



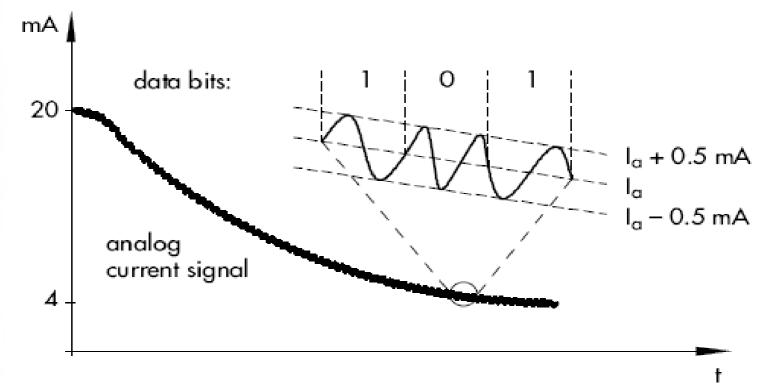
ICP DAS HART Introduction





HART Introduction

HART (Highway Addressable Remote Transducer) :

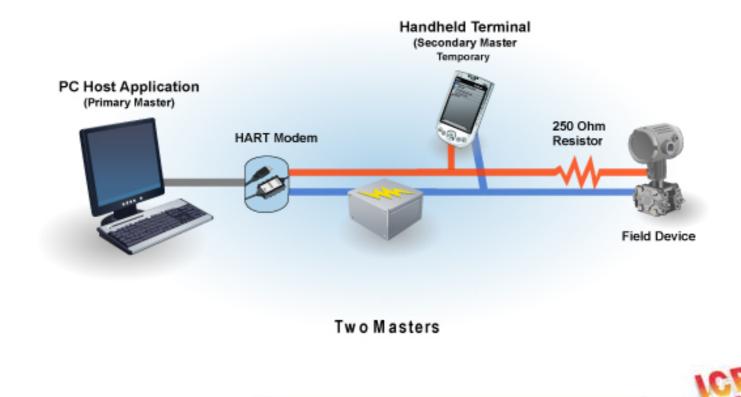


HART Instrument with intrinsically safe explosion-proof.



Comm. Structure (1/2)

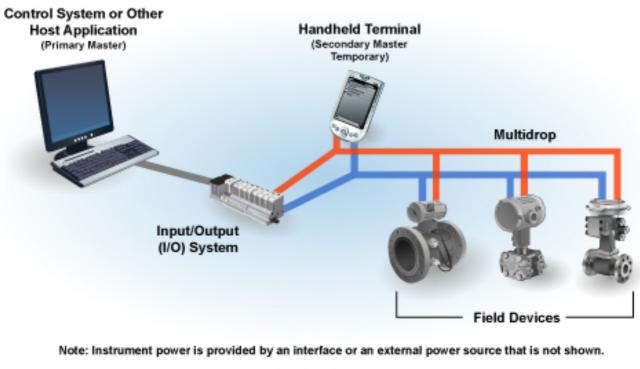
Peer-to-Peer mode (analog/digital)



PAC

Comm. Structure (2/2)

Multi-drop mode (digital)



Two Masters





ICP DAS HART Products

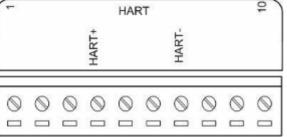
Туре	Model	Module Function	State
Converter	I-7567	USB to HART	Release
Converter	I-7570	RS-232/422/485 to HART	Release
	I-7547	Ethernet to HART	Soon
Cotowov	HART-710	Modbus(RTU/ASCII) to HART	Release
Gateway	GW-7557	PROFIBUS DP to HART	Release
	GW-7437 Modbus/TCP to HART		Soon
I/O Module	I-87H17W	HART AI module with 8 ch.	Release
	I-87H24W	HART AO module with 8 ch.	Soon





I-7567 (1/3)



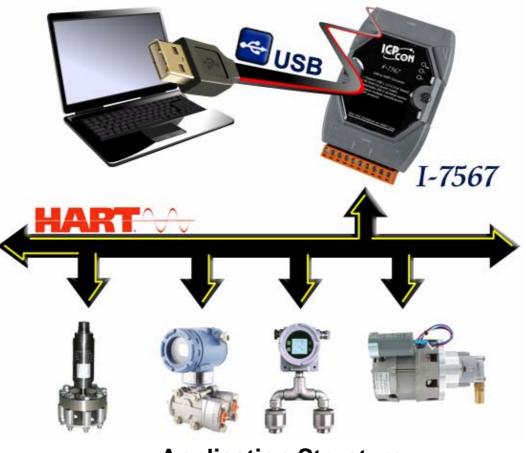


- Support USB1.1 or USB2.0
- No external power supply (by USB)
- Support point-to-point / multi-drop
- Support firmware update via USB
- > Selectable 250 Ω load resistor
- Support HART Short/Long frame
- Support HART Burst mode
- Provide PWR / Tx / Rx LED
- Built-in Watchdog





