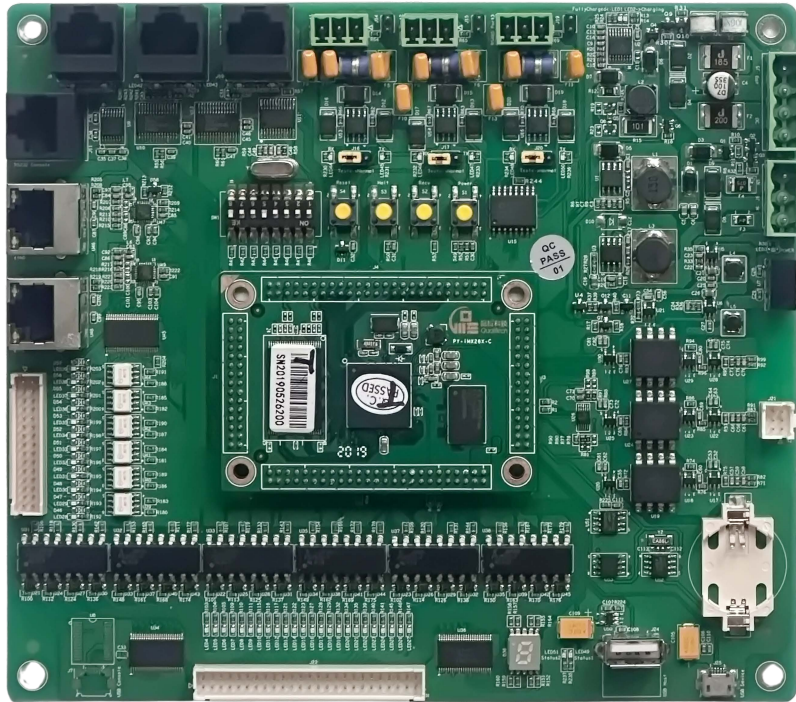
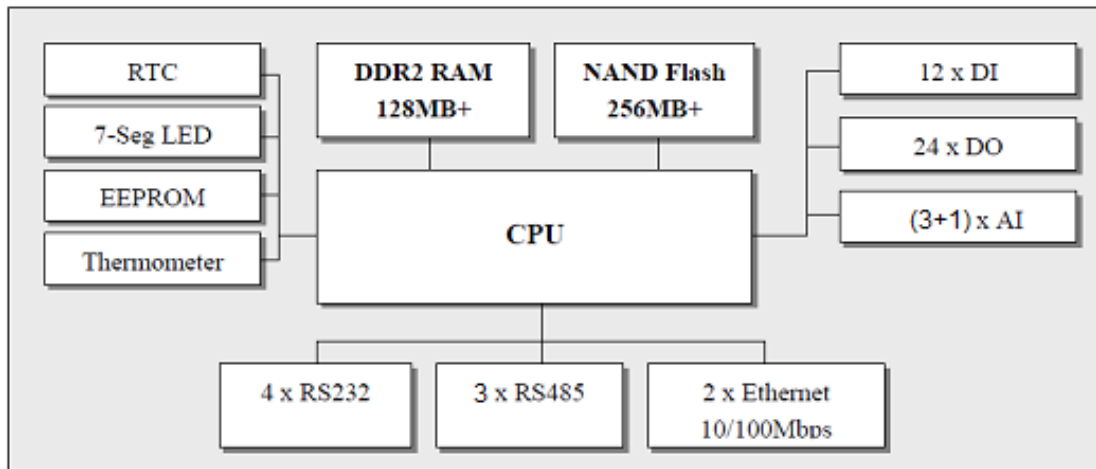


R5500E BOARD



The Qualitech R5500E is the processor card that can be used as a single board RTU with all the features needed for critical remote monitoring applications. It is a flexible controller complete with analog input, digital I/O, serial and Ethernet communication. Qualitech RTU 5500E has the following features:

- High performance RISC-based processor
- 4 RS-232 compliant ports (1xconsole, 1x9-line, 1x3-line, 1x5-line)
- 3 half-duplex RS485 ports with LED indication (1 isolation and 2 non-Isolations)
- 2 10/100Mbit Base Ethernet ports with LED indication
- CPU status indication (7 segments LED)
- Backup battery for Real Time Clock (RTC)
- On-board temperature status
- On-board EEPROM
- On-board AC and battery status
- Built-in I/O with:
 - 24 Digital Input points
 - 12 Digital Output points
 - (3+1) Analog Input points
- 8 on-board dip switches
- Support additional I/Os through multiple communication ports



Special Features

Powerful RISC Processor

Qualitech R5500E uses Freescale high performance ARM9 processor i.MX287 running at 454Mhz.

It has a minimum of 128Mbytes DDR2 at 200MHz and 256Mbytes NAND MLC flash, powerful enough to store and run real-time demanding applications. It runs on Linux 3.18 kernel OS, a proven solution for embedded applications.

Flexible Communications

Qualitech 5500E has a wide range of communication ports consisting of RS-232, RS-485 and Ethernet interfaces. With the high count of communication ports, it enables Qualitech R5500E to communicate with many devices at the same time.

With optional software modules supporting different communication protocols such as MODBUS, IEC 60870-5-101 and DNP3 communication protocols, Qualitech 5500E can offer flexible communication options to connect to different devices and network infrastructures.

System Health Monitoring

Qualitech 5500E has a number of special System monitoring devices, which allow the user to monitor the system's behaviour and enhance its maintenance. The card contains a digital thermometer to monitor the board and processor temperature. Fail-safe operations are provided by a watchdog timer.

Built-in I/O

Qualitech R5500E comes with built-in I/Os in the combination of 24 Digital Input points, 12 Digital Output points and (3+1) Analog Input points. For low I/O count, Qualitech R5500E can act as a single board solution.

TECHNICAL SPECIFICATIONS

Board Size

Length: 180mm
Width: 160mm
Depth: 22mm

Mounting

Type: Plate-mounted

Microprocessor

Processor: i.MX287 ARM926E
Clock Frequency: 454MHz
On-chip Cache: 16KB/32KB

Memory

Main Memory: DDR2 SDRAM with 200MHz BUS
Capacity: 128MB
Data Width: 32-bit
L2 Cache: Not available

FLASH Memory

Capacity: 256MB
Data Width: 8-bit

SRAM

Capacity: 128KB (On Chip)

EEPROM

Capacity: 4K Bytes

Ethernet Interface

Phy: LAN8720A
Number of Ports: 2
Speed: 10 Base-T / 100 Base-T
Connector: 8-pin standard RJ-45

I/O

Digital Input: 24 x Opto-isolated dry contact
Digital Output: 12 x Opto-isolated open-collector
Analog Input: (3+1) x Voltage input or current input
(3 x Opto-isolated, 1 x non-isolated).

Asynchronous Serial Port

Controller: On-Chip
Number of Ports: 4
Configuration: EIA-232-DCE/DTE
Max. Baud Rate: 115.2Kbps
Connector: 10-pin RJ-45

Controller: On-Chip
Ports: 3 (1 Isolated, 2 non-Isolated)
Configuration: RS-485
Std. Baud Rate: 115.2K
Connector: Pheonix Connector

On-board Peripherals

Temperature sensor
Watch-dog timer
Reset & Halt button
AC & Battery status monitor
Real Time Clock
7 Segment LED Status Indicator

Power Requirements

Voltage Range: +18V to +28V
Power Consumption: <10W (AC, maximum)
Power Consumption: <6W (Battery, maximum)

Operating System

Embedded Linux Kernel 3.18

Technical Support

Qualitech Technology Pte Ltd

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<http://www.qualitech-cn.com>