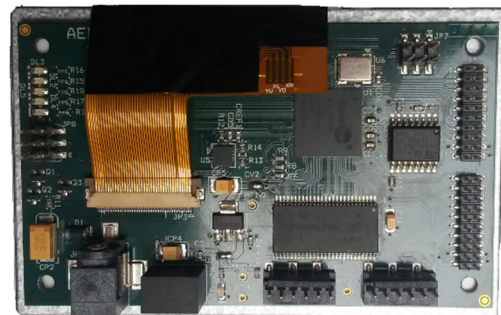




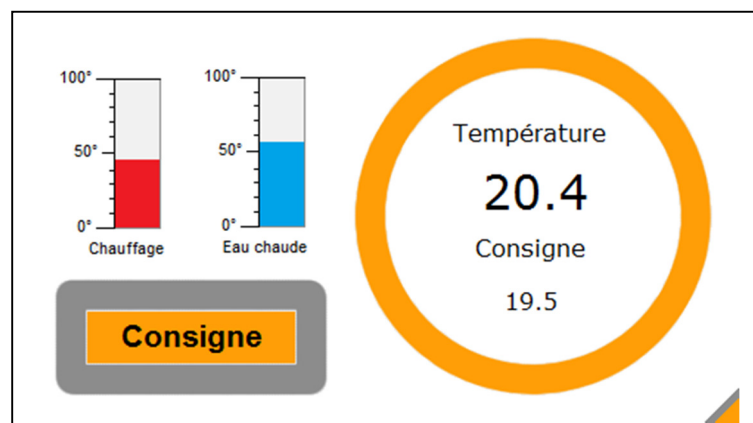
BorneoIce is a ready-to-use solution which allows to connect an equipment or a machine to a 4.3 " color touch screen. BorneoICE allows to conceive quickly and easily a Graphic Man Machine Interface (Graphic User Interface (GUI)) on a color screen, but also, to program the whole system: sensors, engines and state machine.



The main goals of Borneo are:

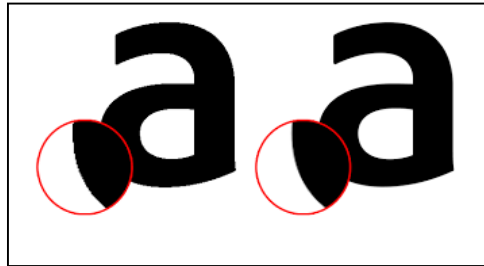
- Provide the simplest product. It is ready-to-use without any configuration. You only have to program your own application. Its simplicity allows to create quickly functional prototypes.
- Provide inputs/outputs to connect all kind of sensors (temperature, pressure ...) in order to be connected to equipment.
- Provide an efficient graphic interface to display clearly a large range of data: numeric, text, curves, images, graphs, etc. It is also important to control a lot of parameters.
- Provide serial communication link to connect to communication modules: Bluetooth, wifi, USB, etc.
- Provides low power consumption in order to be integrated in portable or 24/24/7/7 equipment.

BorneoIce doesn't need operating system and is programmed in JAVA with the Eclipse framework. The JAVA language is very well suited for embedded application which need robustness and security. It basically provides most needed programming mechanisms such as Threads, Garbage Collector,



Exception, Objects ... The 32 bits processor is able to execute complex algorithms and doesn't need extra CPU to execute most of industrial processes.

BorneoIce is able to display antialiased fonts in order to provide the best graphic user interface. The Borneo system allows to write robust applications and is already used in several 24/24/7/7 equipment and "critical" applications.



Hardware features :

- controller BorneoICE (32 bits JAVA processor)
- FPGA Technology ICE40 (40 nm) Lattice Semiconductor
- 28 inputs/outputs TTL 3.3V programmable as : GPIO, I2C and SPI
- 1 Uart RS232 TTL/USB FTDI
- 1 Uart RS232 TTL/RS422/RS485
- 2 CAN 12 bits
- 2 PWM (12 bits)
- Temperature sensor
- 32 Mo SDRAM
- 8 Mo FLASH memory
- 4.3" Touch TFT color screen
- PWM driven BackLight
- Consumption:
 - o 320 mW (screen off)
 - o 720 mW (screen on).
- Power : 24 Volts
- Dimensions : 105 x 68 x 18 (mm)

Software features :

- Programmation language : JAVA
- Programmation framework : Eclipse
- Hardware Java Virtual Machine for fast execution
- Embedded librairies :
 - o Graphics
 - o remote application update
 - o embedded communication (SPI/I2C/UART)
 - o GPIO/PWM
 - o Data recording
- Anti-Aliased fonts (256 alpha levels)
- Multi-Thread Round-Robin
- Customizable Boot screen : image or animation
- Secured execution

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