

## INTRODUCTION

The SIP2 is one of a range of innovative products available for low point count interface applications. This has been developed to help reduce engineering time and cost, and to meet the demand for more specific information from differing protocols and reporting requirements.

This product exposes values from available protocol drivers including Open Protocols and BeMS protocols for data analysis.

## APPLICATION

This product is the latest hardware version of our SIP Interface product range. Based on a combination of the SIP+ EMT-IF and SIP+ Data, it has been designed to easily define points from multiple protocols to a defined BMS (BACnet or Trend) and/or internal data logger software.

**Note** Further protocols may be added according to the commercial and development viability.



### Features

- Max 600 Input points (other variants available)
- Suitable for simple interface applications
- Direct Data logging/Reporting of values
- Various Report formats
- IoT compatible applications
- Trend network Status Report

### Hardware

- Built-in 60 Unit load M-Bus port (Level Converter NOT required)
- Pulse Counter/Digital Input port
- Single PoE (Power Over Ethernet) port
- Single RS485/RS232 port

### Protocol

- M-Bus (Builtin port)
- ModBus RS485, RS232 Serial or TCP/IP
- IoT
  - Supports MQTT with AWS, Microsoft Azure, Google IOT Core compatibility
  - Supports Publish/Subscribe with MQTT Broker
- BACnetIP Server
  - Supports single BACnet port, single BACnet network, but max. 100 BICs
- Data Acquisition
  - Standard (File per point), Half Hourly Log (SIP Billing), Single file, Single file Vertical, Single File Grouped, Trend network health report
- VIQ
  - Supports single UDP Group, single Trend LAN, but max. 100 vIQ OSSs

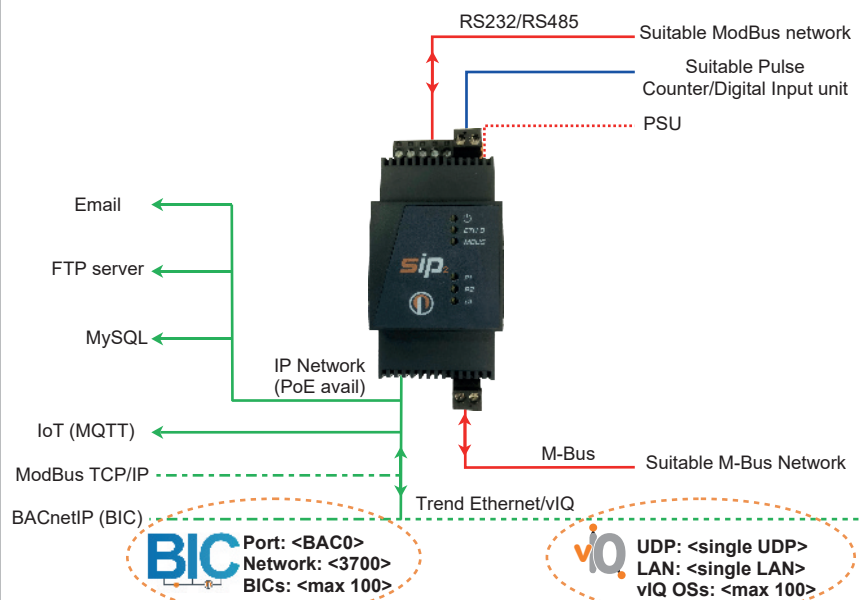
## DESIGN AND FUNCTION

The SIP2 product exploits the data capability of equipment communicating via any supported protocols on the fieldbus and IoT networks, by retrieving, interfacing and reporting selected types of data, e.g. Energy, Amps, Temperatures or On/Off control to a configured data recipient.

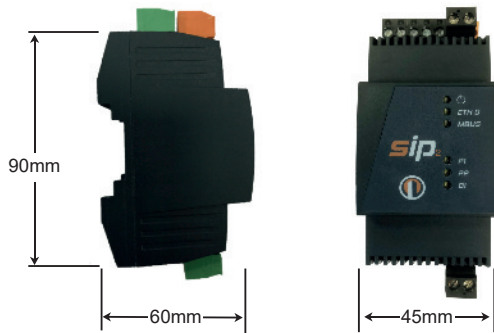
This unit requests values from any protocol, e.g. M-Bus, ModBus, Pulse Counter/Digital Input, IoT (MQTT) and passes these values to the BACnet BMS via our BIC (BACnet Integrated Controller) and/or Trend BMS via our vIQ (Trend Virtual Outstation). It also includes data logging/reporting driver, used to send reports in parallel to the interface.

The Data Acquisition driver provides a data logging and reporting function. Selected parameters and values, provided by supported protocols are updated and retained in the internal database according to the total point count and update frequency. These database values are collated and transmitted in a pre-determined CSV file format (inc. Trend network health report) to a maximum of 20 internal/external recipients via email and/or FTP. It is also possible to query the internal database via a MySQL query.

## SYSTEM OVERVIEW



**Note** Refer to Quick Start for wiring details.



## SPECIFICATION

### Dimensions

45W x 90H (110 with connectors) x 60Dmm  
120g

### Default Setup Parameters

IP address: 192.168.1.128 (255.255.255.0)

### Power Input

Input Voltage Range: 24VDC

Power Consumption: 0.4A @ 24VDC

### Hardware connections

Power: 2 pin Terminal  
 RS232/RS485: 5 pin Terminal (Half duplex)  
 Pulse/Input: 2 pin Terminal (Pulse Counter or Digital Input State),  
 Cable: 200m, Freq: 25Hz, 20ms  
 Eth0: RJ45 connector supports 10BASE-T/100BASE-TX with auto-negotiation and auto-crossover with standard POE IEEE 802.3af  
 LEDs: Power, Eth 0, MBUS, P1 (RS232), P2 (RS485), D1

### Environmental

Operating Temperature: 0 - 55°C

Storage Temperature: -25°C - 85°C

With a comprehensive range of EM&T and interface products for BACnet (IP/MSTP), IoT, M-Bus, ModBus, Pulse/Digital Input, SNMP and Trend protocols we can help you easily link meter, sub-meters and building plant to BeMS systems with energy management and monitoring functionality, and virtual metering.

**Download brochures and datasheets from our website. Alternatively, contact us for more information or to request a quote.**

## INSTALLATION

DIN rail mounting (TS35).

**Note** Contact the relevant device manufacturer for specific protocol cable recommendations.

## CONFIGURATION

Specifically designed HTML web pages from internal web server used to configure this unit.

## PRODUCT CODES

PART NO.	DESCRIPTION
<i>SIP<sub>2</sub></i>	
SIP2/100P	} Up to 100, 300, or 600 input points from multiple protocols (inc. IoT (MQTT), M-Bus, ModBus) mapped to BMS &/or used for data reporting
SIP2/300P	
SIP2/600P	
<i>Accessories</i>	
PSU/24VDC/nA	24V nA DC Power Supply
SYN/ESWn	10/100BaseT(X) ports Ethernet switch

**Note** Contact Synapsys Solutions for PSU requirements.

## REGULATIONS



Issue 2, Feb. 2020

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