

# PCS NEWS

No. 531

## *New Module for EH-150 EH-SIO*

*Dear Ladies and Gentlemen,  
Dear Business Friends,*

We are pleased to inform you that the new serial communication module EH-SIO is available in our stock now. The EH-SIO module provides various communication possibilities.

Module name	Supported protocols
EH-SIO	<ul style="list-style-type: none"><li>• Modbus protocol: Modbus RTU and ASCII protocol, master and slave mode (ASCII protocol from Ver. 2.0 of EH-SIO)</li><li>• General purpose mode for ASCII communication</li><li>• Hi-protocol for HMI/scada connectivity (from Ver. 2.0 of EH-SIO)</li><li>• Simple data link: Data exchange between several EH-150's and MICRO-EH's (from Ver. 2.0 of EH-SIO)</li></ul>

For detailed technical data, please refer to the attached data-sheet. The EH-SIO module is ready for sale and we are looking forward to receive your orders.

With kind regards,

Heiko Bach  
 Product Engineer Automation  
 Hitachi Europe GmbH

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## Supported CPU modules

The function of the EH-SIO module depends on the software version of the CPU as shown in the following table.

Function of EH-SIO	EH-SIO		Supported CPU modules	
	Version		EH-CPU516 (Ver. E2.02 - E2.06)	EH-CPU516 (Ver. E2.07 or later)
	1.0	2.0	EH-CPU548 (Ver. E4.02 - E4.05)	EH-CPU548 (Ver. E4.06 or later)
Free-Protocol	✓	✓	✓	✓
Modbus Master (RTU )	✓	✓	✓	✓
Modbus Master (ASCII )	-	✓	✓	✓
Modbus Slave (RTU )	✓	✓	✓	✓
Modbus Slave (ASCII)	-	✓	✓	✓
Modbus Slave (I/O mapping)	-	✓	✓	✓
Hi-Protocol	-	✓	-	✓
Simple data link	-	✓	-	✓

\* Model name and product code are same.

The software version of CPU module / EH-SIO can be checked in the main plate of the module side.

\* EH-CPU104A/208A/316A do not support EH-SIO.

Be sure to check if both EH-SIO and CPU have ✓ mark at requested function.

Ex.) EH-CPU516 (Ver.E2.02) & EH-SIO (Ver.2.0) Modbus Slave (ASCII) → OK  
 EH-CPU548 (Ver.E4.06) & EH-SIO (Ver.1.0) Hi-Protocol → NG

- EH-SIO behavior when non-supporting CPU module is used
  - Combination of EH-SIO(Ver.1.0/2.0) and EH-CPU516(Ver.E2.01 or before) / EH-CPU548 (Ver.E4.01 or before)  
 Since the handshake of EH-CPU and EH-SIO is not performed properly, EH-SIO is not controlled properly.
  - Combination of EH-SIO(Ver.2.0) and EH-CPU516(Ver.E2.02-E2.06) / EH-CPU548(Ver.4.02-E4.05)  
 Initial setting of Hi-Protocol mode and simple data link mode is performed properly however, these operation modes do not work.
- Combination of EH-SIO(Ver.1.0) and EH-CPU516(Ver.E2.07 or later) / EH-CPU548(Ver.4.06 or later)  
 Initial setting of Modbus (ASCII) mode or simple data link mode is not performed with error detected. Initial setting of Hi-Protocol mode is performed properly however, EH-SIO does not respond to a request from host.  
 Free protocol mode and Modbus (RTU) mode work without any problem.

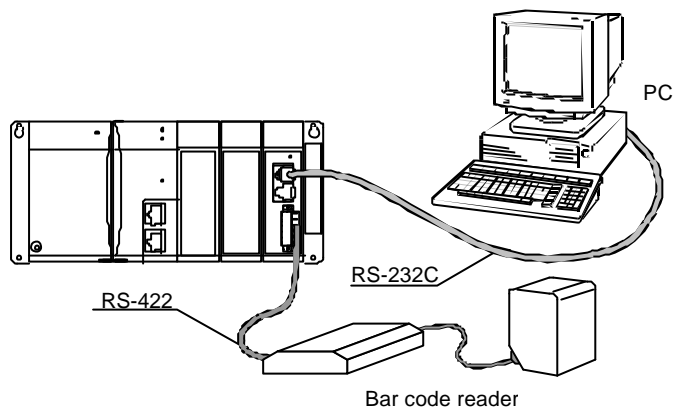
## Details of Features

### (1) 2 communication ports

There are two communication ports on the EH-SIO module. Port 1 is a RS-232C interface. The port 2 can be used as RS-232C, RS-422 or 485 interface. Each communication port can be operate independently and it is possible to assign different functions to each communication port.

