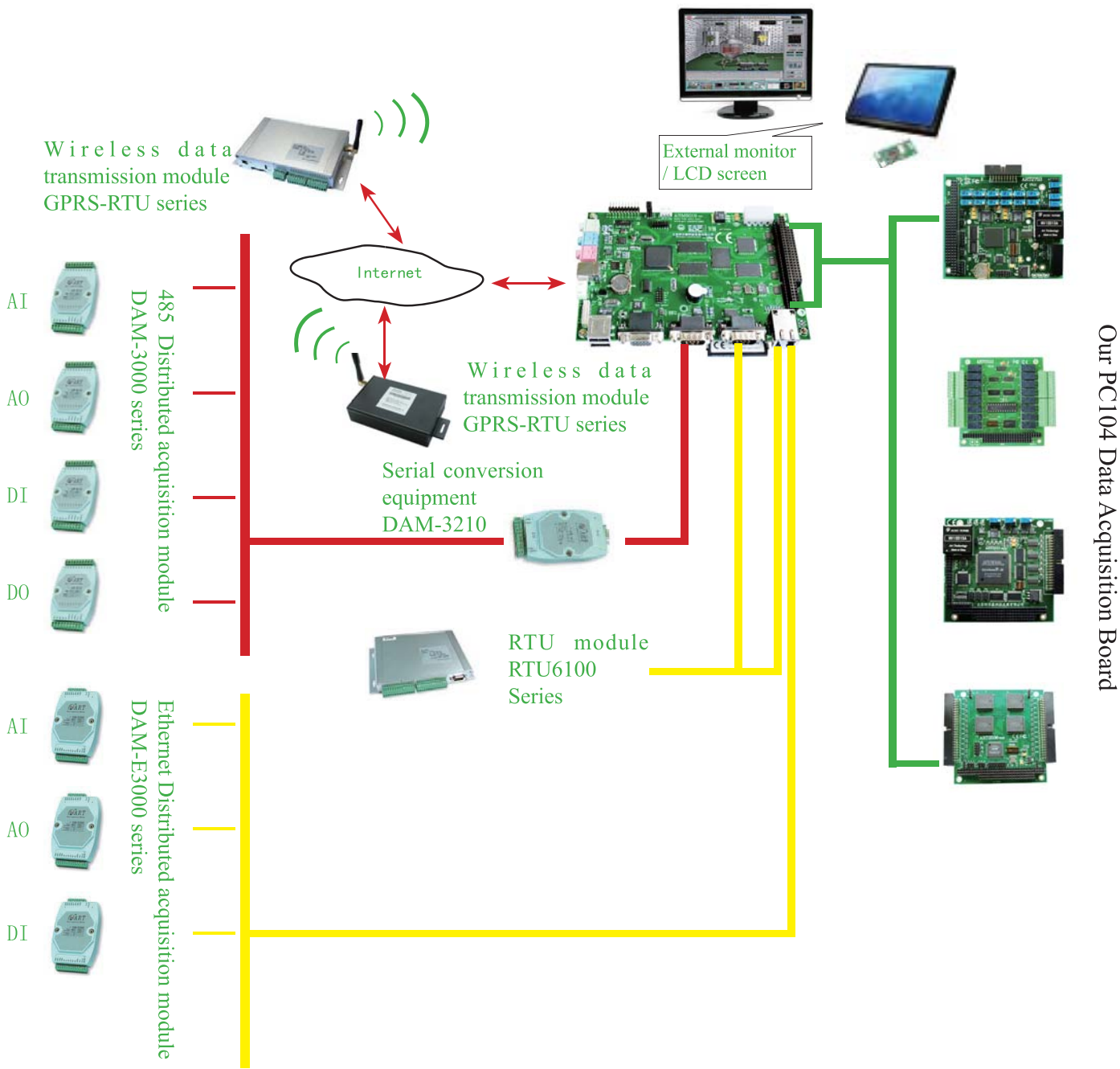
Embedded motherboard data acquisition and control system applications

