## SOLUTION GUIDE

Create the best solution for anyone who wants to connect devices to the Internet easily

English Version



### Contents

- 1 Contents
- 2 Sollae Systems
- **3-4** Lineup
- 5-8 I/O Control Solution
  - **9** CIE-M10
- 10 CIE-H10
- 11 CIE-H12
- **12** CIE-H14
- 13-16 IoT Data Integration Solution
  - **17** PBH-101
  - 18 PBH-104
  - **19** PBH-204
  - **20** IDIS-200
- 21-24 PHPoC Solution
  - **25** P4S-341
    - **26** P4S-342
- 27-30 Console Server Solution
  - 31 CSC-H64
  - **32** CSE-T16/T32
- **33-36** Serial Networking Solution
  - **37** CSE-M53N
  - **38** CSE-M32
  - 39 CSE-M24
  - **40** CSE-M73
  - 41 CSE-B63N
  - **42** CSE-H20
  - **43** CSE-H21
  - 44 CSE-H25
  - 45 CSE-H53N
  - **46** CSE-H55N2
  - **47** CSW-M83
  - 48 CSW-M85
  - **49** CSW-B85
  - **50** CSW-H85K
- 51-52 Software
  - 53 Worldwide Partners

### Sollae Systems

#### Introduction

Since 1998, Sollae Systems has been offering embedded network solution, called ezTCP, for serial devices. ezTCP enables users to control and monitor remote devices over the Internet in real-time. Over the last decade, we have optimized and improved our TCP/IP stack and software to meet our customers' diverse needs. As a result, we are now able to carry out a vision to provide perfectly optimized products with PHPoC (PHP on Chip).

PHPoC is a scripting language developed by Sollae Systems based on a widely used open-source scripting language, PHP. It allows users to realize desired features with user-defined functions.

We mainly design and manufacture products that are simple to apply, easy to use, and convenient for our customers. We strive to create the best solution for anyone with a desire to connect their devices to the Internet and a plan to move forward to the IoT business.



#### Company History

SFP. 2015

Developed PHPoC

JUN. 2011

Registered a patent for new technology applied to ezTCP series SEP. 2007

Certified for ISO9001:2000

MAR. 2000

Developed MIC real-time operating system SEP. 1999

Developed ezTCP/LAN

SEP. 1998

Founded as an information technology venture company

#### Vision

Create the best solution for anyone who wants to connect their devices to the Internet easily.

#### Management Philosophy

Reliable Person Reliable Company Reliable Technology

## Lineup

#### I/O Control Solution



CIE-M10 P.09

- 8 DI ports, 8 DO ports, 1 ADC port
- Modbus/TCP or HTTP



CIE-H10 P.10

- 8 DI ports, 8 DO ports - Modbus/TCP or HTTP



CIE-H12 P.11

- 2 DI ports (dry/wet contact), 1 DO port
- Modbus/TCP or HTTP



#### CIE-H14 P.12

- 4 DI ports, 4 DO ports
- Modbus/TCP or HTTP
- DC8.5-38V (polarity auto detection)

#### IoT Data Integration Solution



PBH-101 PH7

- 1 port
- (1xRS232/RS422/RS485)
- PHPoC interpreter/debugger PHPoC interpreter/debugger - HTTP/SSH/Websocket server - HTTP/SSH/Websocket server



PBH-104 P.18

- 4 ports (4xRS232/RS422/RS485)



#### PBH-204 P19

- 4 DI ports, 4 DO ports
- 1 port
- (1xRS232/RS422/RS485)
- PHPoC interpreter/debugger - HTTP/SSH/Websocket server



#### IDIS-200 P.20

- Modbus/TCP
- Up to 100 connections
- to IoT Gateways
- Up to 32 connections to applications
- Dual Power
- SSL 3.0/TLS 1.0

#### PHPoC Solution



#### P4S-341 P.25

- 8xDIO dedicated
- 14xDIO shared (SPI, I2C, 2xUART)
- 6xADC, 4xH/W Timer, USBD, USBH, RTC
- PHPoC interpreter/debugger - HTTP/SSH/Websocket server



#### P4S-342 P.26

- 10xDIO dedicated
- 14xDIO shared
- (SPI, I2C, 2xUART)
- 6xADC, 4xH/W Timer, USBD, USBH, RTC
- Wireless LAN
- PHPoC interpreter/debugger
- HTTP/SSH/Websocket server

#### Console Server Solution



CSC-H64 PBI

- 4 ports
- (4xRS232/RS422/RS485)
- IPv4/IPv6 dual stack
- Ethernet, Wireless LAN - SSL 3.0/TLS 1.0



CSE-T16 P.32

- 16 ports (16xRS232 with
- RJ45 connector)
- SSL3.0/TLS1.0



#### CSE-T32 P.32

- 32 ports (32xRS232 with
- RJ45 connector)
- SSL3.0/TLS1.0

#### Serial Networking Solution



CSE-M53NP37

- 1 port (1xUART)
- IPv4/IPv6 dual stack
- SSL3.0/TLS1.0



CSE-M32 P.38

- 2 ports (2xUART)
- SSL3.0/TLS1.0, SSH2.0



CSE-M24 P39

- 4 ports (4xUART)
- IPv4/IPv6 dual stack



CSE-M73 P.40

- 1 port (1x3.3V CMOS/ RS232/RS422/RS485)
- Multi-monitoring (8ch.)
- SSL3.0/TLS1.0, SSH2.0



#### CSE-B63N P.41

- 1 port (1xRS232)
- IPv4/IPv6 dual stack - SSL3.0/TLS1.0



#### CSE-H20 P.42

- 2 ports (2xRS232 with RJ45 connector)
- SSL3.0/TLS1.0, SSH2.0



#### CSE-H21 P.48

- 2 ports (2xRS232)
- Wide temperature (-40° ~+70°)
- SSL3.0/TLS1.0, SSH2.0
- High noise immunity



#### CSE-H25 P.44

- 1 port (1xRS232)
- Industrial temperature (-40° ~+85°)
- Multi-monitoring (8ch.)
- SSL3.0/TLS1.0, SSH2.0



#### CSE-H53N P.45

- 1 port (1xRS232)
- IPv4/IPv6 dual stack
- Industrial temperature
- (-40° ∼+85°)
- SSL3.0/TLS1.0



#### CSE-H55N2 P.46

- 1 port (1xRS422/RS485)
- (-40° ~+85° )
- SSL3.0/TLS1.0



- IPv4/IPv6 dual stack
- Industrial temperature



#### CSW-M83 P.47

- 1 port (1xUART) - IEEE 802.11b/g
- Soft AP
- WPA-Enterprise/PSK
- IPv4/IPv6 dual stack - USB WLAN dongle required
- CSW-M85 P.48

- 1 port (1xUART) - IEEE 802.11b/g
- Soft AP
- WPA-Enterprise/PSK
- IPv4/IPv6 dual stack



#### CSW-B85 P.49

- 1 port (1x3.3V CMOS/
- RS232/RS422/RS485) - IEEE 802.11b/g
- Soft AP
- WPA-Enterprise/PSK
- IPv4/IPv6 dual stack



#### CSW-H85K P.50

- 1 port
- (1xRS232/RS422/RS485)
- IEEE 802.11b/g - Soft AP
- WPA-Enterprise/PSK
- IPv4/IPv6 dual stack

PBH-**204** IDIS-**200** 

1

# Remote Digital I/O Control Solution

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Sollae Systems' remote I/O solution gives the best way to monitor various sensors and control power, motors, or actuators from remote sites via the Internet.

