz
Power supply	14 ... 30 VDC. Internal back- up capacitors for safe power down
CPU	Intel® Atom™ Z510 1.1 GHz. **Note: Access Touch 2.0 COM module is alterable to fit customer requirements. Contact Idesco Oy if you need default module to be changed.**
Current consumption	520 mA @ 24 VDC (when display on)
Memory	1GB internal flash memory for Linux OS 512 MB DDR2 on the module Separate SSD memory can be used for Windows OS installation. SSD must be ordered separately, not provided by default
Display and Touch Panel	8,4'' display and 5-wire resistive touch panel
Dimensions of housing	330 x 200 x 100 mm
Material of housing	Plastic
Installation method	Screws

Idesco Oy | Teknologiantie 9, FIN-90590 OULU | Tel +358 20 743 4175 | info@idesco.fi | www.idesco.fi

Protection class	IP20
Operational temperature range	-0 ... +50 ℃
Storage temperature range	-10 ... +50 ℃
Interfaces	RS232, Wiegand, Ethernet, RS485, Wireless (RF), USB (device)
Inputs	2 general purpose inputs
Outputs	Two software controlled outputs (open collector) Two software controlled relays
EMC	Emitted interference: EN 61000-6-4: 2001 Interference resistant: EN 61000-6-2: 2001
LED (for the RFID reader)	Red / Yellow LED.
Ethernet	10 / 100 Mbit LAN
Wireless communication	Optional WLAN or Idesco Cardea (IEEE 802.15.4)”

Idesco Oy | Teknologiantie 9, FIN-90590 OULU | Tel +358 20 743 4175 | info@idesco.fi | www.idesco.fi