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MICROCYBER CORPORATION

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About Us

Based on fieldbus technology, Microcyber Corporation is engaged in R&D, manufacturing, sales and engineering service of advanced industrial control systems, instruments, communication boards and controllers for industrial process control solution. Microcyber Corporation is looking forward to the long-term smooth and close cooperation with you.

Product List

Instruments—FF H1/PROFIBUS PA/ PROFIBUS DP/HART

◆ NCS-PT105II Pressure Transmitter
    (Capacitance Sensor)
◆ NCS-PT105IIS Pressure Transmitter
    (Piezoresistance Silicon Sensor)
◆ NCS-TT105 Temperature Transmitter
◆ NCS-TT106 Temperature Transmitter
    (Head Mounted)
◆ NCS-TT108 Temperature Transmitter
    (8-channel Sensor Input)
◆ NCS-IF105 Current/Fieldbus Converter
◆ NCS-FI105 Fieldbus/Current Converter

HART Module Set

◆ MS0010 Module Set for Capacitance Sensor
◆ MS0110 Module Set for Silicon Sensor
◆ MS0210 Module Set for Temperature

Gateways

◆ G0313 Modbus to FF Gateway
◆ G0307 Modbus to PA Gateway
◆ G0306 Modbus to DP Gateway
◆ G0310 Modbus to HART Gateway
◆ G1013 HART to FF Gateway
◆ G1003 HART to Modbus Gateway

Product List

Built–in Modules

◆ M0313 Modbus to FF Module
◆ M0307 Modbus to PA Module
◆ M0306 Modbus to DP Module
◆ M0310 Modbus to HART Module

ASICs

◆ FBC0409 FF/PA Communication Controller
◆ HT1200M HART Communication Controller
◆ APC3 DP Communication Controller

Development ToolKit

◆ DK13 FF Development ToolKit
◆ DK07 PA Development ToolKit
◆ DK10 HART Development ToolKit

WirelessHART Products

◆ DK11 WirelessHART Development Toolkit
◆ M1100S WirelessHART Module
◆ G1100 WirelessHART Gateway

Accessories

◆ NCS-BP105 Fieldbus Power
◆ NCS-BT105 Terminator
◆ MCAFD4/8 Fieldbus Junction Box
◆ NCS-HM105 HART Modem

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NCS-PT105II Pressure Transmitter (Capacitance sensor)

As a new generation of smart fieldbus pressure transmitter, NCS-PT105II series pressure transmitter with capacitance sensor is available on FF H1, PROFIBUS PA and HART protocols. The transmitter has higher accuracy, better reliability and supports intrinsic safety.

- High accuracy: ±0.075%FS (20°C, range rate 10:1)
- Multi sensor : differential pressure (SD), high static pressure (SH), gauge pressure (SG), absolute pressure (SA), micro differential pressure (SR)
- Compensation : automatically environmental temperature compensation

NCS-PT105IIS Pressure Transmitter (Piezoresistance silicon sensor)

NCS-PT105II series pressure transmitter with advanced, mature, reliable piezoresistive silicon sensors has been designed meticulously by combining advanced microprocessor technology and digital capacitance measurement techniques, and it is available on FF H1, PROFIBUS PA, PROFIBUS DP and HART protocols.

- High accuracy: ±0.075%FS (20°C, range rate 10:1)
- Multi sensor: gauge pressure (SG), absolute pressure (SA)
- Measurement media: liquid, gas and stream

NCS-TT105 Temperature Transmitter

NCS-TT105 temperature transmitter is a new generation of smart transmitter with FF H1, PROFIBUS PA or HART technology. NCS-TT105 transmitter integrates abundant function blocks and realizes not only normal measurement function but also complicated control strategy.

- Support multiple thermal resistances and thermocouples
- Thermal resistance supports 2/3-wire connection mode
- Thermocouple can use cold end compensation function

NCS-TT106 Temperature Transmitter (Head mounted)

NCS-TT106 temperature transmitter supports FF H1, PROFIBUS PA and HART protocols and multiple temperature sensors. With independent R&D communication controller, it has become a fieldbus temperature transmitter with high performance.