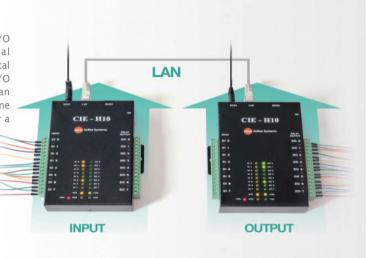
Remote I/O solution can be applied in remote access, facility, and power management system.

## Remote Digital I/O Control

#### Solution Guide

#### Internet Switch

Sollae Systems' Remote I/O Controllers monitor digital input ports and control digital output ports. A pair of I/O controllers can be used as an Internet switch by setting one for a Master and the other for a Slave.



#### Web Browser

Remote I/O controllers can be monitored via a web browser with smartphones, tablets, PCs, etc.











## I/O Integration Solution Using a Cloud Server

IoT Data Integration Server (IDIS-200) enables you to check data in real-time, and you can create a desired type of application with an Application Authorizing Tool (IDIS Maker/Viewer).



#### Mobile Application

Sollae Systems provides an Android OS based mobile application, called "ModMap", for remote I/O management. Also, you can control and monitor remote I/O controllers through a "TCP/IP console" application in iOS environment as well as developing an application with a Modbus/TCP protocol.

## CIE-M10 8 Ports Remote I/O Module



CIE-M10 is an Ethernet remote I/O module with 8 input ports, 8 output ports, and an ADC (Analog to Digital Conversion) port for sensors to detect temperature, humidity, or pressure. It is additionally equipped with a UART interface to allow your serial devices to establish an Ethernet networking connection.

CIE-M10 mainly enables you to extend the distance of the I/O control system, therefore you are able to remotely control and monitor your I/O devices over the Internet from anywhere in the world.

#### **SPECIFICATIONS**

#### Hardware

Digital Input : 8 ports (3.3V CMOS)
Digital Output : 8 ports (3.3V CMOS)

Analog Input : 1 x ADC

Serial : 1 x UART (3.3V CMOS) LAN : 10 Base-T/100 Base-TX,

10/100M auto-sensing, auto MDI/MDIX

**Software** 

Protocols : TCP/UDP/IP/ICMP/ARP/DHCP/PPPoE/TELNET/

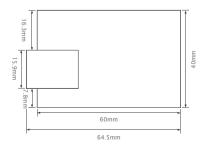
Modbus TCP/HTTP/DNS/DDNS/

Telnet COM Port Control Option (RFC2217)

Configuration : ezManager

#### **FEATURES**

- Remote I/O module
- 8 digital input, 8 digital output ports (3.3V CMOS)
- 1 analog input port (10 bits resolution)
- Separator settings for packet fragmentation
- Modbus/TCP
- Web-based control over custom web page
- Controlled by simple logic formula operating autonomously
- Used as Internet Switch
- Free mobile application





## CIE-H10 8 Ports Remote I/O Controller

#### **SPECIFICATIONS**

#### Hardware

Digital Input : 8 ports (photo coupler)

Digital Output : 8 ports (relay) Serial : 1 x RS232

LAN : 10 Base-T/100 Base-TX,

10/100M auto-sensing, auto MDI/MDIX

Software

Protocols : TCP/UDP/IP/ICMP/ARP/DHCP/PPPoE/TELNET/

Modbus TCP/HTTP/DNS/DDNS/

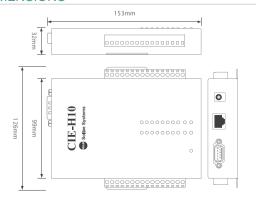
Telnet COM Port Control Option (RFC2217)

Configuration : ezManager

#### **FEATURES**

- · 8 digital input, 8 digital output ports
- Durable steel case
- Dry contact adapter (optional)
- Modbus/TCP
- · Web-based control over custom web page
- Controlled by simple logic formula operating autonomously
- · Used as Internet Switch
- Free mobile application

#### DIMENSIONS



CIE-H10 is an Ethernet remote I/O controller with 8 photo coupler input ports and 8 relay output ports. CIE-H10 mainly enables you to extend the distance of the I/O control system, therefore you are able to remotely control and monitor your I/O devices over the Internet from anywhere in the world.

CIE-H10 comes preloaded with a user web page, which is available to be customized with your own graphic images, to ease control and surveillance on the website. Besides, a Macro function allows each relay output to be automatically controlled as set by simple logic formula.

CIE-H10 also can be used as a freely downloadable management tool (ModMap).

## CIE-H12 Remote I/O Controller



CIE-H12 is an Ethernet remote I/O controller with 2 input ports and 1 relay output port. Two input port options (dry contact and wet contact) allows you to use the device under both types of system. This compact and cost-effective Ethernet I/O controller is ideal for one or two I/O equipment to control and monitor.

CIE-H12 has various methods to control relay output and monitor digital inputs such as HTTP, and Modbus/TCP. Therefore, it is available in various environments such as Remote PC Power Control, Internet Switch, etc.

#### **SPECIFICATIONS**

#### Hardware

Digital Input : 2 ports (dry/wet contact)

Digital Output : 1 port (relay)

LAN : 10 Base-T/100 Base-TX,

10/100M auto-sensing, auto MDI/MDIX

Software

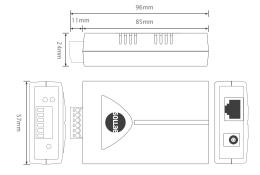
Protocols : TCP/UDP/IP/ICMP/ARP/DHCP/PPPoE/TELNET/

Modbus TCP/HTTP/DNS/DDNS/SMTP

Configuration : ezManager

#### **FEATURES**

- 2 digital input (dry/wet contact), 1 digital output ports
- Modbus/TCP
- Web-based control over custom web page
- Controlled by simple logic formula operating autonomously
- Used as Internet Switch
- Free mobile application





## CIE-H14

#### 4 Ports Remote I/O Controller

#### **SPECIFICATIONS**

#### Hardware

Digital Input : 4 ports (photo coupler)

Digital Output : 4 ports (relay) Serial : 1x RS232

LAN : 10 Base-T/100 Base-TX,

10/100M auto-sensing, auto MDI/MDIX

**Software** 

Protocols : TCP/UDP/IP/ICMP/ARP/DHCP/PPPoE/TELNET/

Modbus TCP/HTTP/DNS/DDNS/SMTP/
Telnet COM Port Control Option (RFC2217)

Configuration : ezManager

#### **FEATURES**

• Wide range of power input (DC 8.5 ~ 38V, terminal block)

• 4 digital input, 4 digital output ports

• Dry contact adapter (optional)

Modbus/TCP

• Web-based control over custom web page

• Controlled by simple logic formula operating autonomously

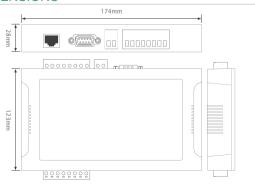
• Used as Internet Switch

• Free mobile application

CIE-H14 is an Ethernet remote I/O controller with 4 photo coupler input ports and 4 relay output ports for sensors and actuators to monitor and control

CIE-H14 mainly enables you to extend the distance of the I/O control system to help you remotely control and monitor your I/O devices over the Internet from anywhere in the world. It is additionally equipped with an RS232 serial interface to offer Ethernet networking capabilities to your serial devices

CIE-H14 supports wide input voltage range, 8.5V~38V, to be available in diverse applications. Its power is interfaced with a terminal block and available for any polarity.



