

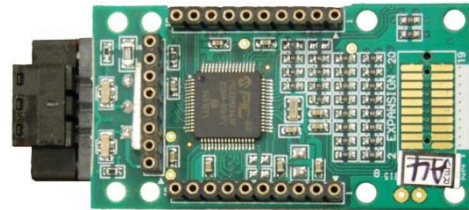
## Overview

The **Application Specific ProtoCessor (ASP)** provides the lowest cost solution for OEM's that have high-volume/cost sensitive products that require quick protocol support. These solutions have been designed for ease of installation and support by the OEM and their customers. The DIP switches provide the OEM's with plug and play solutions. There is no software required to install the ProtoCessors on the various protocol networks.

The OEM puts a ProtoCessor Serial TTL (2x10 pin headers) Socket footprint on their PCB hardware and they get instant access to FieldServer Technologies extensive library of protocols, providing the manufacturer with a more complete solution and greater flexibility not found anywhere else.



**FPC-AD2** Top View



**FPC-AD2** Bottom View

The two banks of DIP switches enable the users to quickly configure the serial protocol settings without the need for any 3<sup>rd</sup> party software. Settings available via the DIP switches include:

- MAC Address
- Baud rate (including auto-baud setting for BACnet MS/TP)
- Node ID
- The OEM has the ability to select profiles or protocols via DIP switches. For example, the same ProtoCessor ASP can be used on four different chillers models. The DIP switches can be used to select profiles used for a specific chiller model.

ProtoCessor ASP modules are factory pre-programmed allowing easy plug-and-play end-user installation.

## ProtoCessor Features and Benefits

Features	Benefits
Lowest cost BACnet, Metasys N2, and Modbus solution on the market.	Lower cost, high volume devices can justify to have Automation protocols.
Easy to provide specific protocol needed by each customer in multiple industries.	Penetrate new markets – increase sales.
Minimal in-house development costs.	Development and protocol support costs reduced.
Minimal changes to current OEM design.	Rapid time-to-market.
Only single socket needed on OEM design.	Minimal impact on hardware/software design.
Compliant to established protocol specifications.	Trusted proven interface.
Add ProtoCessor only to specific orders requiring protocol conversion.	Avoids delivery of unnecessary capability and costs.
No need to purchase costly source code or expense engineering time.	No NRE.

## Typical Applications

Application	ProtoCessor Solution
A low cost, high volume power meter manufacturer with no serial host protocol needed; BACnet MS/TP and Modbus RTU support to penetrate new markets.	Implement the ProtoCessor TTL socket on the OEM hardware and the ProtoCessor Simple Protocol driver (PSP ASCII driver).
A high volume HVAC rooftop company with Modbus RTU capability as the serial host protocol needed; BACnet MS/TP and JCI's Metasys N2 Open protocol support. Four different chillers with slightly different profiles.	Implement a serial TTL ProtoCessor socket to enable instant BACnet MS/TP and Modbus RTU protocol support. By using DIP switches to set profiles, the same ProtoCessor solution is viable for all four chiller models by selecting the appropriate profile via the DIP switches.
A manufacturer of convenience and grocery store coolers with a requirement to connect their systems to various energy management systems; BACnet MS/TP and Modbus RTU support needed.	Implement a ProtoCessor Socket. Have a proprietary Serial host protocol driver implemented on the ProtoCessor.

## Specifications

### Field Connections

RS-485 Galvanic Isolated 3 way Phoenix Connector  
No terminating resistors for RS-485

### Dimensions (LxWxH)

**FPC-AD2** 2.2 x 1.2 x 0.5 in  
5.6 x 3.0 x 1.3 cm

### Approvals

RoHS Compliant  
DNP 3.0 Conformance tested  
CE Approved

### Host Connections

Standard Serial Non-Isolated TTL Interface-TX and RX  
Socket on Board: 2 x 10  
(Header Pins Samtec Part # TLW-110-05-G-S)

### Supported Protocols

- Allen Bradley DF1
- BACnet MS/TP (code base BTL tested)
- DNP 3.0 Serial
- J-Bus
- Metasys N2 by JCI
- Modbus ASCII
- Modbus RTU
- OEM custom serial driver
- ProtoCessor PSP driver  
(for OEMs without a host protocol)



\*Specifications subject to change without notice

### Temperature

**Ambient:** -40° to 185 °F (-40° to 85 °C)  
**Storage:** -40° to 257 °F (-40° to 125 °C)  
**Humidity:** 5 to 90% RH

### Power Consumption

**FPC-AD2** 5V DC @ 120 mA

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