- Support multiple thermal resistances and thermocouples
- Thermal resistance supports 2/3-wire connection mode
- Thermocouple can use cold end compensation function

NCS-TT108 Temperature Transmitter (8-channel sensor input)

NCS-TT108 temperature transmitter supports 8-channel temperature sensor input. It supports FF H1 and PROFIBUS PA protocols, and is applied to a variety of thermal resistance and thermocouple sensors and has a wide range.

- Support multiple thermal resistances and thermocouples
- Thermal resistance supports 2/3-wire connection mode
- Thermocouple can use cold end compensation function

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NCS-IF105 Current/Fieldbus Converter

As a conversion device, NCS-IF105 converter can receive 4~20mA analog signal of 4 channels and convert to Foundation fieldbus or profibus PA signal.

■Number of channels: 4
■Input of signal: 0~20mA, 4~20mA
■Input impedance: 100Ω
■Bus signal: 31.25kbit/s
■Power: 9~32VDC
■Current consumption (static) : ≤14mA

NCS-FI105 Fieldbus/Current Converter

As a conversion device, NCS-FI105 converter can receive Foundation fieldbus or profibus PA signal and convert to 4~20mA analog signal of 4 channels.

■Number of channels: 4
■Output of signal: 4~20mA
■Bus signal: 31.25kbit/s
■Power: 9~32VDC
■Current consumption (static) : ≤14mA

MS0010 Module Set for Capacitance Sensor
MS0110 Module Set for Silicon Sensor

■4~20mA output with HART protocol digital communication (2-wire)
■EMC meets IEC 61326 requirements
■Transmitter accuracy achieves 0.075%
■Sensor temperature compensation
■0~32 seconds adjustable damping coefficient
■Provide instrument calibration, calibration software and technology
■Operating temperature: −40℃~+85℃
  (with LCD−20℃~+70℃)

MS0210 Module Set for Temperature

■Transmitter accuracy achieves 0.05%
■Support many types of thermal resistance and thermocouple sensors
■Thermocouple can use cold end compensation function
■Support 2/3/4-wire RTD connection mode
■Safety isolation for bus and sensor

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G0313 Modbus to FF Gateway

- ■ Modbus-RTU protocol to FF protocol
- ■ Compliant with FF standard
- ■ Support LinkMaster function
- ■ Support standard DD specification
- ■ Support up to four Modbus devices

G0307 Modbus to PA Gateway

- ■ Modbus-RTU protocol to PA protocol
- ■ Support PA3.02 specification
- ■ Support AI, AO, DI, DO standard function block
- ■ Support up to four Modbus devices

G0306 Modbus to DP Gateway

- ■ Modbus-RTU protocol to DP protocol
- ■ Standard DP interface, baud rate self-adapting, support up to 12Mbps
- ■ Support up to 244 byte input / output
- ■ Configure Modbus relevant parameters by GSD
- ■ Modbus side can be both master and slave station

G1013 HART to FF Gateway

- ■ HART protocol to FF protocol
- ■ Support HART 5/6/7 protocol
- ■ Support ITK6.1.1
- ■ Support up to four HART slave devices
- ■ Support 4 AI and 1 PID function block

G0310 Modbus to HART Gateway

- ■ Modbus-RTU protocol to HART protocol
- ■ Support 6 device variables and 4 dynamic variables
- ■ Support Modbus communication parameters dynamic configuration
- ■ Support HART multipoint mode
- ■ Support 375/475 communicator

G1003 HART to Modbus Gateway

- ■ Support Modbus-RTU/ASCII, hardware interface RS232/422/485
- ■ Can work in a point-to-point or multipoint mode
- ■ Supported HART command can be configured
- ■ Connect up to 15 HART slave devices in multipoint working mode
- ■ Support HART burst mode