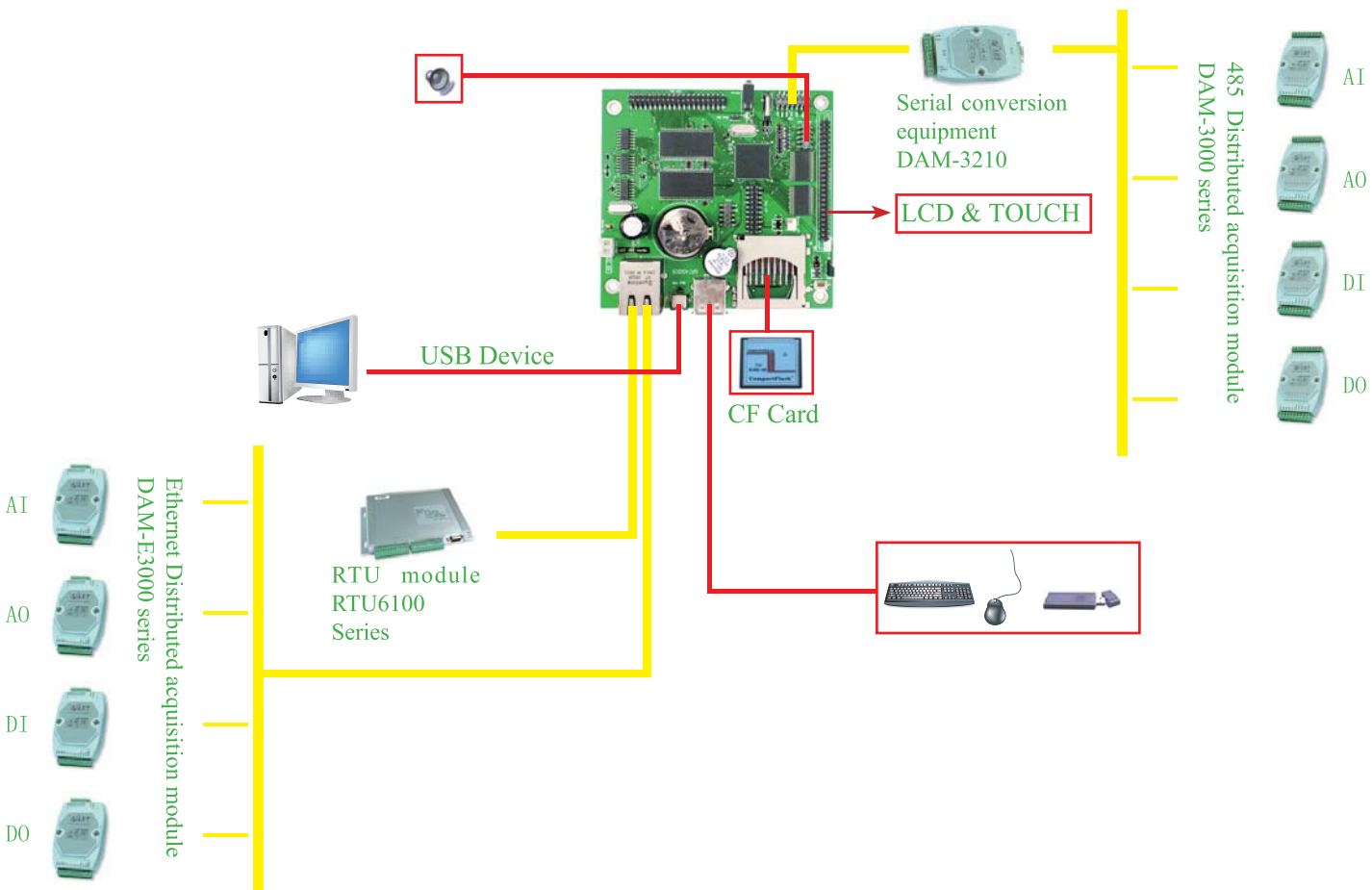
Embedded motherboard with the on-board serial ports, Ethernet port and other functions, together with good human-computer interface, can quickly build a field bus control system. With 10/100M Ethernet interface, the system can expediently access to the information management layer of the enterprise, realization of the local monitoring and remote monitoring in real-time; we can also use the Ethernet characteristics of high transmission rate, as a terminal management unit, connect the Ethernet acquisition module and RS485/232 acquisition module; multi-serial on-line equipment; loading PC104 data acquisition to achieve filed signal acquisition and real-time monitoring.

ART provides more reliable, stable, convenient, and efficient industrial products for you.