**IDIS-200** 

P4S-**341** P4S-**342** 

# 2

# IoT Data Integration Solution

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Sollae Systems' IoT Data Integration Solution is to gather data in one place and utilize it in various applications to easily implement, remote monitoring and control system.

"

### IoT Data Integration

#### Solution Guide

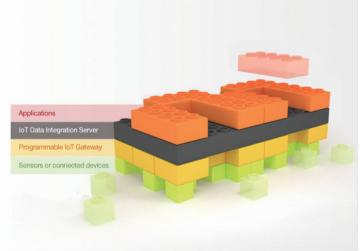
#### ■ IoT Data Integration Solution

IoT data integration solution can be deployed easily to the IoT system by collecting sensor or equipment data in one place.



### Cooperation and Maintenance

A system can be built through system modularization and cooperation as it provides a standardized interface. As a result, it provides an easy maintenance and a system expansion.







## Programmable IoT Gateway

Programmable IoT Gateways extract and process data from various sensors or equipment, and send the data to an IoT Data Integration Server.



## loT Data Integration Server

IoT Data Integration Server gathers dispersed data in the server to use them from multiple applications.

Programmable IoT Gateway



PBH-101 is a 1 port programmable device server embedded with a PHPoC interpreter.

PBH-101 offers a serial port interfaced with RS232/RS422/RS485. Equipped with a USB port, it provides Wireless LAN networking capabilities to serial devices by simply plugging in a Wireless LAN adapter.

#### **SPECIFICATIONS**

#### Hardware

Serial : 1 x RS232/RS422/RS485 LAN : 10 Base-T/100 Base-TX.

10/100M auto-sensing, auto MDI/MDIX

WLAN : IEEE802.11b/g Wireless LAN

(USB dongle provided by Sollae Systems is required)

Software

PHPoC : PHP compatible interpreter

(limited syntax & internal functions)

Connectivity : Ad-hoc/Infrastructure/Soft AP,

TCP/UDP/IP/ICMP/DHCP/WPA/EAPOL,

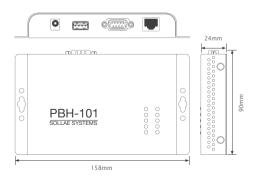
HTTP/SSH/Websocket server

Security: SSL/SSH, AES/RC4/3DES/MD5/SHA1,

WPA-PSK/Enterprise

#### **FEATURES**

- PHPoC interpreter/debugger
- · 64bit integer, double-precision floating point
- Multi-tasking capability (application and HTTP server)
- Websocket server
- · Uploading and debugging codes via USB
- Overvoltage, reverse voltage, overcurrent protection circuit
- Industrial temperature range (-40 $^{\circ}$  ~ +85 $^{\circ}$  )





#### Programmable IoT Gateway

#### **SPECIFICATIONS**

Hardware

Serial : 4 x RS232/RS422/RS485 LAN : 10 Base-T/100 Base-TX.

10/100M auto-sensing, auto MDI/MDIX

WLAN : IEEE802.11b/g Wireless LAN

(USB dongle provided by Sollae Systems is required)

Software

PHPoC : PHP compatible interpreter

(limited syntax & internal functions)

Connectivity : Ad-hoc/Infrastructure/Soft AP,

TCP/UDP/IP/ICMP/DHCP/WPA/EAPOL,

HTTP/SSH/Websocket server

Security: SSL/SSH, AES/RC4/3DES/MD5/SHA1,

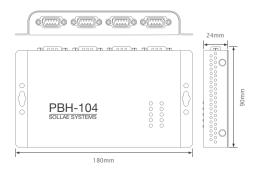
WPA-PSK/Enterprise

PBH-104 is a 4-port programmable device server embedded with a PHPoC interpreter.

It offers 4 serial ports interfaced with RS232/RS422/RS485 and a USB port for 802.11b/g Wireless LAN. PBH-104 makes it easy to realize desired features with user-defined functions since PHPoC is compatible with a PHP scripting language which has been widely used throughout the development environments.

#### **FEATURES**

- PHPoC interpreter/debugger
- · 64bit integer, double-precision floating point
- Multi-tasking capability (application and HTTP server)
- Websocket server
- · Uploading and debugging codes via USB
- Overvoltage, reverse voltage, overcurrent protection circuit
- Industrial temperature range (-40° ~ +85°)



Programmable IoT Gateway



PBH-204 is a programmable I/O controller supporting 4 digital input/output ports and an RS232/RS422/RS485 serial interface

Embedded with a PHPoC interpreter, PBH-204 eases realization of desired features with user-defined functions since PHPoC is compatible with a PHP scripting language which has been widely used throughout the development environments. With Wireless LAN capability, PBH-204 is flexible in application and sufficient to meet diverse needs.

#### **SPECIFICATIONS**

#### Hardware

Digital Input : 4 ports (dry/wet contact, NPN/PNP)

Digital OutPut : 4 ports (relay, NC/NO)
Serial : 1 x RS232/RS422/RS485
LAN : 10 Base-T/100 Base-TX.

