RTP Corp.

PRODUCT HIGHLIGHTS

- **Multi-Processor Architecture**
- **Supports Single, Dual, Triple, and Quad Redundancy**
- **Four Independent 1 GB Ports**
- **Intel Atom CPU @ 1.33 GHz**
- **512 Mbytes SDRAM**
- **Temperature Monitor**
- **LED Status Indicators**
- **Supports Modbus TCP communication**
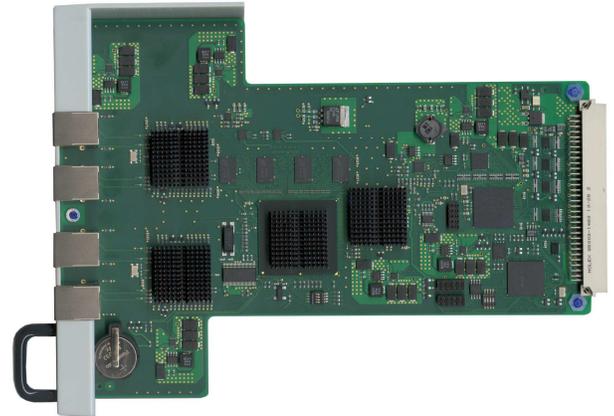
3201 Node/Chassis Processor Card

PRODUCT OVERVIEW

The 3201 Node/Chassis Processor Card is the core component to a RTP 3000 TAS N+ systems. It provides a central location for all communication within the system, including I/O communications, communications to other nodes within the domain, nodes in other domains, and MODBUS TCP communications.

The 3201 Processor utilizes a multi-processor (CPU) architecture. The CPU's work in parallel, each performing a specific function. At the core, is an Intel® ATOM™ Processor. Two CPUs is dedicated to communication tasks. These CPUs are purpose-built microprocessors that check every message received to determine its intended destination.

Once the first CPUs have performed error checking, they send a message to the next CPU via direct memory access (DMA) for later use. This CPU is a very fast general purpose microprocessor. It is capable of very fast floating point math and hyper-threading. Once it has completed all its calculations, it queues the message for the first CPU to dispatch.

The third CPU on the 3201 Processor is another purpose built microprocessor dedicated to I/O communication within the chassis. This CPU provides time stamping of SOE and Alarms to a 1 millisecond resolution.

This unique architecture permits the 3201 Processor to perform extensive diagnostics every scan and execute 1 millisecond scan rates. Each time you add a chassis you add another 3201 Processor and distribute the application to each chassis.

The 3201 Processor can be configured to operate in a single, dual, triple, or quad redundant architecture. Redundant Processors can be located in separate chassis preventing the possibility that a single physical event would take out the system.

RTP is the Best Technology for Your Investment,
Here's why:
This product is compatible with the RTP 3000 TAS N+ systems. It is a multi-processor architecture that delivers exceptional Performance and Comprehensive Diagnostics. The results speak for themselves: A reaction time of 7 msec, true 1 msec SOE (Analog and Digital), an MBTF of greater than 50,000 years an MTTFS of greater than 60,000 years, and a PFDavg of 5×10^{-5}. *Compare these numbers to any other system.*
Built-in proof test diagnostics means it will never be necessary to shut down at the proof test interval. Unlimited online downloads of logic and configuration changes do not require a periodic shut down like other systems. *Compare this functionality to any other system.*
NetSuite Software: One-time price includes unlimited use of Logic Development, Alarm Manager, Data Archive and Historian and HMI without hardware or software keys. *Compare this functionality and price to all other systems.*
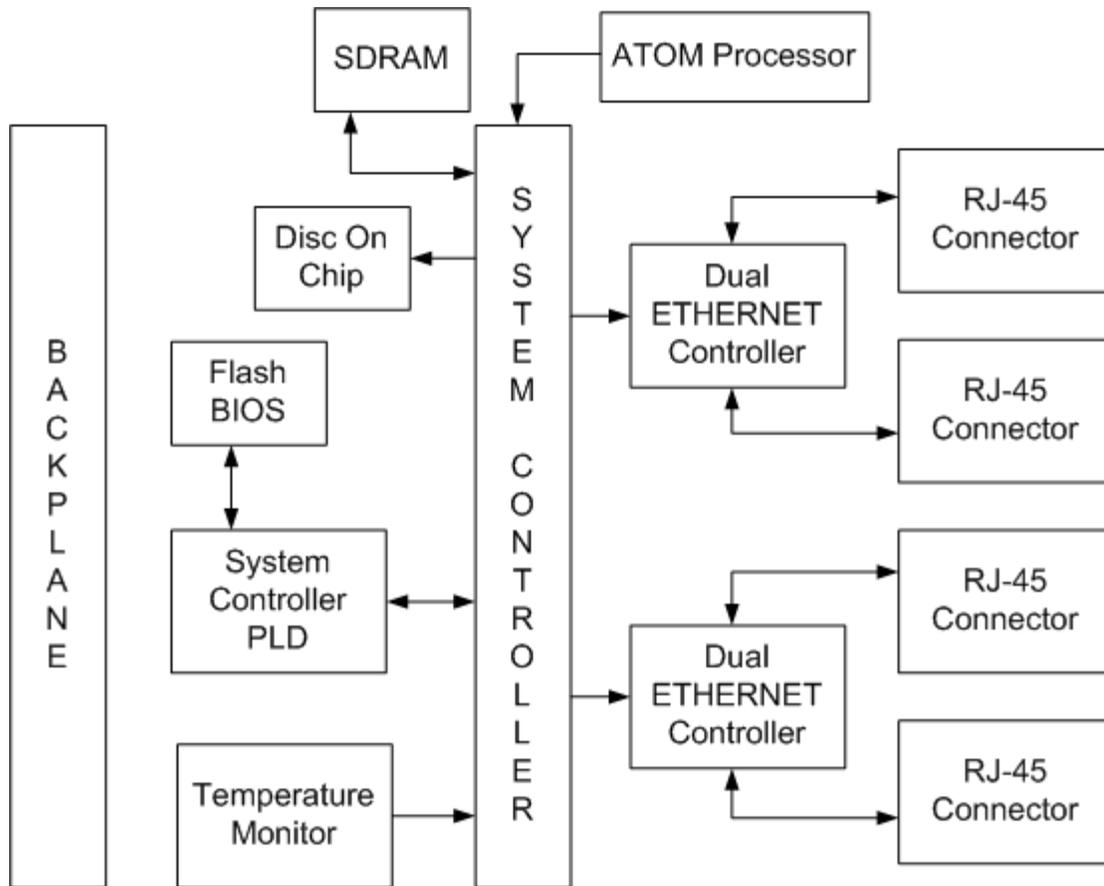Finally, a Safety Instrumented System (SIS) should always take the process it protects to a safe state when it is required to do so, and it should never interfere with the operation of the process at the time. *The RTP 3000 TAS N+ does this better than any other system.*

Built-in, comprehensive proof test software performs the proof test diagnostics. When the Node Processor is online, the proof test diagnostics run continuously without interrupting the system and verify the comprehensive diagnostics are at work and the readiness of the system to detect a failure.

LED's on the Node Processors front panel indicate whether the card has power and provide an indication of the system health and redundancy status.

Convenient communication ports are provided by four 1GB RJ-45 connectors that accept standard Ethernet cables. The ports have dedicated functions. The top port is for host, peer-to-peer, and MODBUS TCP communications. The second port is for InterLink. The bottom two ports are used for I/O communications and to pass variables between nodes within a domain.

The 3201 Processor card's "hot swappable" design allows it to be plugged into or removed from a live RTP chassis.

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