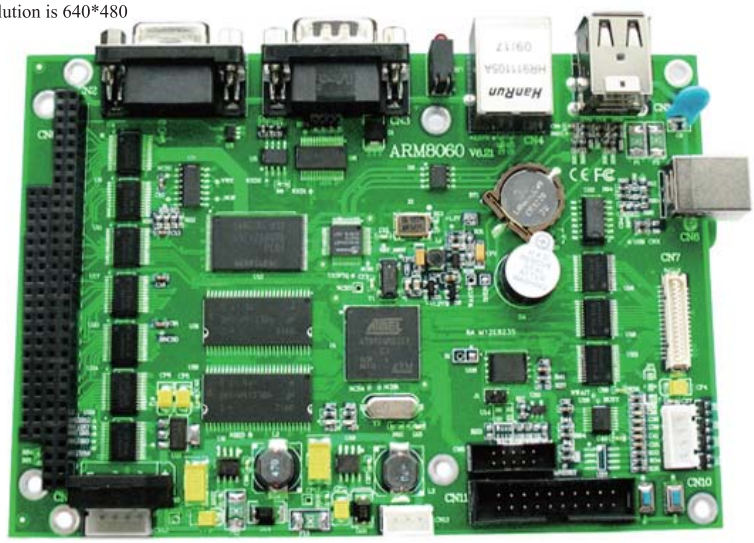
ARM8008 Industrial Motherboard (ARM 9 processor)

※ Operation system: WinCE4.2, Linux2.4 OS, and other driver programs interface under two operating system
※ CPU: SAMSUNG S3C2410 processor
Operating Frequency: 203MHz
※ SDRAM: 64MB
※ NAND FLASH: 64MB
※ LCD: Support DSTN and TFT LCD (16/256/4K/64K color)
※ Touch screen: 4-wire Resistive Touch Screen
※ USB HOST: support USB keyboard, mouse, U disk and USB camera
※ USB DEVICE: support the data communications between PC and motherboard
※ SD Card: support SD/MMC Card, capacity up to 2G
※ Serial: support three standard RS-232 communication interfaces
※ Ethernet: support standard TCP/IP protocol, 10M Ethernet port, CS8900A, with connectivity and transmission indicator light
※ Keyboard: 20-pin scanning keyboard
※ Audio: support multimedia voice
※ JTAG: 10-pin interface, support writing and debugging program
※ Clock: built-in RTC chip, get the power from back-up Li-ion battery
※ Expansion bus: 40-pin expansion bus, 16-bit data width and 6-bit address width
※ Power: 5V, 500mA, single DC power supply



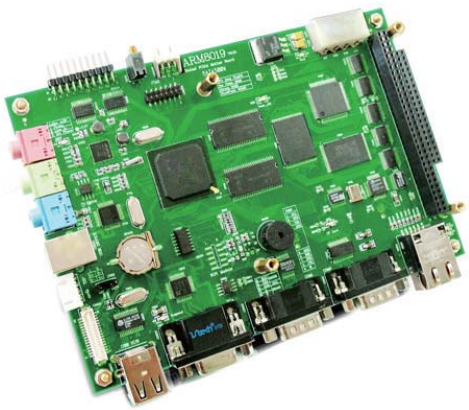
ARM8060 (AT91RM9261 processor)

※ CPU: Atmel AT91SAM9261
Operating Frequency Range: 550Hz~200MHz
※ SDRAM: Industrial grade 64MB SDRAM
※ Solid State Memory
NorFlash: 4MB
NandFlash: 256MB
※ Display System
Interface for LCD: Supports TFT Liquid Crystal Screen, the highest resolution is 640*480
Interface for Touch Screen: Supports 4-line Resistance Touch Screen
※ Communication Interface:
RS232 Serial port: 1x 5-line serial port, baud rate-- 921.6Kbps
Debugging Serial port: 1x 3-line serial port, baud rate—115200 Kbps
Interface for RS485: 1xIndustrial Grade standard RS485
USB HOST: 2x USB2.0, baud rate-- 12Mbps
USB Device: 1x USB2.0, baud rate-- 12Mbps
Ethernet: one, 10M/100Mbps Self-adaptive
※ Power Interface: 12~36VDC
※ Other Device:
1 x DC buzzer
3 x LED
Independent Watchdog Timer
General- Purpose I/O
※ Techniques Characteristic
※ 6 layer PCB Design, high stability, anti-interference
※ Operation Temperature
Operation Temperature: -10°C ~+60°C
Storage temperature: -20 °C ~ +70 °C



ARM8019 (Intel PXA270 processor, support PC104 bus expansion)