I-7567 (2/3)







I-7567 (3/3)

HC_Tool:

C_Tool	1. A sl
earch : Start Stop Status : Idle Information : Search Device Sucess. Manufacturer ID : keine Angabe Manufacturer's Device Type Code : 1 Number of preambles needed in the request : 5 Command set revision level : 5 Command set revision level : 5 Command set revision level : 10 Software revision : 10 Hardware revision : 8 Flags : 0 Device ID number : 4711	2. M co 3. D
Send & Receive Msg	
Send Data FF FF FF FF FF 02 80 00 00 82 With Parity Check	Send
下午 02:03:10:875—>FF FF FF FF FF 02 80 00 00 82 00	<
Receive Data	Clear
下午 02:03:11:421 <—FF FF FF FF FF 06 80 00 0E 00 00 FE FB 01 05 05 0A 0A 08	00 00 12 67 F1

- 1. Auto scan all HART devices and show the device information.
- 2. Module configuration and HART communication easily and quickly.
- 3. Data logging for HART comm.



I-7570 (1/3)

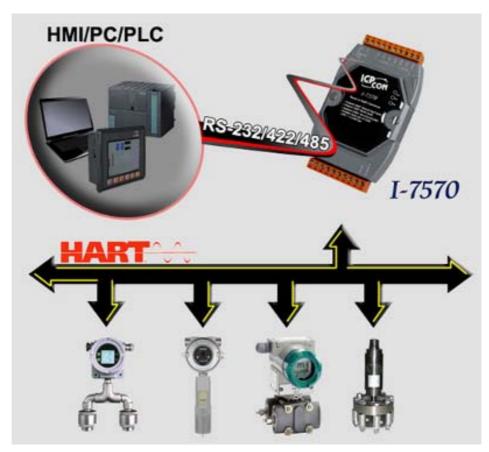


- Provide RS-232/422/485 Interface
- Support point-to-point / multi-drop
- Support firmware update via RS-232
- > Selectable 250 Ω load resistor
- Support HART Short/Long frame
- Support HART Burst mode
- Provide PWR / Tx / Rx LED
- Built-in Watchdog





I-7570 (2/3)







I-7570 (3/3)

HC_Tool:

Cettings Data Log SRMsg About	1. A sl
earch : Start Stop Status : Idle Information : Manufacturer ID : keine Angabe Manufacturer's Device Type Code : 1 Number of preambles needed in the request : 5 Command set revision level : 5 Transmitter specific revision level : 10 Software revision : 8 Flags : 0 Device ID number : 4711	2. M co 3. D
Send & Receive Msg	
Send Data FF FF FF FF FF 02 80 00 00 82	Send
下午 02:03:10:875—>FF FF FF FF FF 02 80 00 00 82 00	<
Receive Data	Clear
下午 02:03:11:421 <==FF FF FF FF FF 06 80 00 0E 00 00 FE FB 01 05 05 0A 0A 08	8 00 00 12 67 F1 🔗

- 1. Auto scan all HART devices and show the device information.
- 2. Module configuration and HART communication easily and quickly.
- 3. Data logging for HART comm.



I-7547 (1/3)

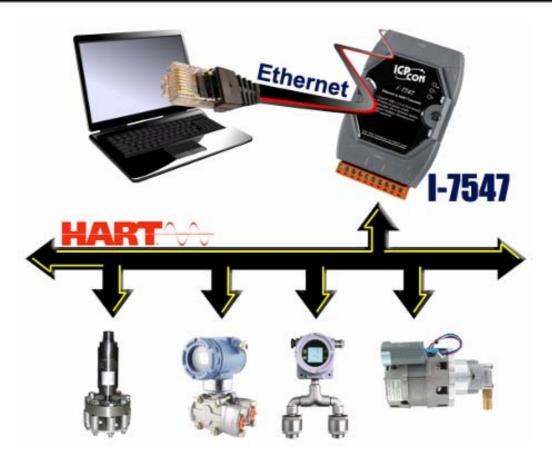


- Support Ethernet Comm. Interface
- Support point-to-point / multi-drop
- Support firmware update via Ethernet
- > Selectable 250 Ω load resistor
- Provide four HART channels
- Support HART Short/Long frame
- Support HART Burst mode
- Provide PWR / RUN LED