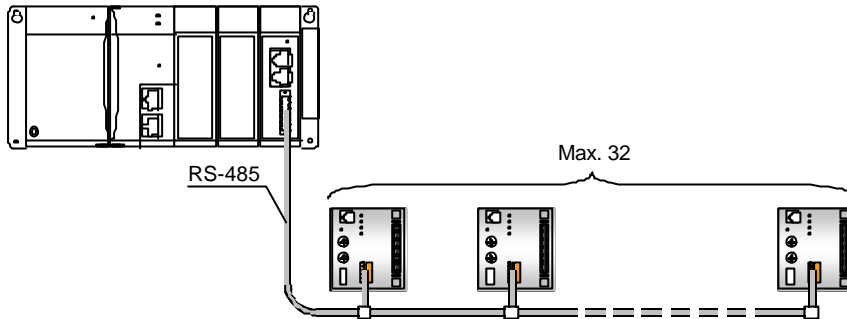
### (2) Communication operation by user program

Communication with external device is performed by user program. It is controlled by special command "TRNS 9".



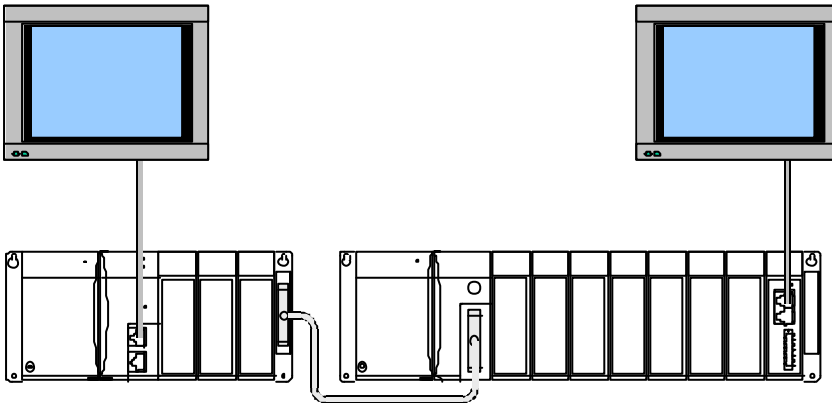
### (3) Modbus protocol is supported.

Since EH-SIO can be configured as master or slave, application range of EH-150 will be expanded, such as supervising by host computer or controlling modbus slaves. Modbus (ASCII ), Modbus Slave (I/O mapping), Hi-Protocol are supported from Ver2.0 of EH-SIO.



### (4) Communication protocol for H series (Hi-Protocol) is supported.

EH-SIO can communicate with HMI (Human Machine Interface) which supports H/EH series communication procedure. (Hi-Protocol mode can be set up Max. 8 units to one CPU.) For example, it is convenient when using two or more touch panels to be connected. Moreover, since EH-SIO can be mounted also in an expansion base, system expansion is very flexible. This function is supported from Ver2.0 of EH-SIO.



\*A programming tool is not connectable with EH-SIO

**(5) Simple data link.**

The simple data link is to exchange I/O informations between the EH-SIO module (master) and max. 32 slaves. The models of PLC used as the slave are EH-150\* and MICRO-EH\*. After the initial settings of EH-SIO are completed, the I/O area will be automatically linked.

(Simple data link mode can be set up Max. 8 units to one CPU.)

\* Required function for slave PLC is to support transmission control procedure 2 (with station No.).

(EH-CPU316A/516/548, MICRO 23 / 28.)

This function is supported from Ver2.0 of EH-SIO.

