64PW2

VMEbus TWO PWM SERVO AMPLIFIERS with one RS-422 serial data link

MOTHERBOARD MANUAL

64PW2 MOTHERBOARD MANUAL

VMEbus TWO PWM SERVO AMPLIFIERS with one RS-422 serial data link

FEATURES:

- 5.0 A max. continuous; 8.5 A peak (per channel).
- Continuous background bit testing

SAFETY FEATURES:

Interrupts and Status monitoring for the following:

- Over-current condition
- Supply over-voltage condition
- Supply under-voltage condition
- Over temperature condition for PWM card
- Over temperature condition for Power Supply card
- VMEbus watchdog timer
- RS-422 SDLC watchdog timer
- Master Drive Enable

DESCRIPTION:

This conduction cooled card incorporates two bi-directional PWM amplifiers that drive brush-type DC motors. The amplifiers can be set for either current or voltage control via the VMEbus. Actual motor control is done with the on-board RS-422 serial data link. The required 65V DC power for the amplifiers is supplied by an external power supply module that is controlled via a pulse train generated by this card. **The motor drive power is opto-isolated from VME power**.

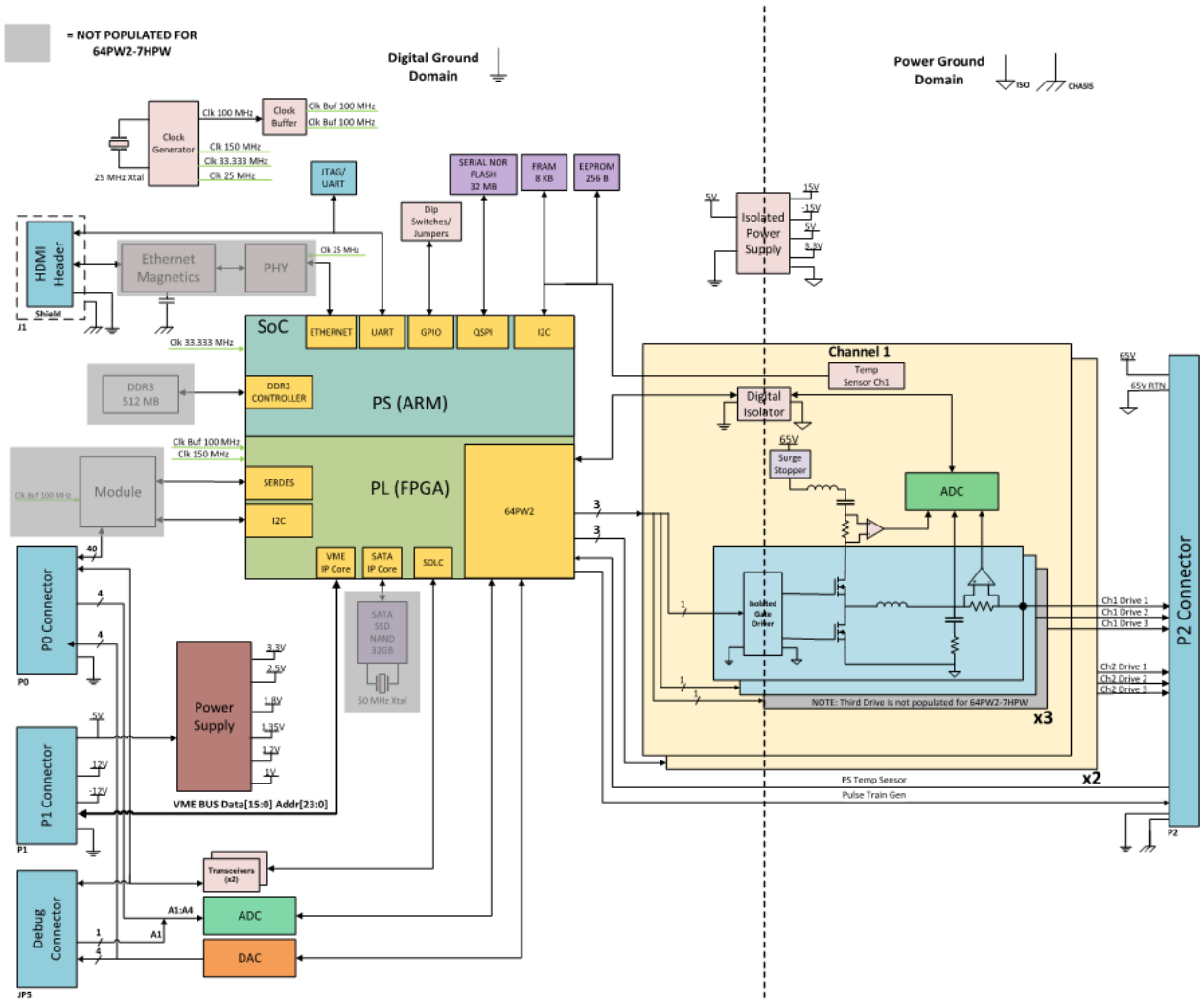
Major diagnostics are incorporated to offer substantial improvements to system reliability. These diagnostics alert the user to malfunctions as they occur and are available in the status registers. The processor monitors every safety characteristic and generates an interrupt (and shutdown if applicable) in the event of a failure. Both drives can be shut down by the processor via an active high drive enable signal tied to isolated gate drivers. The testing is totally transparent to the user, requires no external programming, has no effect on the standard operation of this card and can be enabled or disabled via the bus. Thermal protection is also implemented to shut down the system to prevent damage caused by excessive temperature conditions.

To simplify logistics, Part number, S/N, Date code, & Rev. are stored in non-volatile memory locations.

NOTE:

Manual Perspective Definitions – To maintain legacy design documentation definitions, Motherboard refers to the base card assembly and modules may refer to functions (e.g. PWM, A/D, D/A, Serial).

BLOCK DIAGRAM TWO PWM SERVO AMPLIFIERS



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