

MI BPM Project MI BPM TB Control Module Status Report August 29th, 2006

Significant changes are **highlighted**.

MI BPM TB Control Module Production

Hardware status:

-) 12 Modules assembled and tested.

Firmware status:

-) All boards have been updated with latest firmware release (June 19th, 2006).

-) Coding work in progress:

- 1) Transition Board single module addressing and read-back. **√ Completed**
More work to be done....
- 2) TB Integration testing should start this week.
- 3) Timing Module integration testing should start this week (b4 B→W).
- 4) Diagnostics. Work in progress.

MI BPM TB

Firmware status:

-) Coding in progress together with Control Module firmware development:

- 1) Transition Board single module addressing and read back. **√ Completed**
Problems in fitting the design in TB Programmable Logic chip (Altera CPLD).
Two possible solutions were found:

a) Module Addressing, no read-back.

Design compatible with new firmware developed for the Timing Module and Control Module.

No changes in TB registers and control signals.

b) Module addressing and read-back.

Additional changes to be done in the firmware of timing module and control module.
TB registers and control signals are redefined.

- 2) Integration testing should start this week (b4 B→W).
- 3) Diagnostics. Work in progress.

Document related to the Control Module are available on the web page:

http://www-ese.fnal.gov/MI_BPM_TB_CTL/

The screenshot shows the Quartus II IDE with the following components:

- Project Navigator:** Lists entities including MAX7000S: EPM7064STC100-10, BPM_TB (64), and BPM_TB_board_controller:EPM... (51).
- Main Editor:** Displays the VHDL code for `BPM_TB_board_controller.vhd`. The code includes a header with creation and modification dates, file name, and author information (Stefano M. Rapisarda).
- Compilation Report - Flow Summary:**
 - Flow Status:** Analyzed - Mon Aug 28 10:28:46 2006
 - Quartus II Version:** 5.1 Build 176 10/26/2005 SP 0.15 SJ Full Version
 - Revision Name:** BPM_TB
 - Top-level Entity Name:** BPM_TB
 - Family:** MAX7000S
 - Device:** EPM7064STC100-10
 - Timing Models:** Final
 - Met timing requirements:** Yes
 - Total macrocells:** 64 / 64 (100 %)
 - Total pins:** 68 / 68 (100 %)
- Status Window:**

Module	Progress %	Time
Full Compilation	100 %	00:00:00
Analysis & Synthesis	100 %	00:00:00
Filter	100 %	00:00:00
Assembler	100 %	00:00:00
Timing Analyzer	100 %	00:00:00
Design Assistant	100 %	00:00:00
- Messages:**
 - Info: Smart recompilation skipped module Assembler because it is not required
 - Info: Smart recompilation skipped module Timing Analyzer because it is not required
 - Info: Smart recompilation skipped module Design Assistant because it is not required
 - Info: Quartus II Full Compilation was successful. 0 errors, 0 warnings