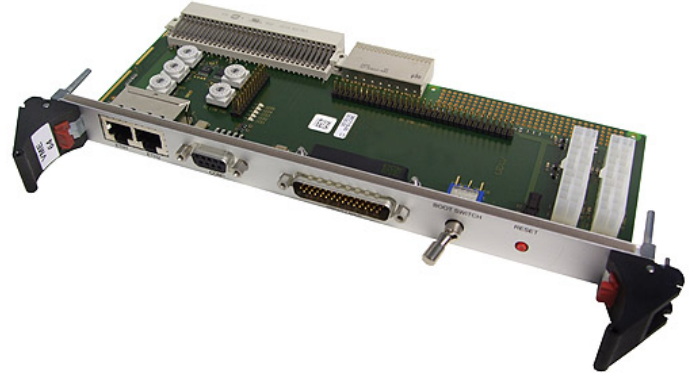


# CT15 – 6U VMEbus Transition Module for A602

- 6U / 80 mm standard format
- 1 RS232 interface
- DEX (6x UART)
- BMCX signals
- AFDX® signals
- Debug signals
- PMC I/O
- -40 to +85°C qualified



The CT15 is a 6U VMEbus transition module for use in combination with MEN's A602 single-board computer.

It is plugged onto the VMEbus backplane system slot from the rear side and leads the rear-panel serial I/O signals to standard connectors.

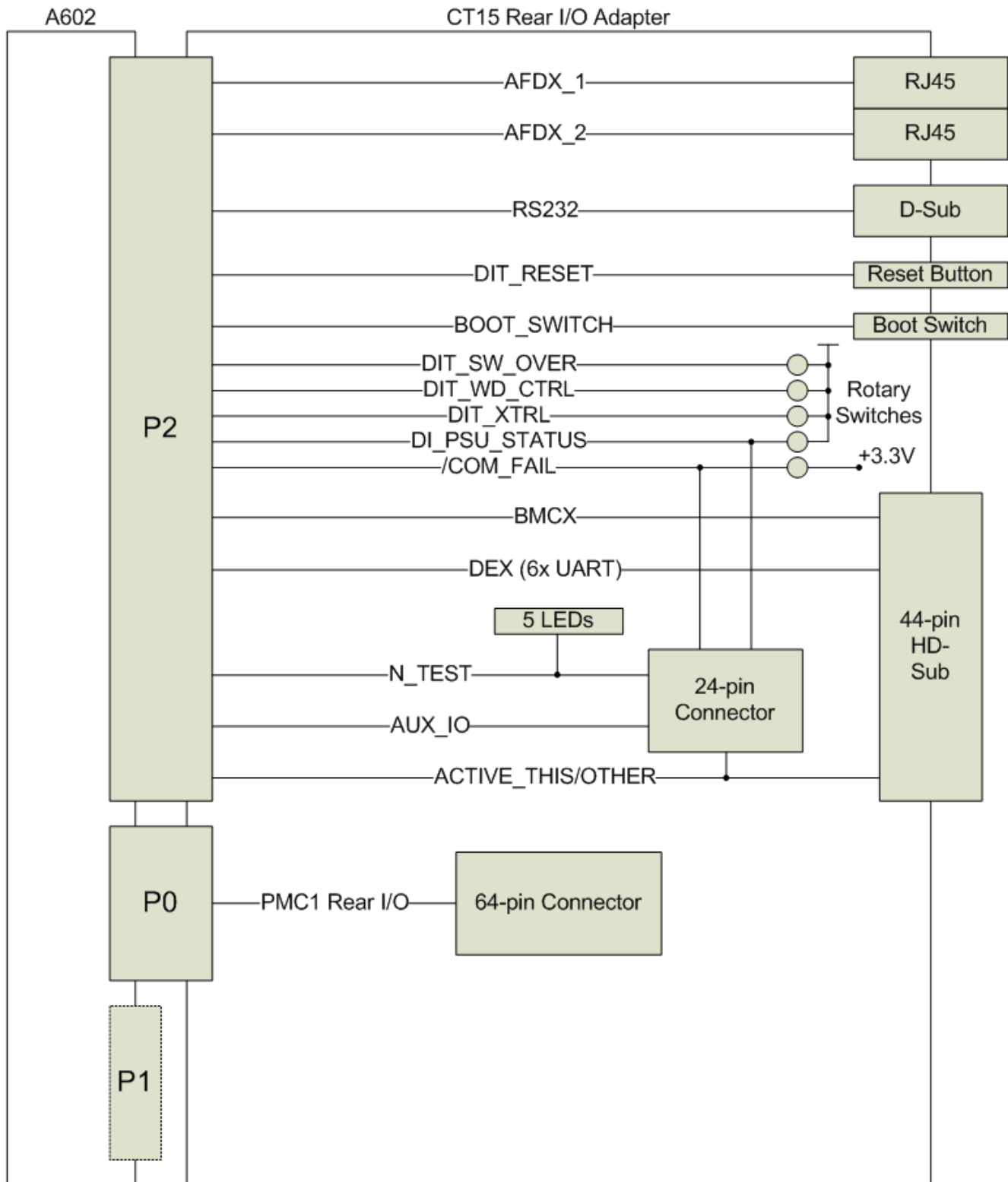
The signals are one RS232 UART, various signals from the two PMC slots (standard rear I/O from PMC1, AFDX® from PMC2), the necessary signals for inter-

board communication when connecting a second A602 (BMCX, DEX (6x UART), ACTIVE\_THIS/OTHER) and various debug signals (/COM\_FAIL, DI\_PSU\_STATUS, N\_TEST and the AUX\_IO signals).