I-7547 (2/3)







I-7547 (3/3)

HC_Tool:

ettings Data Log SRMsg About	1. A sl
earch : Start Stop Patus : Idle Information : Manufacturer ID : keine Angabe Manufacturer's Device Type Code : 1 Number of preambles needed in the request : 5 Command set revision level : 5 Command set revision level : 10 Software revision : 10 Hardware revision : 8 Flags : 0 Device ID number : 4711	2. M co 3. D
Send & Receive Msg	
Send Data FF FF FF FF FF 02 80 00 00 82 With Parity Check	Send
下午 02:03:10:875—>FF FF FF FF FF 02 80 00 00 82 00	<
Receive Data	Clear
下午 02:03:11:421 <== FF FF FF FF FF 06 80 00 0E 00 00 FE FB 01 05 05 0A 0A 08	00 00 12 67 F1

- 1. Auto scan all HART devices and show the device information.
- 2. Module configuration and HART communication easily and quickly.
- 3. Data logging for HART comm.



HART-710 (1/3)



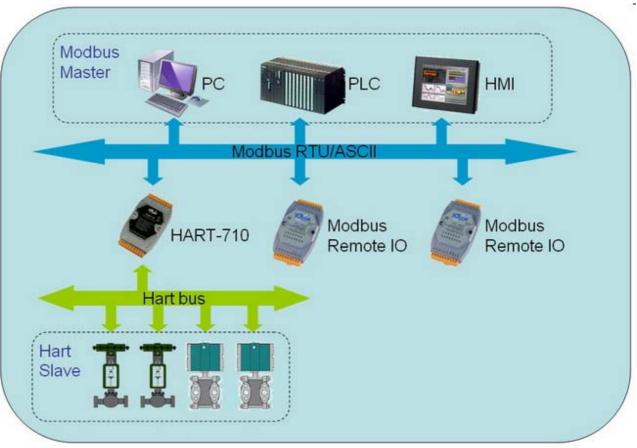
-	e)
HART+ HART-	(R) Vs+ (B) GND

- Support Modbus RTU/ASCII
- Provide RS-232/422/485 Interface
- Support point-to-point / multi-drop
- Support firmware update via RS-232
- > Selectable 250 Ω load resistor
- Support HART Short/Long frame
- Support HART Burst mode
- Provide PWR / Tx / Rx LED
- Built-in Watchdog





HART-710 (2/3)







HART-710 (3/3)

Utility 工具軟體:



- 1. Auto scan all HART devices and show the device information.
- 2. Module configuration and HART communication easily and quickly.
- 3. Modbus Address Mapping Table Configuration.





PROFIBUS 0 0 Support PROFERES DIVO & DPV1 M Surport #ART sharef, and Tours result HART modules | Units 14 erport HART channels: 4 Allen the HART matern PROFILE'S hand only detected source Max 340-data longth -1 240/249 (byte) haud C1041 : 85-212 ***** (PROFIBUS) B) GND 14 HART OF HART 0-HART 2+ HART 1+ ART1-HART 2-ART 34 R) Vs+

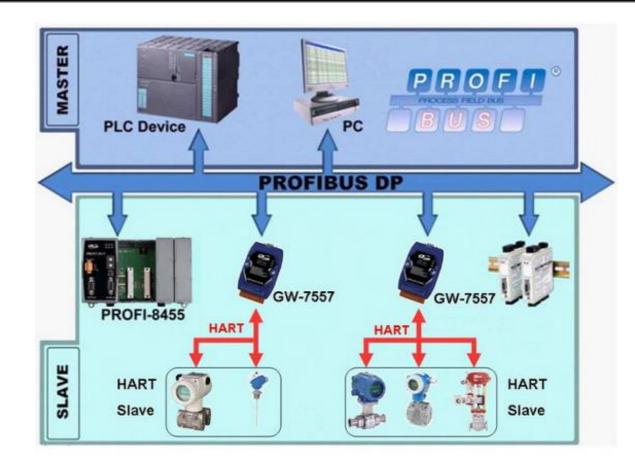
GW-7557 (1/2)

- Support PROFIBUS DP-V0
- Auto Detect PROFIBUS Baudrate
- Support PROFIBUS Max. Baud 12Mbps
- Max Output / Input Length 240 Bytes
- Provide four HART channels
- Support two HART master
- Support point-to-point / multi-drop
- Support HART Burst mode
- Provide PWR / RUN / ERR LED
- Built-in Watchdog





