

INTRODUCTION

The SIP+ is one of a range of innovative products available for various applications. This has been developed to help reduce engineering time and cost, and to meet the demand for more information from differing protocols and better energy monitoring.

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



APPLICATION

This product is a new hardware version of our SIPd product range. It has been designed to easily define source points from multiple protocols linked to the internal data logger software, and/or a BMS/IoT/SCADA.

Features

- Dual IP port
- CANBus (Increase Serial network)
- Max 6000 linked points (other variants available)
- BMS compatible applications
- IoT compatible applications
- SCADA compatible applications
- Data logging from multiple protocols
- Various Report formats (EBIS/Billing/3rd party)

Hardware

- Max. 16 SIP Slices (max 8A)
 - M-Bus Slice (limited to Unit Loads (1 Unit Load = 1.5mA -max. 250 unit loads). Max. 20 points per M-Bus meter
 - Serial Expansion Slice (max. 32 meters according to ModBus RTU)

Protocol

- BACnet/IP**
 - Support BACnet Client connection, and BACnet Server, max 100 BICs
- BACnet MSTP**
 - Support BACnet MSTP (RS485) connection
- M-Bus Master**
 - Serial and TCP/IP
 - 1 (one) driver per hardware connection
- ModBus Master**
 - RS485, RS232 Serial and TCP/IP
 - 1 (one) driver per Serial connection
- ModBus Slave**
 - RS485, RS232 Serial and TCP/IP
- IoT (MQTT & REST)**
 - Supports MQTT with AWS, Microsoft Azure, Google IOT Core compatibility
 - Supports REST Client/Server
- Trend Serial and Ethernet**
 - Supports Trend Controller Supervisor port or Ethernet connection
- VIQ**
 - Supports single UDP Group, Trend LAN, but max. 100 vIQ OSs

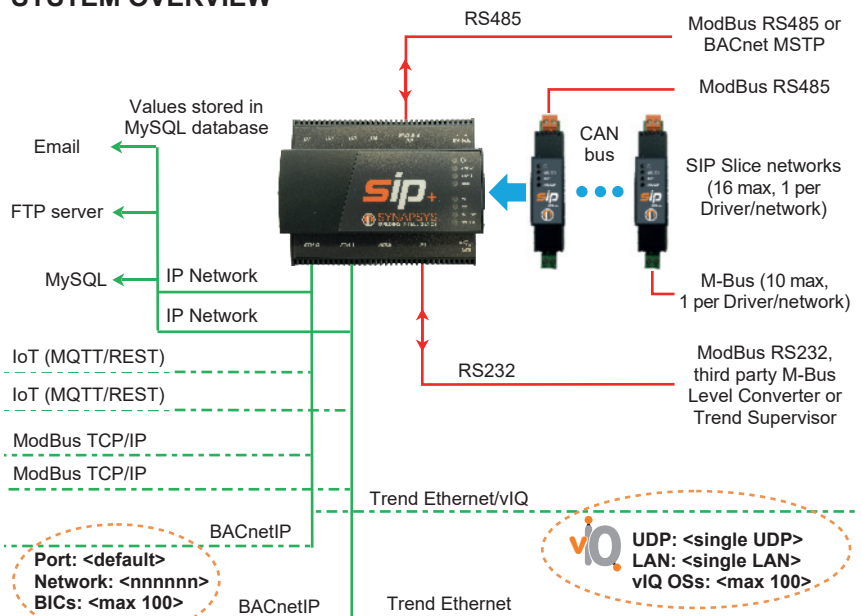
DESIGN AND FUNCTION

The product exploits the data capability of equipment communicating via any supported protocols, by retrieving and exposing a high volume of selected types of data, e.g. Energy, Temperatures or On/Off to defined local or remote Data reporting Recipients via email/FTP (secure FTP) reporting, direct MySQL database query and/or to any supported interface protocol, i.e. BMS (BACnet/Trend), IoT (MQTT/REST) and/or SCADA (third party ModBus Master).

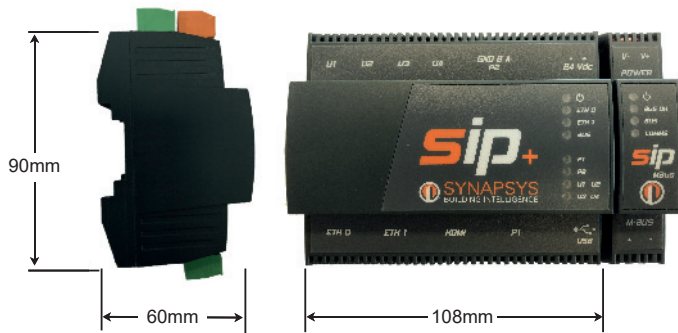
The SIP+ Data-IF (interface) uses the on board RS485 port for ModBus Serial or BACnet MSTP. The on board RS232 (RJ45) port for connection to third party M-Bus Master, ModBus RS232 or Trend IQ controller Supervisor port. Additional slices can be used for additional networks.

The 2 (two) Ethernet ports can be used to interface directly to BACnet, MQTT, REST, Third party ModBus Master and/or Trend and/or sending CSV files via email/FTP. The values logged in the internal MySQL database according to the number and update frequency of requested points. The Data acquisition driver will send reports in a pre-determined CSV file format (inc. SIP Billing compatibility, single file format options) to a maximum of 20 internal/external recipients via email and/or FTP. It is also possible to interrogate the internal database via a MySQL query.

SYSTEM OVERVIEW



Note Refer to Quick Start for wiring details.



SPECIFICATION

Dimensions

108W x 90H (110 with connectors) x 60Dmm
160g

Default Setup Parameters

IP address: 192.168.1.128 (255.255.255.0)

Power Input

Input Voltage Range: 24VDC

Power Consumption: 0.3A @ 24VDC

Hardware connections

Rail Connector: 1 connection (max 8A) for up to 16 additional Slices, powered directly through the DIN Rail Connector

Power Connector: 2 pin Terminal

RS232 Connector: RJ45 Connector (Cable available)

RS485 Connector: 3 pin Terminal, Half duplex

Eth0 & Eth1: 2 x RJ45 connector supports 10BASE-T/100BASE-TX with auto-negotiation and auto-crossover

LEDs: Power, Eth0, Eth1, Bus, P1 (RS232), P2 (RS485). NA: U1 & U2, and U3 & U4

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, 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).

Connect up to 16 SIP Slices using a CAN bus connector supplied with each slice.

Caution

An appropriate PSU is required according to the number of SIP Slices installed on the DIN Rail.

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+/Data</i>	
SIP+/DATA/IF/500P	Up to 500, 1000, 2000, 4000, or 6000 input points from multiple protocols (inc. BACnet, IoT (MQTT), M-Bus, ModBus & Trend) linked to BMS/IoT/SCADA and internally stored reporting Datapoints
SIP+/DATA/IF/1000P	
SIP+/DATA/IF/2000P	
SIP+/DATA/IF/4000P	
SIP+/DATA/IF/6000P	
<i>Accessories</i>	
PSU/24VDC/nA	24V nA DC Power Supply
SYN+/MBUS/CONV/...	M-Bus specific slice with SIP+ pack (below)
SYN+/SER/CONV	ModBus Serial specific slice with SIP+ pack, inc. DIN Rail, RS485 3-pin terminal and RS232 cable
SYN/ESWn	10/100BaseT(X) ports Ethernet switch

Note

Contact Synapsys Solutions for PSU requirements.

REGULATIONS



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