10/100M auto-sensing, auto MDI/MDIX

WLAN : IEEE802.11b/g Wireless LAN

(USB dongle provided by Sollae Systems is required)

Software

PHPoC : PHP compatible interpreter

(limited syntax & internal functions)

Connectivity : Ad-hoc/Infrastructure/Soft AP, TCP/UDP/IP/ICMP/DHCP/WPA/EAPOL,

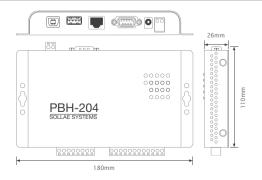
HTTP/SSH/Websocket server

Security: SSL/SSH, AES/RC4/3DES/MD5/SHA1,

WPA-PSK/Enterprise

#### **FEATURES**

- PHPoC interpreter/debugger
- 64bit integer, double-precision floating point
- Multi-tasking capability (application and HTTP server)
- Websocket server
- Uploading and debugging codes via USB
- Overvoltage, reverse voltage, overcurrent protection circuit
- Industrial temperature range (-40 $^{\circ}$  ~ +85 $^{\circ}$  )





## **IDIS-200**

IoT Data Integration Server

#### **SPECIFICATIONS**

#### Hardware

Serial : 1 x RS232 (system console) LAN : 10 Base-T/100 Base-TX,

10/100M auto-sensing, auto MDI/MDIX

**Software** 

Protocols : TCP/IP/ICMP/ARP/DHCP/TELNET/

Modbus TCP/TFTP/DNS

Security : SSL3.0/TLS1.0 Configuration : idisManager IDIS-200 collects data from multiple remote devices in one place and delivers HMI control commands to provide an optimized solution for IoT environment

#### **FEATURES**

- Supports Modbus/TCP
- Up to 100 connections to IoT Gateways
- Up to 32 connections to applications
- Secure options (SSL 3.0/TLS 1.0, password)
- Various debugging functions for communication status (RS232 console, TELNET)
- Redundant operation
- Dual power (AC 100V ~ 240V)



P4S-**341** P4S-**342** PBH-**101** PBH-**10**4

PBH-204

## 3 PHPoC Solution

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Embedded with a PHPoC (PHP on Chip) interpreter, programmable device servers enable you to realize desired features with user-defined functions. Thus, they can be a perfect solution for M2M (Machine to Machine) and IoT (Internet of Things).

### PHPoC Solution Guide

#### Sensor Monitoring

You can monitor data such as temperature, pressure, acceleration, fine dust, etc. from various sensors. PHPoC Black (P4S-341)/Blue (P4S-342) are equipped with ADC, I2C, SPI, UART, timer, and digital input interfaces for a variety of sensors.



#### **Actuator Control**

You can control a DC servo motor, a linear actuator, or a stepping motor connected to PHPoC Black/Blue. Equipment connected to the digital outputs can also be controlled. PHPoC Black/Blue give an output of PWM up to 12 units.











#### WebSocket Application

PHPoC Black/Blue support the standard HTML5 WebSocket to send and receive data in real time on the Web. (\*You must use a browser that supports the WebSocket.)

#### Library & Sample Code

It offers a variety of libraries and example codes for external system integration.



## P4S-341

Programmable IoT Board (PHPoC Black)



P4S-341 is a wired LAN programmable board embedded with a PHPoC interpreter. It supports various interfaces to connect with sensors and equipment. With PHPoC Black, you can monitor and control your equipment from a remote site via web browser. Also, it is designed to be stackable for you to implement additional functions with PHPoC expansion boards.

#### SPECIFICATIONS

#### Hardware

MCU : Cortex-M4 168MHz, flash 1024K, SRAM 192K

Digital I/O : 8 x DIO dedicated (6 x User, 2 x LED), 14 x DIO shared (SPI, I2C, 2 x UART)

6 ADG (ADEE 131:1)

Analog Input : 6 x ADC (AREF, 12bit) H/W timer : 4 x H/W timer

H/W timer : 4 x H/W timer USB : 1 x USB device

LAN : 10 Base-T/100 Base-TX, 10/100M auto-sensing,

auto MDI/MDIX

RTC : battery backup

#### **Software**

PHPoC : PHP compatible interpreter

(limited syntax & internal functions)

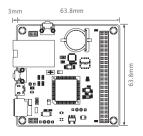
Connectivity: TCP/UDP/IP/ICMP/DHCP/HTTP/SSH/

Websocket server

Security: SSL/SSH, AES/RC4/3DES/MD5/SHA1

#### **FEATURES**

- PHPoC interpreter/debugger
- · 64bit integer, double-precision floating point
- Max. 12 PWM output (4 x H/W timer, 8 x S/W timer)
- Multi-tasking capability (application and HTTP server)
- Websocket server
- · Uploading and debugging codes via USB





## P4S-342

#### Programmable IoT Board (PHPoC Blue)

#### **SPECIFICATIONS**

#### Hardware

MCU : Cortex-M4 168MHz, flash 1024K, SRAM 192K

Digital I/O : 10 x DIO dedicated (8 x User, 2 x LED), 14 x DIO shared (SPI, I2C, 2 x UART)

Analog Input : 6 x ADC (AREF, 12bit)

H/W timer 4 x H/W timer

USB : 1 x USB device, 1 x USB host WLAN : IEEE802.11b/g Wireless LAN

(USB dongle provided by Sollae Systems is required)

RTC : battery backup

#### **Software**

PHPoC : PHP compatible interpreter

(limited syntax & internal functions)

Connectivity : Ad-hoc/Infrastructure/Soft AP, TCP/UDP/IP/ICMP/DHCP/WPA/EAPOL,

HTTP/SSH/Malaaalaa aanaa

HTTP/SSH/Websocket server

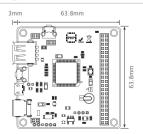
Security: SSL/SSH, AES/RC4/3DES/MD5/SHA1,

WPA-PSK/Enterprise

#### **FEATURES**

- PHPoC interpreter/debugger
- · 64bit integer, double-precision floating point
- Max. 12 PWM output (4 x H/W timer, 8 x S/W timer)
- Multi-tasking capability (application and HTTP server)
- · Websocket server
- · Uploading and debugging codes via USB

#### DIMENSIONS



P4S-342 is a programmable IoT board embedded with a PHPoC interpreter. It has 22 digital input/output pins, 6 analog inputs, a USB connector, a power jack, two buttons (reset/function), and various communication interfaces such as UART, SPI, and I2C. It also supports a network interface as well as many useful functions like ADC. RTC, and Timers (Software/ Hardware). It is designed to be stackable for you to implement additional functions with PHPoC expansion boards.

CSC-H64 CSE-T16 CSE-T32

# 4

## Console Server Solution

"

Console Servers provide system consoles with seamless network connectivity to facilitate real-time remote control and monitoring.

## Console Server Solution Guide

### Console Server Solution

Console server is a device that allows you to connect and integrate the serial console ports of various equipment via a network from a remote site. When there are network or system failures, Sollae Systems' console server can manage and resolve the problems by connecting your system console to the network.



#### Application Example

Sollae Systems' console server can integrate and manage console ports of various network equipment installed in IDC, Firewall, VPN, switches, routers, etc.









## Efficient Equipment Management

A console port, based on serial communication, has a limitation in communication distance. Sollae Systems' console servers can help you connect system consoles to a network to enable efficient and systematic management.



## Smartphone Application

Access to equipment's console ports is available through a console server with a smartphone application.

## CSC-H64

4 Ports Serial to Ethernet/WLAN Converter



CSC-H64 is a serial to Ethernet/ Wireless LAN converter that enables your serial devices to carry robust networking capabilities.

CSC-H64 offers 4 serial ports interfaced with RS232/RS422/RS485 and a frame delimiter for packet fragmentation.

CSC-H64 comes preloaded with Soft AP so it can simply be linked to any devices in Wireless LAN by operating as an AP. It eases network construction with mobile devices such as smartphones, tablet PCs, and laptops where an AP is unavailable.