GW-7557 (2/2)







I-87H17W (1/2)

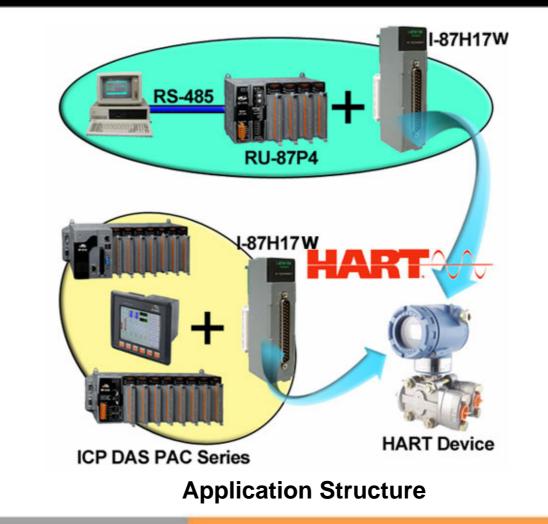
H17W	Pin Assignment Name	Te	erminal N	0.	Pin Assignment Name
HART Input	X EXT_PWR VIN7-	19 18 17	000	37 36	BK2 EXT_GND
	VIN7+ VIN6-	16 15	000	35 34 33	EXT_GND INT_PWR6
»7 F	VIN6+ VIN5-	14 13	00	32 31	EXT_GND
	VIN5+ VIN4- VIN4+	12 11 10	000	30 29	EXT_GND INT_PWR4
	VIN3- VIN3+	09 08	000	28 27	EXT_GND INT_PWR3
T	VIN2- VIN2+	07 06	000	26 25 24	EXT_GND INT_PWR2 EXT_GND
	VIN1- VIN1+	05	00	23 22	INT_PWR1 EXT_GND
1	VIN0- VIN0+ BK1	03 02 01	000	21 20	INT_PWR0 EXT_GND

-pin male D-Sub Connector

- Support WinPAC / ViewPAC / XPAC and I-87Kn / RU-87Pn / USB-87Pn / ET-87Pn series.
- Provide 8 HART channels.
- Support current measurement and HART communication.
- Support point-to-point only.
- Support 2 or 4 wire HART device.
- Open wire detection for every ch.
- Built-in Dual Watchdog
- Support DCON protocol and utility
- Provide PWR and Ch. LED



I-87H17W (2/2)







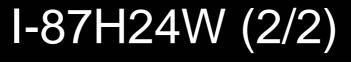
I-87H24W (1/2)

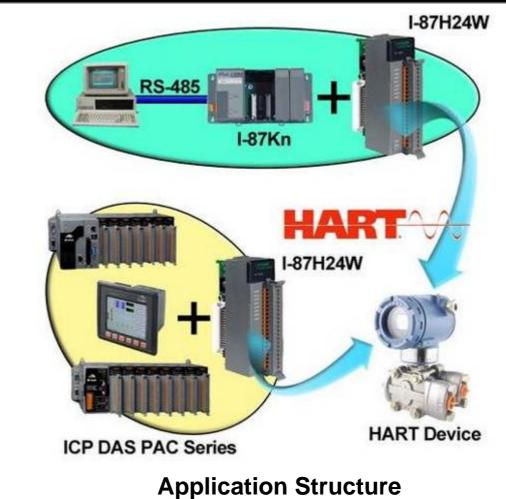


ninal	No.	Pin Assignment
• (01	lout0+
a (02	lout0-
	03	lout1+
0 (04	lout1-
	05	lout2+
	06	lout2-
0 (07	lout3+
	08	lout3-
a (09	
a (10	
0	11	
n (12	
8	13	
	14	
п (15	
	16	
	17	
α (18	
	19	24V+
11	20	GND

- Support WinPAC / ViewPAC / XPAC and I-87Kn / RU-87Pn / USB-87Pn / ET-87Pn series.
- Provide 4 HART channels.
- Support current measurement and HART communication.
- Support point-to-point only.
- Support 2 or 4 wire HART device.
- > Open wire detection for every ch.
- Built-in Dual Watchdog
- Support DCON protocol and utility
- Provide PWR and Ch. LED











HART Resource

 ICP DAS HART Products Website : <u>http://www.icpdas.com/products/Remote_IO/can_bus/hart_series.htm</u>

2. HART Official Website:

http://www.hartcomm.org/index.html

