

delivered with a modem pre-installed). For additional details, please refer to the attached schematic diagrams.

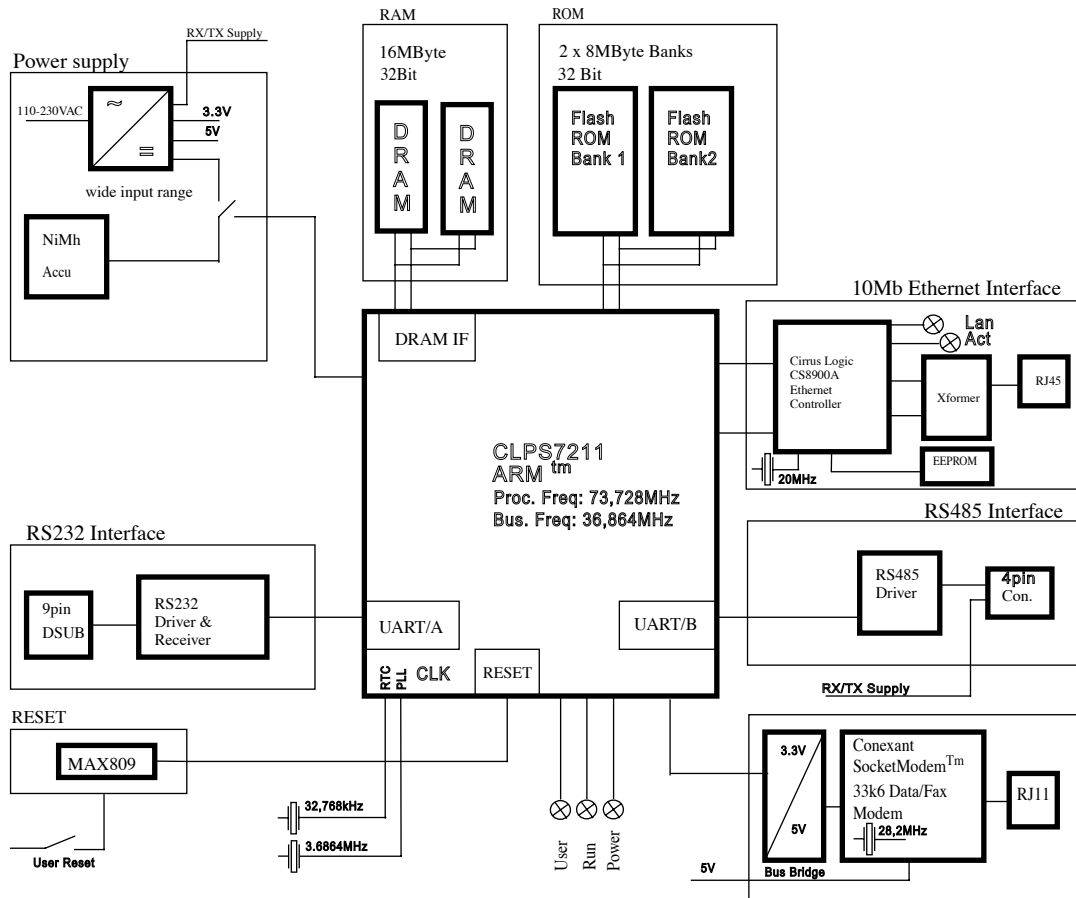


Figure 1. A840 Telemetry Gateway Block Diagram

1.2.1. Power Supply

The mains voltage (100-240V~) is converted to 12V/0.42ADC via the AC/DC converter PS1 (see also the Figure 4 on page 14). The 12V supply is used to charge the NiMH battery via Q1 and R2 in standard charge mode and via R1 and R2 in trickle charge mode. The battery voltage is measured via ADC U1. To prevent deep discharging of the battery, the power supply can be completely shut down via PORT PD7. Also the external communication unit can be shut off via PORT PD3. Once a complete shutdown has occurred, the system wakes up only when the mains input voltage is re-applied.

The DC/DC converter U3 is used to provide the 3.3V system voltage. The CPU core voltage is provided by U9, a 2.5V low drop-out series voltage regulator. The 3.3V supply is monitored by U4, which releases the POR line at least 140ms after Vcc is