M0310 Modbus to HART Module

- Support HART 5/6/7 protocol
- Comply with standard Modbus RTU protocol
- Support Modbus communication parameter dynamic configuration
- Support 6 device variables and 4 dynamic variables

M0306 Modbus to DP Module

- Modbus-RTU master station, PROFIBUS DP slave station
- Comply with PROFIBUS DPV0 protocol standard
- Electrical interface connected with Modbus-RTU slave station is TTL level
- Can set PROFIBUS DP slave station address via DIP switch

M0307 Modbus to PA Module

- Comply with Profibus PA 3.02 specification
- Support Modbus-RTU communication parameter dynamic configuration
- Support function blocks: AI, AO, DI, DO, PID, etc
- Support up to 4 channels AI, AO, DI, DO

M0313 Modbus to FF Module

- Comply with FF protocol standard
- Support Modbus-RTU communication parameter dynamic configuration
- Support function blocks: AI, AO, DI, DO, PID, etc
- Support ITK 6.1.1

**Easy to upgrade:
same size and interface**

FBC0409 FF/PA Communication Controller

- Designed to comply with IEC 61158-2
- Supports line data rate 31.25kbit/s
- Good at integration, simple external circuit, small size
- Available in 44-pin TQFP package
- Low power consumption design : <600μA

HT1200M HART Communication Controller

- Low power consumption
- Compatible with HT20C15 and SYM20C15
- Single chip, FSK modem (Semi-duplex 1200b/s)
- Integrates circuit of receiving band-pass filter
- LQFP32 package

APC3 DP Communication Controller

- Compatible with VPC3 and SPC3 in mode DPV0, at the working voltage 3.3V
- Support Intel and Motorola processing interface modes
- SPC3 in mode DPV0, except for different the working voltages

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Communication Board---FF/PA/DP/HART

■ Same hardware for FF H1& PROFIBUS PA
■ FISCO certified
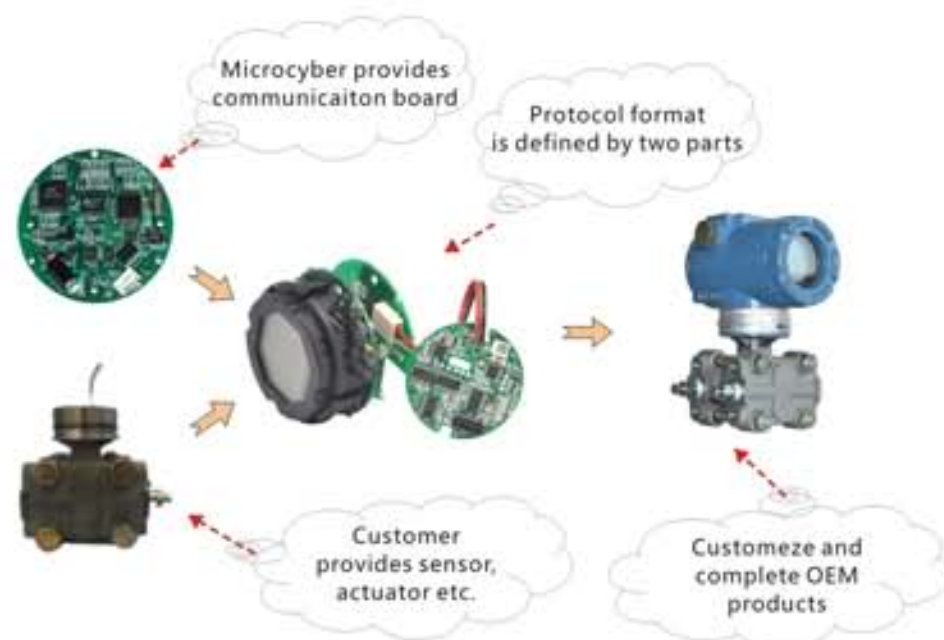■ Customized board

Fieldbus Development Toolkit---FF H1/PROFIBUS PA/HART

■ Drive your own fieldbus

Technical Service

■ OEM service
■ Certification pre-test
■ Certification test support
■ System integration test support

Microcyber provides communicaiton board

Protocol format is defined by two parts

Customer provides sensor, actuator etc.

