



TETREON  
TECHNOLOGIES  
LIMITED

# Thermco PC-MUX for Horizontal TMX

## PRODUCT SPECIFICATION

HTR – PC-Mux 006

Jan 2006



Stack Status Screen



Tube Status Screen

### PC-Mux Retrofit for TMX Controllers

The PC-Mux is a central multiplexing computer with graphical user interface (GUI) for the Thermco TMX furnace control system. The system is designed to replace the older generation TMX 9k, 10k and 12k Mux computers, and is available fitted to new furnaces manufactured by Tetreon / Thermco, and as a retrofit for Thermco furnace systems or other makes of horizontal furnace.

#### Rationale for system development:

The first TMX 9k was based on the Texas Instruments 9900 series 16 bit CPU which is now obsolete and very difficult to support. The same applies to the 10k and 12k systems which were based on Digital VAX platforms with the VMS operating systems and Sun Sparc Stations running Unix. All of these products are difficult to support, making reliability a key issue for production management. Tetreon has designed a PC based system that offers not just significantly improved MTBF by using industrial quality hardware, but includes new features accessible from a graphical user interfaces that make operation more user friendly. The PC-Mux also incorporates data collection of all of the main furnace parameters, which are stored in a relational database for later graphic display or export to SPC packages.

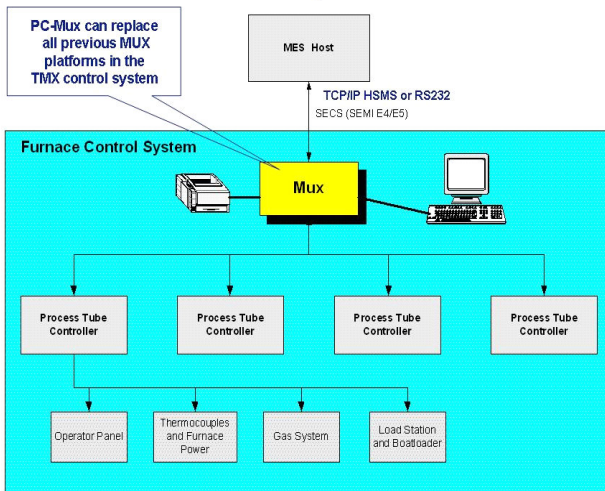


# Thermco PC-MUX for Horizontal TMX

## Features:

- Reliable PC platform with Windows XP operating system. 19" rack mount design with high resolution flat panel display.
- Three 80 G-byte hard drives in a raid 5 configuration for security of operation and backup.
- Configuration screens based on the TMX 9k / 10K, no re-training required for existing users.
- Graphical user interface with easy to interpret stack and tube status graphics.
- Extended recipe editor with no limits on recipe lines or sub-recipes, incorporating drag and drop options for command insertions.
- Help screens for all functions.
- On screen display of logged messages.
- Simple logstat printing using standard Windows printing options.
- Data collection of all main machine data including temperature, gas, & boat position.
- Graphical presentation of data collection for maintenance and SPC purposes.
- A DVD writer is included for backup of data collection and recipes.
- Available as a retro-fit to most makes of furnace when used with the TMX tube controller.
- Single purchase only, no annual license fee or expensive maintenance contract.

## HTR Control System Overview



## Software Specification:

- Compatible with all TMX tube computers.
- Based on Windows XP operating system.
- Fully backwards compatible with all TMX systems and recipes including LSCS for interface to TEL automation.
- Enhanced graphical user interface
- Transfer utility for recipes from older TMX systems.
- Enhanced recipe editor functions.
- Data collection of all key real time parameters.
- Graphing utility for collected data.
- Export from database to SPC packages.
- On Screen Audit trail of events.
- SECS I/II and GEMS supported with TCP/IP

## Hardware Specification

- 4U \* 19" Industrial Rackmount PC chassis, with positive pressure to prevent dust ingress, 300 watt PSU and hot swap fan unit, keyboard and optical mouse.
- Intel P4 2.4 Ghz processor with 512MB RAM.
- Three 80Gb hard drives configured as raid level 5, drives are caddy mounted for ease of removal.
- Digital I/O (required for LSCS), 6 \* serial RS232 interfaces, 4 \* USB ports and onboard Ethernet 10/100 BaseT network card.
- DVD writer for data backup.
- Industrial 17" flat panel monitor with high resolution 1280 x 1024 display.

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