Etheron Terminal

Etheron terminal provides fully integrated API emulation for Orb-Weaver based smart card, it is equiped with 3.2 inch LCD and touchscreen for human interface, USB port for communication with PC software, designated IO port for external device control.

Cloud integration are already provided to manage the terminal framework remotely, this kind of mechanism eliminate the need to update each terminal software manually, as well as managing each terminal remotely through our cloud service.

It also support integration with 3rd party devices, enabling integration between service and hardware, the use of Wi-Fi internet network instead of telecomunication network would eliminate unecessary operational cost while deliver the most sophisticated security.

Features

- 168Mhz ARM Cortex microprocessor with 192K RAM
- 3.2 inch, 64K colors LCD with touchscreen interface
- ISO7816-3 interface with T=0 and T=1 protocol
- ISO14443-A interface up to 104kbps
- IEEE802.11b/g/n max 66Mbps
- USB Full Speed communication for transaction control
- 3 Pin IO port with (1x UART, 3x IO port, 3x PWM port)
- Up to 36 hours operational time (2600mAh)
- Integrated real-time operating system with task monitoring
- Cloud integration, auto-sync terminal framework and application management
- Global Platform v2.2 for card application management
- Transaction automation through automaton, cloud integration, auto-sync NTP, firmware update
- Up to 64K user space application framework
- Changable screen orientation

External Interfaces

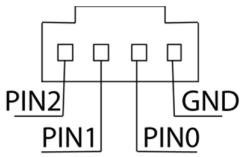
USB port

USB port can be connected to PC or external adapter (in-case of charging), use at minimum 500mA adapter for charging. USB also can be used to provide access to host computer, allowing transaction to be triggered from host computer, in-order to enable computer access, the host computer must install the specified driver.

Download Driver

IO Port

IO port consist of three pin, each pin can be configured differently depending on the installed framework. External device can be interfaced through IO port



Pin	Ext	Type	PWM (freq)
0	Rx	IO/Int/UART	10-1000Hz
1	Tx	IO/Int/UART	10-1000Hz
2	-	IO/Int	10-1000Hz

Electrical Characteristics

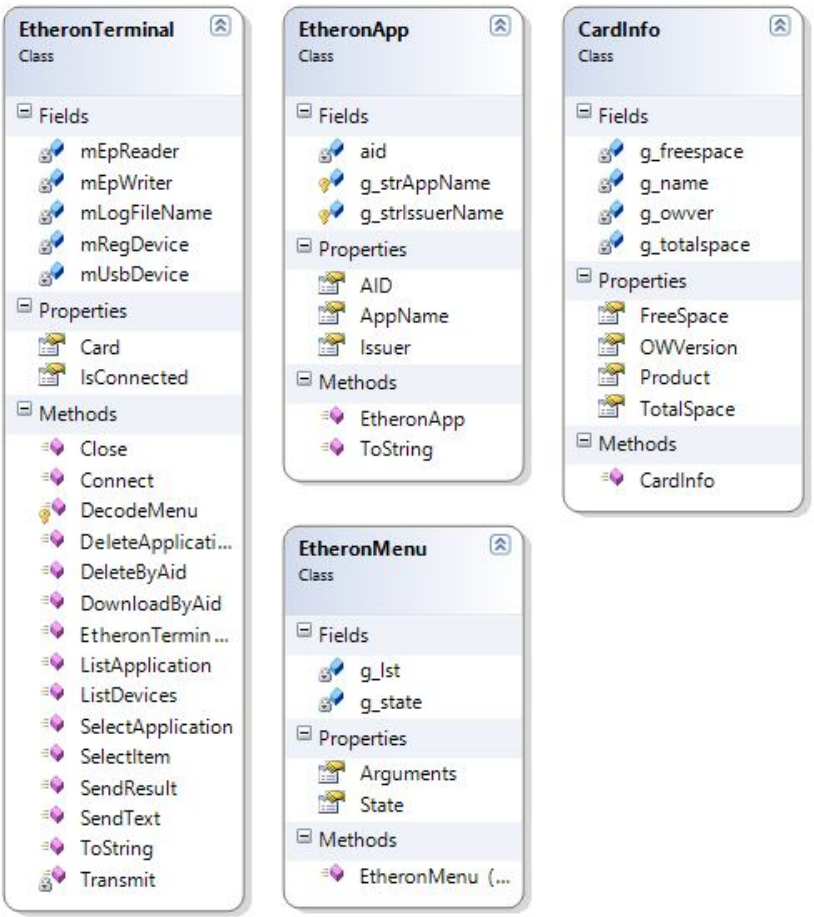
Name	Desc	Min	Typical	Max	Unit
Vusb	USB Input Voltage	4.5	5.0	5.5	V
Vin	Logic Voltage	3	3.3	3.6	V
Vout	Logic Voltage	3	3.3	3.6	V
Iusb	USB Input Current	0	400	480	mA
Istb	Standby Current	50	65	70	mA
Irun	Running Current	170	250	300	mA
Tr	Running Temperature	5	27	70	C

Installing Etheron Driver

Download Etheron Interface Driver zip file from www.orbleaf.com (same way as **Organ Studio > Connecting with Etheron Terminal)**, extract to directory any directory and execute the installer (depending on your system, an x86 for 32 bit or x64 for 64 bit operating system), the driver already tested to works with Microsoft Windows 8.1 (you might need to disable device driver enforcement check if necessary), once the driver installed, you can start connecting any Etheron Terminal.

Accessing Etheron Terminal

Before accessing Etheron Terminal, you must install the driver first, a library for accessing Etheron Terminal already available as Organ Studio Module, simply go to modules directory of Organ Studio installation and find EtheronNet.dll, you can start accessing any Etheron Terminal using Microsoft Visual Studio, EtheronNet and Etheron driver are based on LibUSB project.



Using Microsoft Visual Studio To Access Etheron Terminal

EtheronTerminal.ListDevices()

use static method ListDevices() from EtheronTerminal class to list all connected Etheron Terminal, ListDevice() would return all available devices in array of EtheronTerminal, use connect method on each EtheronTerminal instance to start connecting.

ListApplication()

after the terminal has been successfully connected, use ListApplication() method to list available card application on terminal (the card must be inserted first), once all application has been listed, you can start selecting application through SelectApplication() method.