#### **SPECIFICATIONS**

#### Hardware

Serial : 4 x RS232/RS422/RS485 LAN : 10 Base-T/100 Base-TX.

10/100M auto-sensing, auto MDI/MDIX

WLAN : IEEE802.11b/g Wireless LAN,

(USB dongle provided by Sollae Systems is required)

#### Software

Protocols : ICMPv6/TCPv6/UDPv6/TCP/UDP/IP/ICMP/ARP/

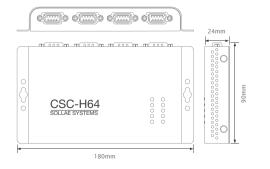
DHCP/TELNET/DNS/DDNS/Telnet COM Port

Control Option(RFC2217)

Security : SSL3.0/TLS1.0, WPA-Enterprise Configuration : ezManager, AT commands

#### **FEATURES**

- Durable steel case
- Console server function
- Industrial temperature range,  $-40^{\circ}$  ~  $+85^{\circ}$  (without a USB WLAN adapter)
- Overvoltage, reverse voltage, overcurrent protection
- IPv4/IPv6 dual stack
- SSL (Secure Sockets Layer)





## **CSE-T16/T32**

16/32 Ports Console Server

#### **SPECIFICATIONS**

#### Hardware

Serial : 16/32 x RS232 (RJ45 interface)

LAN : 10 Base-T/100 Base-TX,

10/100M auto-sensing, auto MDI/MDIX

Software

Protocols : TCP/UDP/IP/ICMP/ARP/DHCP/TELNET/DNS/

DDNS/TFTP/Telnet COM Port Control Option

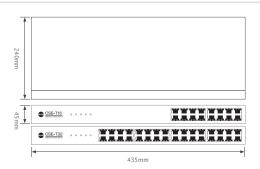
(RFC2217)

Security : SSL3.0/TLS1.0 Configuration : ezManager CSE-T16/T32 are 16/32 ports console servers allowing devices with console ports to be embedded with networking capabilities. With CSE-T16/T32, you can easily monitor the status of devices over the network from anywhere in the world

CSE-T16/T32 also help you save time and energy by improving the efficiency of integrated management and control of many devices in diverse applications.

#### **FEATURES**

- RS232 to Ethernet converter (console server)
- 19 inches rack mount type
- SSL (Secure Sockets Laver)
- Cisco serial interface
- · Simple and intuitive configuration tool
- Free mobile application



Ethernet

CSE-M53N CSE-M32 CSE-M24 CSE-M73

CSE-B63N CSE-H20 CSE-H21 CSE-H25

CSE-H53N CSE-H55N2 CSC-H64

Wireless LAN

CSW-M83 CSW-M85 CSW-B85 CSW-H85K

CSC-H64

# 5

## Serial Networking Solution

"

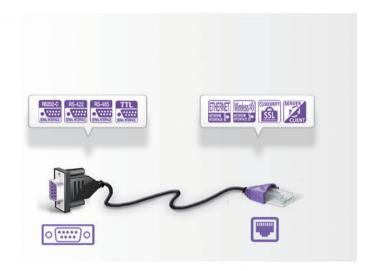
Sollae Systems' ezTCP is designed to control and monitor serial devices over the network. You no longer need to invest your time and energy to manage your device on site or develop network solution. Simply applying ezTCP to your system, you will get your industrial equipment to be embedded with network capabilities quickly and easy.

## Serial Networking

#### Solution Guide

### Serial Networking Solution

ezTCP provides an easy way to connect your devices to the Internet such as LAN, Wireless LAN, and etc. ezTCP enables you to control and monitor devices over the Internet in a short time.



#### Serial Tunnelling

A pair of ezTCP is good for setting up serial tunneling to automatically transfer serial data across the LAN.





# Virtual serial port (ezVSP)

ezVSP (virtual serial port) adds network connectivity to a legacy system without any changes.



# Networking module

Embedding Sollae Systems' networking module can give a networking function to a serial equipment.

# CSE-M53N Embedded Serial to Ethernet Module



CSE-M53N is a micro-sized embedded serial to Ethernet module with pins compatible with CSE-M53.

CSE-M53N basically provides conversion functions to remotely control and manage serial devices over the Ethernet.

CSE-M53N is a perfect solution for environments where industrial operating temperature range (-40 $^{\circ}$ C  $\sim$  +85 $^{\circ}$ C) is demanded and those who plan to move forward to the next generation Internet protocol, IPv6.

### **SPECIFICATIONS**

#### Hardware

Serial : 1 x UART (3.3V CMOS) LAN : 10 Base-T/100 Base-TX.

10/100M auto-sensing, auto MDI/MDIX

#### Software

Protocols : ICMPv6/TCPv6/UDPv6/TCP/UDP/IP/ICMP/ARP/

DHCP/PPPoE/TELNET/DNS/DDNS/

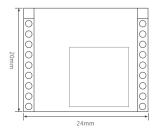
Telnet COM Port Control Option (RFC2217)

Security : SSL3.0/TLS1.0

Configuration : ezManager, AT Commands

## **FEATURES**

- Compact module type (20mm x 24mm)
- Industrial temperature range (-40 $^{\circ}$  ~ +85 $^{\circ}$ )
- SSL (Secure Sockets Layer)
- Separator settings for packet fragmentation
- IPv4/IPv6 dual stack
- High speed UART x 1 (up to 921.6Kbps)
- RS232/RS422/RS485 extension
- Virtual COM Port Redirector for Windows OS (ezVSP)





# CSE-M32

#### 2 Ports Embedded Serial to Ethernet Module

### **SPECIFICATIONS**

#### Hardware

Serial : 2 x UART (3.3V CMOS) LAN : 10 Base-T/100 Base-TX.

10/100M auto-sensing, auto MDI/MDIX

**Software** 

Protocols : TCP/UDP/IP/ICMP/ARP/DHCP/PPPoE/TELNET/

DNS/DDNS/Telnet COM Port Control Option

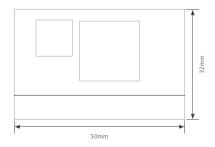
(RFC2217)

Security : SSL3.0/TLS1.0, SSH2.0 Configuration : ezManager, AT Commands CSE-M32 is a 2-port embedded serial to Ethernet module that accomplishes conversion functions (serial to TCP/IP and vice versa) to provide your serial devices with seamless network connectivity. Applying it, you can remotely control and manage serial devices over a network without changing existing software.

CSE-M32 is equipped with a TCP/IP stack optimized for compact size and multiple UART ports to enable highspeed data transmission.

#### **FEATURES**

- SSL (Secure Sockets Layer)
- Separator settings for packet fragmentation
- High speed UART x 2 (up to 1.8Mbps)
- Virtual COM Port Redirector for Windows OS (ezVSP)
- Flexible configuration and network communication by 'AT Commands' (patent)



# CSE-M24

4 Ports Embedded Serial to Ethernet Module



CSE-M24 is a module for manufacturers with a desire to quickly and easily embed the Ethernet connectivity in their products. It allows your devices to get a network connectivity with just a serial connection.