Customeze and complete OEM products

DK11 WirelessHART Development Toolkit

DK11 WirelessHART development toolkit can help device manufacturer to develop and test WirelessHART field device quickly and efficiently, to shorten time to market, improve performance and core competitiveness.

■ Provide all required materials to develop WirelessHART field device, not necessary to purchase other devices
■ Pass FCG conformance test
■ Do long-term interoperability test with many similar products
■ Provide rich library files, sample code, detailed technical development documents

M1100S WirelessHART Module

M1100S WirelessHART module can help equipment manufacturers to integrate WirelessHART communication standard to field device simply and quickly, to achieve safe, reliable, standard WirelessHART data transmission and enhance the product's performance and competitiveness.

■ Low power consumption
■ Comply with HART7.5 standard
■ Provide detailed technical documentation and development tools
■ Fast integration, shorten development process

G1100 WirelessHART Gateway

G1100 WirelessHART intelligent gateway is responsible for the establishment, management and maintenance of WirelessHART network. It continuously optimize the network to ensure all devices work efficiently and safely.

■ Gain real-time process data. Reliability of wireless data can reach 99%
■ Wireless network configuration tool
■ Comply with HART7.5 standard
■ Explosion proof grade: Ex nA IIC T4 Gc
■ Support up to 500 wireless devices

NCS-BP105 Fieldbus Power Conditioner
NCS-BT105 Fieldbus Terminator

NCS-BP105 fieldbus power conditioner applies to Foundation fieldbus and profibus PA control system and provides power to fieldbus instrument. Matched with Fieldbus terminator, it adopts uniform impedance characteristic, to reproduce bus signal perfectly.

■Comply with the FF-831 bus power supply test specification
■Support redundant connection, active impedance control method
■Servo voltage output, meeting the requirements of long distance power supply
■Strong anti-electromagnetic interference, protection of bus device

MCAFD4/8 Fieldbus Junction Box

The fieldbus junction box is used to connect FF H1 and PROFIBUS PA devices to fieldbus, and it can be used as terminator at bus mainline and branch end.

■Short circuit protection and breakdown equipment isolation
■No effect of other normal working Fieldbus devices when installing or uninstalling
■Low installation cost, simple electric maintenance, waterproof and dust proof of housing joint
■No polarity of Fieldbus input. Not necessary to consider polarity of fieldbus devices
■Each MCAFD4/8 can connect max 4/8 devices

NCS-HM105 HART Modem

Industrial automation instrument is upgrading from traditional 4~20mA analog control signal to industrial fieldbus with digital communication function. HART bus has digital communication function and it's compatible with 4~20mA analog control signal.

■Conform to HART physical layer standard
■Transformer isolation, no ground connection influence
■Low power consumption, no need of external power source
■USB and Serial port

FF H1/PROFIBUS PA/ PROFIBUS DP/HART Partners

◆Emerson Process Management, Valve Actuation, LLC. (USA)
◆Leyden Engineering (USA)
◆Bifold Fluidpower (UK)
◆Chongqing Chuanyi Automation Co., Ltd. (CHINA)
◆Enertork,Ltd. (KOREA)
◆Young Tech Co.,Ltd (KOREA)
◆Metroval - Controle de Fluidos Ltda.(BRAZIL)
◆Dandong Top Electronic Instrument Co., Ltd. (CHINA)
◆Tefulong Group Co., Ltd. (CHINA)
◆...

FF/PA communication board for pressure transmitter, temperature transmitter, actuator

FF/PA communication board for level transmitter, flowmeter

DP communication board for actuator

HART communication board for actuator

HART communication board for actuator

FF/PA communication board for positioner

FF/PA communication board for electromagnetic flowmeter

FF/PA communication board for electronic actuator

FF/PA communication board for analyzer