※ CPU: Intel XScale series PXA270
Operating Frequency Range: 104MHz~520MHz
Basic Frequency: 520MHz
Power consumption: 750mW
※ SDRAM: Industrial grade 64MB PC133 SDRAM
※ Solid State Memory
NorFlash: 32MB (Intel StrataFlashMemory)
NandFlash: 256MB (Samsung NandFlash Memory)
CF Card: 256MB~1GB (TrueIDE Mode)
※ Display System
Interface for LCD: Supports both DSTN and TFT Liquid Crystal Screen, the highest resolution is 800*600
Interface for VGA: Supports CRT Display with external VGA connector, the resolution is 800*600
※ Audio System
Interface for AC97: Phone x 1, Line In x 1, MIC x 1
Interface for Touch Screen: Supports 4-line Resistance Touch Screen
※ Communication Interface:
RS232 Serial port: 1x 3-line serial port, baud rate-- 921.6Kbps
Full-function Serial port: 1x9-line serial port, baud rate-- 921.6Kbps
Interface for RS485: 1xIndustrial Grade standard RS485
USB HOST: 2x USB2.0, baud rate-- 12Mbps
USB Client: 1x USB2.0, baud rate-- 12Mbps
Ethernet: Ethernet Controller, Industrial Grade chip, 10M/100Mbps Self-adaptive, 1 x RJ-45 Ethernet port
WLAN: 1 x Extension of wireless LAN card 802.11b/g (choice)
※ PC104 Bus: Extended PC104 Bus
※ Other Device:
1 x DC buzzer
2 x LED
RTC and Backup Battery
Independent Watchdog Timer
General- Purpose I/O, 8 cache digital input/output (5V)
JTAG Debug Interface
※ Techniques Characteristic
6 layer PCB Design, high stability, anti-interference
※ Operation Temperature
Industrial Grade Operation Temperature: -10°C ~+60°C



ARM8020 (ARM 10 processor)

※ CPU: Intel XScal series PXA270 processor
Operating frequency range: 104MHz~520MHz
Main frequency: 520MHz
Power dissipation: 750mW
※ SDRAM: 64MB
※ Solid State Memory
NorFlash: 32MB（Intel StrataFlash Memory）
NandFlash: 256MB（Samsung NandFlash Memory）
CF Card: 256MB~8GB（TrueIDE Mode）
※ Display System
LCD interface: Support DSTN and TFT LCD with RGB interface (Maximum Resolution 800*600)
VGA interface: Can accessed by an ordinary computer monitor (Resolution 800*600)
※ Audio System
AC97 audio interface: Phone*1, Line*1, MIC*1
Interface for Touch Screen: Supports 4-line Resistance Touch Screen
※ Communication Interface
RS232 serial port: one three-wire serial, baud rate up to 921.6Kbps
Full-function serial: one nine-wire serial, baud rate up to 921.6Kbps
RS485 serial port: one industry standard RS485 interface
USB Host: two (USB2.0), baud rate up to 12Mbps
USB Client: one (USB2.0), baud rate up to 12Mbps
Ethernet: one, industry-on-chip, 10M/100Mbps adaptive
CAN Bus: two (CAN2.0A/B)
※ Other Device
DC buzzer: one
LED lights: two
RTC backup battery
Independent watchdog timer
General purpose I/O: 8 DI/O
JTAG Debug Interface
※ Techniques Characteristic: 6 layer PCB design, high stability
※ Operation Temperature: -10 °C~ +60 °C

ARM8603 (AT91SAM9263 processor)

※ CPU: Atmel AT91SAM9263 processor
Operating Frequency: 200MHz
※ System Memory:
DATAFlash: 4MB
SDRAM: 64MB (32-bit)
NandFlash: 256MB
IDE Interface: one
CF Card: 256MB~8GB (TrueIDE Mode)
SD Card: support SD/MMC card that up to 2GB
※ Display System
Interface for LCD: Support TFT Liquid Crystal Screen, the highest resolution is 800*600
Interface for VGA: Supports CRT Display with external VGA connector, the resolution is 800*600
※ Communication Interface:
Debugging Serial port: 1x 3-wire serial port, baud rate—115200 Kbps
RS232 Serial port: 2x3-wire serial port,
1x5-wire serial port,
2x9-wire full-function serial port
Interface for RS485: 2xIndustrial Grade standard RS485
CAN Bus: two (CAN2.0A/B)
SPI: one
USB HOST: 2x USB2.0
USB Client: 1x USB2.0
※ Ethernet: one, 10M/100Mbps Self-adaptive
※ Audio System
Interface for AC97: Phone x 1, Line In x 1, MIC x 1
※ Power Interface: 12~36VDC
※ Other Device:
1 x DC buzzer
5 x LED
RTC and Backup Battery
JTAG Debug Interface
One reset button
※ Techniques Characteristic
6 layer PCB Design, high stability, anti-interference
※ Operation Temperature
Operation Temperature: -10°C ~+60°C
Storage temperature: -20 °C ~ +75 °C