Using CSE-M24, not only you can reduce cost and risk, but also shorten development time to add the network capability.

Because CSE-M24 allows extending the distance of your serial communication system, you are able to remotely control and monitor the serial devices over the Internet.

# **SPECIFICATIONS**

#### Hardware

Serial : 4 x UART (3.3V CMOS) LAN : 10 Base-T/100 Base-TX.

10/100M auto-sensing, auto MDI/MDIX

#### Software

Protocols : ICMPv6/TCPv6/UDPv6/TCP/UDP/IP/ICMP/ARP/

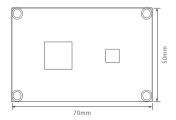
DHCP/PPPoE/TELNET/DNS/DDNS/

Telnet COM Port Control Option (RFC2217)

Configuration : ezManager, AT Commands

## **■** FEATURES

- UART x 4 (up to 460.8Kbps)
- Separator settings for packet fragmentation
- IPv4/IPv6 dual stack
- Extension board for RS232/RS485 interface (optional)
- Virtual COM Port Redirector for Windows OS (ezVSP)
- Flexible configuration and network communication by 'AT Commands' (patent)





# CSE-M73

#### **Embedded Serial to Ethernet Module**

### **SPECIFICATIONS**

Hardware

Serial : 1 x RS232/RS422/RS485/3.3V CMOS

LAN : 10 Base-T/100 Base-TX,

10/100M auto-sensing, auto MDI/MDIX

**Software** 

Protocols : TCP/UDP/IP/ICMP/ARP/DHCP/PPPoE/TELNET/

DNS/DDNS/Telnet COM Port Control Option

(RFC2217)

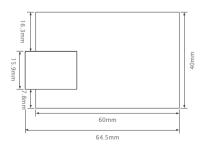
Security : SSL3.0/TLS1.0, SSH2.0
Configuration : ezManager, AT Commands

**FEATURES** 

Multi-monitoring

- SSL (Secure Sockets Laver)
- Separator settings for packet fragmentation
- Various serial interfaces (RS232/RS422/RS485/3.3V CMOS)
- Built-in RI45 connector for Ethernet interface
- Virtual COM Port Redirector for Windows OS (ezVSP)
- Flexible configuration and network communication by 'AT Commands' (patent)

DIMENSIONS



CSE-M73 is an embedded serial to Ethernet module with a built-in RJ45 connector for Ethernet interface.

Embedded with an optimized TCP/IP stack, CSE-M73 enables your serial equipment to access to the network without changing the existing software. In other words, CSE-M73 handles TCP/IP protocol to provide your serial equipment with seamless network connectivity, helping you control, monitor and manage your serial equipment at a remote site.

# CSE-B63N



Embedded RS232 to Ethernet Board

CSE-B63N is an embedded RS232 to Ethernet board which CSE-M53N is integrated.

CSE-B63N is offered with an evaluation board which makes it much easier to embed CSE-M53N in your system without extra time and burden to build an additional circuit on your own

The basic concept of CSE-B63N is quickly and easily adding networking capabilities to your serial equipment, which helps you remotely control and monitor from anywhere in the world.

### **SPECIFICATIONS**

#### Hardware

Serial : 1 x RS232

LAN : 10 Base-T/100 Base-TX,

10/100M auto-sensing, auto MDI/MDIX

Software

Protocols : ICMPv6/TCPv6/UDPv6/TCP/UDP/IP/ICMP/ARP/

DHCP/PPPoE/TELNET/DNS/ DNS/

Telnet COM Port Control Option (RFC 2217)

Security : SSL3.0/TLS1.0

Configuration : ezManager, AT Commands

### **FEATURES**

- High speed RS232 x 1 (up to 921.6Kbps)
- IPv4/IPv6 dual stack
- Stateless/stateful (DHCPv6) address auto-configuration
- Separator settings for packet fragmentation
- Security options (SSL3.0/TLS1.0, IP/MAC filtering, password)
- Virtual COM Port Redirector for Windows OS (ezVSP)
- Flexible configuration and network communication by 'AT Commands' (patent)





# CSE-**H20**

2 Ports RS232 to Ethernet Converter

### **SPECIFICATIONS**

#### Hardware

Serial : 2 x RS232 (RJ45 interface) LAN : 10 Base-T/100 Base-TX.

10/100M auto-sensing, auto MDI/MDIX

Software

Protocols : TCP/UDP/IP/ICMP/ARP/DHCP/PPPoE/TELNET/

DNS/DDNS/Telnet COM Port Control Option

(RFC2217)

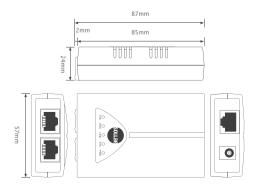
Security : SSL3.0/TLS1.0, SSH2.0
Configuration : ezManager, AT Commands

CSE-H20 is a 2-port RS232 to Ethernet converter that handles TCP/IP data automatically. Therefore, it helps your serial devices to simply get networking capabilities as well as restraining them from the distance limitation of serial communication

CSE-H20's serial ports are interfaced with RJ45 connectors and support serial communication at speed up to 230,400bps.

# **FEATURES**

- Compact size (87mm x 57mm x 24mm)
- SSL (Secure Sockets Layer)
- Separator settings for packet fragmentation
- Virtual COM Port Redirector for Windows OS (ezVSP)
- Serial tunneling
- Console server function
- RJ45 type of serial port



# CSE-H21

Industrial 2 Ports RS232 to Ethernet Converter



CSE-H21 is a 2-port industrial serial to Ethernet converter that provides your serial equipment with seamless network connectivity. By applying it, therefore, you can remotely control and monitor your serial equipment over a network without changing the legacy system.

CSE-H21 ensures stable performance in spite of noise in industrial environments since it is equipped with a surge protection circuit and two of electrically isolated RS232 ports.

### **SPECIFICATIONS**

#### Hardware

Serial : 2 x RS232

LAN : 10 Base-T/100 Base-TX,

10/100M auto-sensing, auto MDI/MDIX

#### Software

Protocols : TCP/UDP/IP/ICMP/ARP/DHCP/PPPoE/TELNET/

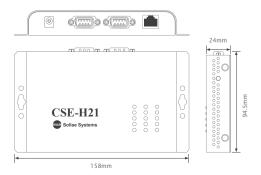
DNS/DDNS/Telnet COM Port Control Option

(RFC2217)

Security : SSL3.0/TLS1.0, SSH2.0
Configuration : ezManager, AT Commands

#### **FEATURES**

- Durable steel case
- Electronically isolated serial ports (high noise immunity)
- Wide range of operating temperature (-40°C  $\sim$  +70°C)
- SSL (Secure Sockets Layer)
- Separator settings for packet fragmentation
- Virtual COM Port Redirector for Windows OS (ezVSP)
- · Serial tunneling
- Console server function





# CSE-H25 Secure RS232 to Ethernet Converter

CSE-H25 is an RS232 to Ethernet converter with enhanced security protocols embedded.

