

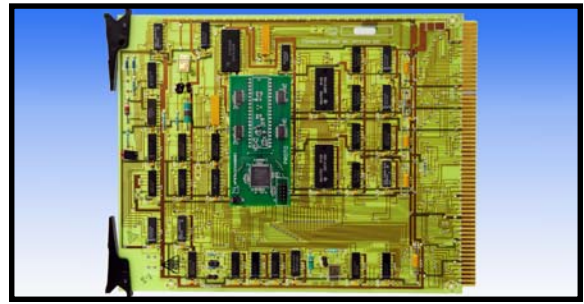
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# WPCP-1600

## Introducing a No-Fail Processor for TDC 2000 Controllers

*100% bit-compatible replacement for  
the original CP-1600 microprocessor*

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### Good news for TDC 2000 users!

Western Process Computers, Inc. has begun a program to identify and eliminate major causes of failure in TDC 2000 equipment. As a first step, we have developed a reliable, 100% bit-compatible emulation of the original microprocessor chip used on TDC 2000 processor boards.

### Rationale for a new microprocessor

About 25% of failures in TDC 2000 equipment are caused by the processor board. Our investigation of these failures shows that more than 90% of the time, the cause is a failure of the microprocessor chip only. Elimination of microprocessor chip failures will eliminate almost 1/4 of all box failures in a TDC 2000 system.

### Facts about the TDC 2000 CPU chip

TDC 2000 Hiway boxes use a General Instrument CP-1600 microprocessor chip, a 16-bit microprocessor developed more than 30 years ago. New CP-1600 chips have not been manufactured for more than 20 years. Two versions of the chip (differing in speed) were used in TDC 2000 equipment, with the faster microprocessor being used in Extended Controllers, Multifunction Controllers, and the DHP.

### A robust, highly-reliable replacement

WPC's emulation of the CP-1600 is implemented in an industrial grade FPGA, benefiting from more than 30 years of semiconductor design, fabrication, and reliability improvements when compared with the original microprocessor.

WPC's replacement microprocessor solution works in all Hiway boxes. It is designed for longevity and robustness, and has been tested in all TDC 2000 controllers, PIUs, RCDs, Operator Stations, and the DHP.

### CP-1600 vs WPCP-1600

	CP-1600	WPCP-1600
Power consumption	1.5 watts	0.01 watt
ESD-resistant design	No	Yes
Inrush Current protection	No	Yes
Voltages used	+12, +5, -3	+5

### Order information

The WPCP-1600 is available as an upgrade when you order a replacement processor board. We install the WPCP-1600 on a tested, certified Honeywell processor board (30731832-001, 30731832-002, or 82408217-001). The enhanced board is guaranteed to operate identically to the original, and comes with a **5-year replacement warranty**.



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