

## Introduction

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The ICPCON 8000 is a new family of compact, modular, intelligent and rugged, distributed I/O (input/output) systems, designed for data acquisition and control in manufacturing, research and education.

This new exciting series offers a flexible, versatile, and economical solution to a wide range of applications. From Data-Acquisition, process control, test and measurement, to energy and building management.

The 8000 is a modular network based system with the capability of connecting I/O either through it's own local bus or alternatively through I/O expansion or network extension.

The unit comprises a main control unit with a range of standard communication interfaces, and an I/O bus permitting I/O expansion.

The bus is hybrid in nature providing the facility to connect either serial or parallel I/O modules. The parallel bus is used for high speed data transfer.

The unit can communicate either using serial communications (RS232,RS485), Ethernet, or CANbus.

The Ethernet version of the product supports an integrated web server permitting Internet and Intranet applications

The 8000 can be used as an intelligent distributed data acquisition front end connected to a Host machine running a standard SCADA package, or alternatively it can be user programmed as an autonomous controller running an embedded software application. Significant non volatile memory is available for data and program storage.



The product is made up of four basic components:-

- **Main Control Unit (MCU):**

- The MCU is the power house of the 8000. Each MCU comprises a central processor module (CPM), a power supply, a four(4) or eight(8) slot backplane for either 4 or 8 Parallel I/O modules. The CPM is powerful integrated processing engine comprising a CPU, RAM and ROM, and an option of communication interfaces including RS-485, Ethernet and CANbus.

- **I/O Expansion Unit:**

- The I/O expansion units are used to extend the number of I/O modules. Each expansion unit comprises a Power supply and a Back Plane with either 4 or 8 Serial I/O Expansion Slot. The I/O expansion units, 87K4, 87K8, are equipped with a 115.2K BPS RS-485 bus which links to expansion unit to the main control unit.

- **8000 I/O modules :**

- There are two types of I/O modules, Parallel I/O Modules which are high speed modules (can only be installed in the Parallel I/O Expansion slots) and Serial I/O Modules (can be installed in either the Parallel or Serial I/O Expansion slots.)