It basically supports conversion functions (serial to TCP/IP and vice versa) to control and monitor RS232 serial devices over the network

CSE-H25 comes preloaded with various communication functions (DNS, DDNS, Telnet COM Port Control Option, etc.) and strong security functions (SSL, MAC/IP filtering, etc.), along with multi-monitoring that allows your serial device to be monitored by multiple hosts at the same time.

# **SPECIFICATIONS**

#### Hardware

Serial : 1 x RS232

LAN : 10 Base-T/100 Base-TX,

10/100M auto-sensing, auto MDI/MDIX

Software

Protocols : TCP/UDP/IP/ICMP/ARP/DHCP/PPPoE/TELNET/

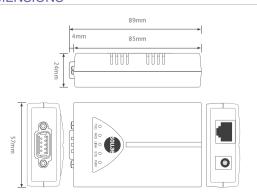
DNS/DDNS/Telnet COM Port Control Option

(RFC2217)

Security : SSL3.0/TLS1.0, SSH2.0
Configuration : ezManager, AT Commands

# **FEATURES**

- Multi-monitoring in TCP server mode (maximum 8 channels)
- Industrial temperature range (-40° ~ +85° )
- SSL (Secure Sockets Layer)
- Separator settings for packet fragmentation
- Virtual COM Port Redirector for Windows OS (ezVSP)
- Serial tunneling
- Console server function



# CSE-H53N

Industrial RS232 to Ethernet Converter



CSE-H53N is an industrial RS232 to Ethernet converter that supports IPv6 addressing architecture as well as IPv4.

It is an ideal solution for system integrators or solution providers who want to quickly and easily add networking capabilities to their systems to remotely control and monitor their serial equipment from a remote distance.

CSE-H53N supporting industrial temperature range (-40°C  $\sim$  +85°C) comes preloaded with various communication functions(DNS, DDNS, Telnet COM Port Control Option, etc.) and strong security functions (SSL, MAC/IP filtering, etc.), along with a packet fragmentation separator.

### **SPECIFICATIONS**

#### Hardware

Serial : 1 x RS232

LAN : 10 Base-T/100 Base-TX,

10/100M auto-sensing, auto MDI/MDIX

Software

Protocols : ICMPv6/TCPv6/UDPv6/TCP/UDP/IP/ICMP/ARP/

DHCP/PPPoE/TELNET/DNS/DDNS/

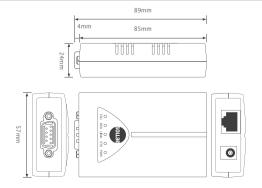
Telnet COM Port Control Option (RFC 2217)

Security : SSL3.0/TLS1.0

Configuration : ezManager, AT Commands

### **FEATURES**

- Industrial temperature range (-40°C ~ +85°C)
- Overvoltage, reverse voltage, overcurrent protection circuit
- IPv4/IPv6 dual stack
- SSL (Secure Sockets Layer)
- Separator settings for packet fragmentation
- Virtual COM Port Redirector for Windows OS (ezVSP)
- Serial tunneling
- Console server function





# CSE-H55N2

Industrial RS422/RS485 to Ethernet Converter

### **SPECIFICATIONS**

#### Hardware

Serial : 1 x RS422/RS485 (terminal block)

LAN : 10 Base-T/100 Base-TX,

10/100M auto-sensing, auto MDI/MDIX

Software

Protocols : ICMPv6/TCPv6/UDPv6/TCP/UDP/IP/ICMP/ARP/

DHCP/PPPoE/TELNET/DNS/DDNS/

Telnet COM Port Control Option (RFC2217)

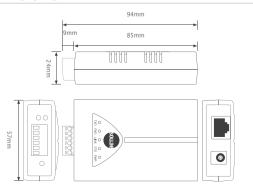
Security: SSL3.0/TLS1.0

Configuration : ezManager, AT Commands

## **FEATURES**

- Industrial temperature range (-40°C ~ +85°C)
- Overvoltage, reverse voltage, overcurrent protection circuit
- Hardware design to improve stability against noise and electrical damage
- IPv4/IPv6 dual stack
- SSL (Secure Sockets Layer)
- Separator settings for packet fragmentation
- Virtual COM Port Redirector for Windows OS (ezVSP)
- Serial tunneling

# **DIMENSIONS**



CSE-H55N2 is an industrial RS422/RS485 to Ethernet converter that supports IPv6 addressing architecture as well as IPv4

It comes equipped with a terminal block for RS422 and RS485 interface

The basic concept of CSE-H55N2 is quickly and easily adding networking capabilities to your serial equipment to help you remotely control and monitor serial equipment from anywhere in the world.

# CSW-M83

#### Embedded Serial to Wireless LAN Module



CSW-M83 is an embedded serial to Wireless LAN module that conforms to IEEE 802.11b/ q wireless standards.

CSW-M83 provides your industrial equipment with seamless wireless network connectivity via UART to help you control and monitor serial devices from anywhere over Wireless LAN.

Applying CSW-M83, therefore, not only reduces costs and risks but also shortens development time to add Wireless LAN network capabilities.

### SPECIFICATIONS

#### Hardware

Serial : 1 x UART (3.3V CMOS)
WLAN : IEEE802.11b/g Wireless LAN.

Ralink RT3070/5370 USB Wireless LAN

donale required

**Software** 

Protocols : ICMPv6/TCPv6/UDPv6/TCP/UDP/IP/ICMP/ARP/

DHCP/TELNET/DNS/DDNS/

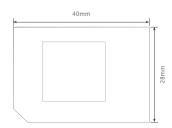
Telnet COM Port Control Option (RFC2217)

WLAN Security : WEP, WPA-PSK (TKIP/AES), WPA2-PSK (TKIP/AES), WPA-Enterprise (EAP-TLS, EAP-TTLS, PEAP)

Configuration : ezManager, AT Commands, Web

# **FEATURES**

- IEEE 802.11b/g
- UART x 1 (up to 230.4Kbps)
- IPv4/IPv6 dual stack
- Soft AP (setting and connection through a smartphone or laptop without an AP available)
- Separator settings for packet fragmentation
- WPA Enterprise (EAP-TLS, EAP-TTLS, PEAP)
- · Infrastructure and Ad-hoc network
- Security options (IP/MAC filtering, password)
- A Ralink RT3070/RT5370 USB Wireless LAN dongle required





# **CSW-M85**

#### Embedded Serial to Wireless LAN Module

### **SPECIFICATIONS**

Hardware

Serial : 1 x UART (3.3V CMOS)

WLAN : IEEE802.11b/g Wireless LAN, chip antenna/

U.FL connector (selectable)

**Software** 

Protocols : ICMPv6/TCPv6/UDPv6/TCP/UDP/IP/ICMP/ARP/

DHCP/TELNET/DNS/DDNS/

Telnet COM Port Control Option (RFC2217)

WLAN Security : WEP, WPA-PSK (TKIP/AES), WPA2-PSK (TKIP/AES), WPA-Enterprise (EAP-TLS, EAP-TTLS, PEAP)

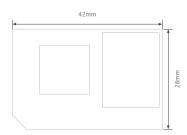
Configuration : ezManager, AT Commands, Web

CSW-M85 is an embedded serial to Wireless LAN module that adds wireless networking capabilities to your industrial equipment via UART.