It also offers a reset button, a boot switch, five LEDs for the N\_TEST signals from the A602's North FPGA and five rotary switches allowing the /COM\_FAIL, DIT\_XTRL, DIT\_SW\_OVER, DIT\_WDCTRL and DI\_PSU\_STATUS signals to be pulled low with an option to connect /COM\_FAIL to +3.3V.

The board is designed for an operating temperature from -40 to +85°C with qualified components.

## Diagram



## Technical Data

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Peripheral Connections       | <ul style="list-style-type: none"> <li>■ RS232 UART interface <ul style="list-style-type: none"> <li>□ 9-pin D-Sub connector</li> </ul> </li> <li>■ Inter-board connection to other A602 <ul style="list-style-type: none"> <li>□ BMCX signals</li> <li>□ DEX (6x UART) signals</li> <li>□ ACTIVE_THIS/OTHER signal</li> <li>□ All via 44-pin HD-Sub connector</li> </ul> </li> <li>■ Rear I/O signals from PMC1 <ul style="list-style-type: none"> <li>□ Via 64-pin connector</li> </ul> </li> <li>■ AFDX<sup>®</sup> signals from PMC2 <ul style="list-style-type: none"> <li>□ 2 RJ45 connectors</li> </ul> </li> <li>■ Miscellaneous signals <ul style="list-style-type: none"> <li>□ N_TEST</li> <li>□ AUX_IO</li> <li>□ DI_PSU_STATUS</li> <li>□ /COM_FAIL</li> <li>□ ACTIVE_THIS/OTHER signal</li> <li>□ All via 24-pin connector</li> </ul> </li> </ul> |
| Switches/buttons             | <ul style="list-style-type: none"> <li>■ 5 rotary switches the following allowing signals to be pulled low: <ul style="list-style-type: none"> <li>□ DIT_SW_OVER</li> <li>□ DIT_WD_CTRL</li> <li>□ DIT_XTRL</li> <li>□ DI_PSU_STATUS</li> <li>□ /COM_FAIL (connection to +3.3V possible)</li> </ul> </li> <li>■ Boot switch <ul style="list-style-type: none"> <li>□ Flip switch to choose between boot images</li> </ul> </li> <li>■ Reset button</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                   |
| LEDs                         | <ul style="list-style-type: none"> <li>■ N_TEST signal LEDs <ul style="list-style-type: none"> <li>□ 5 LEDs on PCB</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Mechanical Specifications    | <ul style="list-style-type: none"> <li>■ Dimensions: 233,35x80 mm conforming to VMEbus specification for 6U boards</li> <li>■ Weight: 162 g</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Environmental Specifications | <ul style="list-style-type: none"> <li>■ Temperature range (operation): <ul style="list-style-type: none"> <li>□ -40..+85°C (qualified components)</li> <li>□ Airflow: min. 1.5m/s</li> </ul> </li> <li>■ Temperature range (storage): -40..+85°C</li> <li>■ Relative humidity (operation): max. 95% non-condensing</li> <li>■ Relative humidity (storage): max. 95% non-condensing</li> <li>■ Altitude: -300m to + 20,000m</li> <li>■ Shock: 15g/11ms</li> <li>■ Bump: 10g/16ms</li> <li>■ Vibration (sinusoidal): 1g/10..150Hz</li> <li>■ Conformal coating on request</li> </ul>                                                                                                                                                                                                                                                                             |
| MTBF                         | <ul style="list-style-type: none"> <li>■ tbd @ 40°C according to IEC/TR 62380 (RDF 2000)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Safety                       | <ul style="list-style-type: none"> <li>■ PCB manufactured with a flammability rating of 94V-0 by UL recognized manufacturers</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| EMC                          | <ul style="list-style-type: none"> <li>■ Conforming to EN 55022 (radio disturbance), IEC1000-4-2 (ESD) and IEC1000-4-4 (burst)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## Ordering Information

|                             |                                                                                                                                                 |                                                                                                                                                                       |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Standard CT15 Models</b> | <b>08CT15-02</b>                                                                                                                                | Rear I/O adapter for A602 with front panel. With RS232, PMC RIO, DEX-UART, BMC, MISC, -40..+85°C with qualified components                                            |
| <b>Related Hardware</b>     | <b>01A602-02</b>                                                                                                                                | 3x PowerPC® 750CL 1 GHz, 3x 512 MB DRAM, 2x 256 MB Flash, 1 MB FRAM, 2 standard PMC slots, convection cooling (airflow 2 m/s), -40 to +50°C with qualified components |
| <b>Documentation</b>        | More detailed information on the CT15 is included in the appendix of the A602 User Manual. Please <a href="#">contact us</a> to request a copy. |                                                                                                                                                                       |

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