

Solution: Ixxat INpact  
Country: USA  
Company: Promess  
Incorporated

### The Results

- Dramatically reduced development effort and time-to-market by leveraging dedicated industrial communications hardware from a proven industry expert.
- Streamlined mechanical and software integration due to flexible module form-factor and mature driver set.
- Simplified manufacturing & supply chain -- one module part number to support all industrial protocol variants.



*"Ixxat INpact allowed the UltraPRO Motion Controller to integrate into almost any PLC network, expanding its global reach and flexibility among users."*

**Robert McCullough**  
Manager of Electrical Engineering,  
Promess

## Reduced COGS, increased product flexibility with quicker time-to-market

Promess leverages HMS INpact interface cards to accelerate product development and broaden flexibility in application.

Industrial device developers have been leveraging Single-Board Computers (SBC) for years in order to accelerate early-stage development efforts, however they commonly resort to traditional embedded processing architectures for pilot & series stages due to concerns over lack of SBC reliability & industrialization. As a result, these developers also typically defer the implementation of industrial communications protocols (eg ProfiNet, Ethernet/IP, EtherCAT, etc.) to the pilot or series stage as well.

Recent offerings of industrialized SBC boast significantly reduced failure rates, widened temperature specifications, developer-friendly tool sets and a lower overall cost point. As a result, developers are reconsidering SBC even for series production to achieve better price:performance and time-to-market when working on increasingly compressed development schedules.

HMS Networks, a proven leader in embedded industrial communications solutions, noted this SBC trend and invested in developing the Ixxat 'INpact' solution to provide device manufacturers an option for additional design flexibility, speed, and overall system performance. INpact leverages industry leading Anybus NP40 chip technology and industrial protocol expertise to deliver unparalleled flexibility in northbound connectivity. In addition, a time-tested PC Interface in PCI, PCIe, PCIe Mini, and M.2 form factors with robust, user-friendly driver interfaces for Linux and Windows, along with many popular RTOS systems.



## Customer Problem Statement

Promess Incorporated is known as the manufacturer of complete turnkey monitoring and motion systems used in a wide variety of Assembly and Test applications around the world. Promess delivers complete systems including the mechanics, control electronics, all sensors, amplifiers and software. When Promess delivered their servo-based solutions to the market there was increasing demand to integrate into large complex assembly and test systems utilizing higher-end PLC's and industrial fieldbus networks. As time went on, Promess wanted the flexibility to accommodate a wider range of customer PLC & fieldbus specifications in order to grow their business and compete in global markets.

Promess first became acquainted with HMS' embedded protocol co-processors with their MotionPro line, which uses the HMS CompactCom line of co-processors. This solution allowed the MotionPro Motion Controller to integrate into almost any PLC network, expanding its global reach and flexibility among users.

The Promess UltraPRO Technology is a Multi- Axis Motion Control and sensing Platform designed to be used in conjunction with one or more of Promess' Electro-Mechanical units. A Single Board Computer (SBC) was used in the UltraPRO solution due to the ease of use and faster development time of a standard PC product compared to embedded platforms. When a new application was in development and with communication to Industrial communication protocols in the specification, HMS was

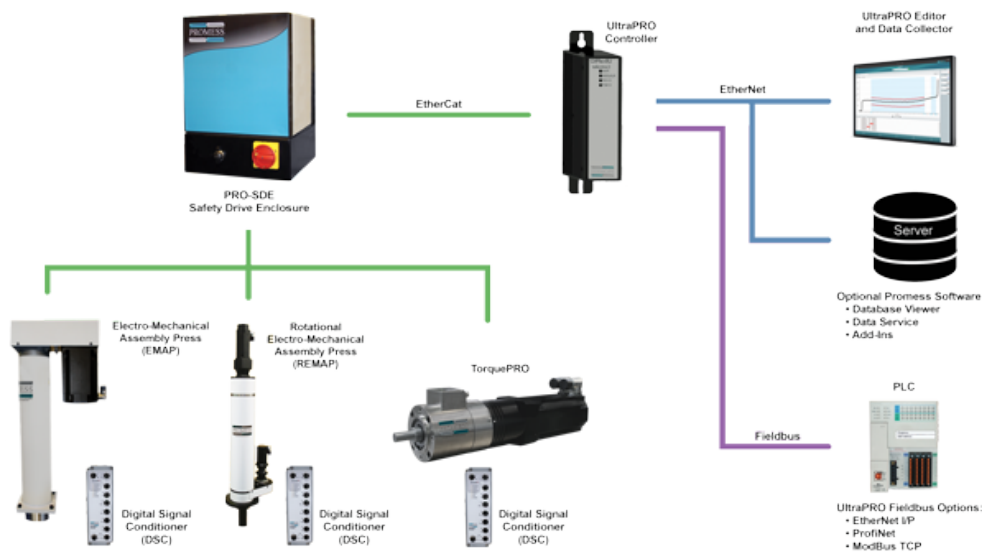
one of the communication solutions considered. This created a problem for integration, as the CompactCom does not utilize standard PC interfaces.

## HMS Solution

HMS proposed the HMS INpact Interface. The many hardware PCI profiles and Ethernet interfaces used on the INpact ensured that whatever profile was used on their final version of the SBC, a solution would be available. In addition, use of the Common Ethernet platform allowed Promess to manage & stock only one UltraPRO hardware configuration and flash the customer's needed protocol prior to shipment. This decreased the overall COGS by increasing volume discounts. Additionally, HMS provided the INpact solution with M12 connectors, which was needed to achieve an IP67-rated solution.



*UltraPRO Controller shown utilizing HMS INpact Interface with dual M12 connectors*



*The flexible Promess UltraPRO Controller enables seamless integration with all major industrial PLC's due to the fieldbus interface provided by HMS INpact.*