Applying CSW-M85, you can control and monitor your serial devices from anywhere in the world over Wireless LAN.

#### **FEATURES**

- IEEE 802.11b/g
- UART x 1 (up to 230.4Kbps)
- IPv4/IPv6 dual stack
- Soft AP (setting and connection through a smartphone or laptop without an AP available)
- · Separator settings for packet fragmentation
- WPA Enterprise (EAP-TLS, EAP-TTLS, PEAP)
- · Infrastructure and Ad-hoc network
- Security options (IP/MAC filtering, password)
- Internal chip antenna, U.FL socket for external antennas



# CSW-B85

#### Embedded Serial to Wireless LAN Board



CSW-B85 is an embedded serial to Wireless LAN board integrated with CSW-M85, a serial to Wireless LAN module.

It adds wireless networking capabilities to your industrial equipment via RS232, RS422, RS485, and 3.3V logic level. Applying CSW-B85, you can control and monitor your serial devices from anywhere in the world over Wireless LAN.

## SPECIFICATIONS

#### Hardware

Serial : 1 x RS232/RS422/RS485/3.3V CMOS

WLAN : IEEE802.11b/g Wireless LAN, chip antenna/

U.FL connector (selectable)

Software

Protocols : ICMPv6/TCPv6/UDPv6/TCP/UDP/IP/ICMP/ARP/

DHCP/TELNET/DNS/DDNS/

Telnet COM Port Control Option (RFC2217)

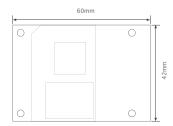
WLAN Security : WEP, WPA-PSK (TKIP/AES), WPA2-PSK (TKIP/

AES), WPA-Enterprise (EAP-TLS, EAP-TTLS, PEAP)

Configuration : ezManager, AT Commands, Web

# **FEATURES**

- IEEE 802.11b/a
- IPv4/IPv6 dual stack
- Soft AP (setting and connection through a smartphone or laptop without an AP available)
- Wireless Received Signal Strength Indication (RSSI) mode
- Separator settings for packet fragmentation
- WPA Enterprise (EAP-TLS, EAP-TTLS, PEAP)
- Infrastructure and Ad-hoc network
- Security options (IP/MAC filtering, password)
- · Internal chip antenna, U.FL socket for external antennas





# CSW-H85K

RS232/RS422/RS485 to Wireless LAN Converter

### **SPECIFICATIONS**

#### Hardware

Serial : 1 x RS232/RS422/RS485

WLAN : IEEE802.11b/g Wireless LAN, external antenna

**Software** 

Protocols : ICMPv6/TCPv6/UDPv6/TCP/UDP/IP/ICMP/ARP/

DHCP/TELNET/DNS/DDNS/

Telnet COM Port Control Option (RFC2217)

WLAN Security : WEP, WPA-PSK (TKIP/AES), WPA2-PSK (TKIP/AES). WPA-Enterprise (EAP-TLS. EAP-TTLS. PEAP)

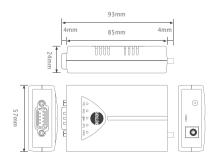
Configuration : ezManager, AT Commands, Web

CSW-H85K is a serial to Wireless LAN converter that adds wireless networking capabilities to your industrial equipment via RS232, RS422, and RS485

Applying CSW-H85K, you can control and monitor your serial devices from anywhere in the world over Wireless LAN.

## **FEATURES**

- Soft AP (setting and connection through a smartphone or laptop without an AP available)
- Wireless Received Signal Strength Indication (RSSI) mode
- WPA Enterprise (EAP-TLS, EAP-TTLS, PEAP)
- IPv4/IPv6
- Separator settings for packet fragmentation
- Console server function
- Virtual COM Port Redirector for Windows OS (ezVSP)
- · SMA connector for external antenna



# Software

# ezManager



#### ezManager is a software needed for using ezTCP

#### What ezManager does:

- Changes configuration (e.g. IP Address)
- · Gets information and checks status
- · Changes firmware

#### ezManager has merits such as:

- Simple and easy to use for anyone without an installation
- · Loaded with all the functions to use the software
- Manages devices in local/remote network
- Compatible with Windows (version 2000 above)

### ezVSP



#### ezVSP is a software for converting Serial to TCP/IP on PC

#### What ezVSP does:

- Allows legacy serial software to work without modifying the serial program
- Manages virtual COM port (max. 255) on a PC
- · Converts serial to TCP/IP and vice versa

#### ezVSP has merits such as:

- Supports various communication modes (TCP Server/Client, UDP)
- · Creates and handles multiple virtual COM ports
- Loaded with functions for user's convenience

# ModMap



# ModMap is a software for management of remote I/O devices

#### What ModMap does:

- Manages multiple remote I/O devices with Modbus/TCP
- Supports Modbus/TCP functions for maintaining devices

#### ModMap has merits such as:

- Manages and handles multiple devices regardless of their type
- · Loaded with functions for user's convenience
  - Pulse shape output
  - Script
  - Backup/Restore
  - Warning message



PHPoC Debugger, required for the script development, is a development tool for Windows.

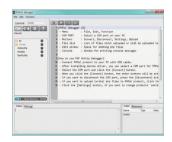
#### What PHPoC Debugger does:

- · Uploads/Downloads files
- · Real-time debugging scripts
- · Edits the script files
- · Sets system environment
- · Determines resource status
- · Changes firmware

#### Advantage of PHPoC Debugger:

- Real-time script debugging function to clearly and quickly diagnose problems
- An option to use an external editor
- Sets passwords to protect the source code
- · Simple and easy to use without an installation

# PHPoC Debugger



IDIS Maker/Viewer is an application program for Windows® to manage and control remote I/O devices and IoT Gateways that are connected to the IDIS-200.

#### What IDIS Maker/Viewer does:

- Connects with IDIS-200 via Modbus/TCP
- Monitors digital inputs of the equipment that is connected with IDIS-200
- Monitors and controls digital outputs of the equipment connected with IDIS-200

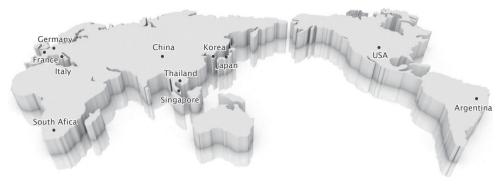
#### IDIS Maker/Viewer has merits such as:

- · Configures the monitoring and controlling screen
- · Configures multiple screens
- Controls output port by ON, OFF, Toggle, or Pulse
- · Sends a notification message, sound alarm, or an E-mail
- when the status of input or output changes
- Provides a scheduling function to help users appoint regular tasks

# IDIS Maker/Viewer



# Distributors & Resellers



#### Distributors

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