



PROYTEK, S. A.
Todo en Automatización

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PROYTEK-HARTDrv

HART[®] Devices Master Driver

For **SIXNET[®]** IPm Series Linux Based Controllers and RTUs

PROYTEK-HARTDrv is a software module that enables SIXNET's IPm controllers and RTU's to gather variables and other data directly from smart transmitters and other smart devices that are HART[®] compatible. Data is read from devices directly in digital form.

PROYTEK-HARTDrv puts variables and transmitter data into the SIXNET IPm I/O registers, making transmitter data directly available to other applications running in the IPm, such as ISaGRAF programs and Sixlog datalogging, and other SIXNET devices through the standard peer-to-peer capabilities of SIXNET controllers. The HART data is also universally available as Modbus I/O registers using the Modbus master and slave drivers resident in all SIXNET controllers and RTUs.



The driver is
100% compatible
with all SIXNET
IPm products.

The driver is
a Linux based
application



Features:

- Fully integrated with IPm firmware, entirely based on standard Linux and SIXNET IPm libraries
- Scalable. Unlimited number of serial ports and HART[®] devices per port (Only limited by available hardware ports in the controller or RTU).
- Multi-threaded software design. The driver launches a thread process for each serial port, handling serial HART[®] communications over each serial port independently, concurrently and in parallel
- Small memory and flash disk footprint. Runs on all SixTRAK IPm or VersaTRAK IPm models
- **Fully installable and configurable using the SIXNET I/O Tool Kit**
- On line configuration changes and activation. No need to reboot the controller in order to activate changes
- Uses Unique Device ID HART[®] addressing scheme, allowing for more than 15 devices per serial port (appropriate design of HART[®] network required)
- Can read process data from Multivariable HART[®] devices

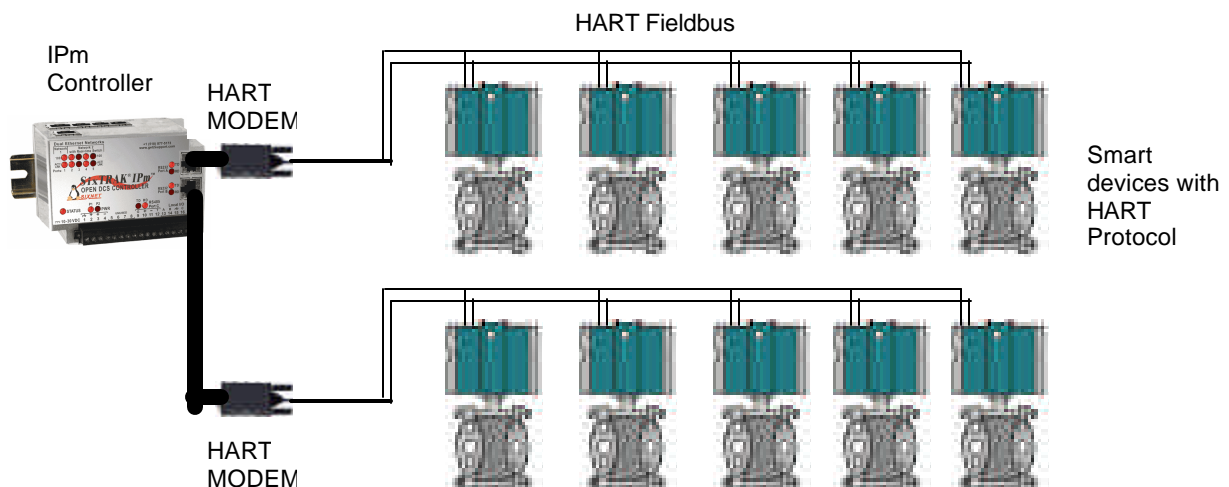


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- HART® variables are presented as Modbus I/O registers for universal accessibility.
- Maximum accuracy: No A/D conversion at RTU/DCS and no scaling. Data is read in floating point and in final engineering units directly from transmitter device. Final accuracy is the same as the transmitter's
- HART® Device's variables and data can be mapped to any SIXNET's data base variable type. Internal data conversion to any SIXNET data base type, if required, is transparent to the user.
- Fully meets HART® conformance classes #1 and #1A
- Supports command 15 of HART® conformance class #2, and commands 3 and 33 of conformance class #3
- User can freely configure what to read from **each** device and where to map into SIXNET IPm database i.e.:
 - Choose from:
 - Read Unique Identifier
 - Read Primary Variable and Engineering Unit Code
 - Read Output Current and Percentage of Range
 - Read Output Information
 - Read All Dynamic Variables and Current
 - Read Selected Dynamic Variables
 - And map to any of:
 - AX (analog input), AY (analog output), X (discrete input), Y (discrete output), LX (long 32-bit integer input), LY (32-bit output), FX (floating point input), and FY (floating point output) registers
- Full SIXNET tag naming support. Each variable array can have its SIXNET tag name assigned by the user at configuration time or automatically built and assigned at run-time by the driver, based on IPm's hostname and transmitter's Unique ID
- Full run-time debugging output execution option, for maintenance and troubleshooting
- Supports any type of HART® modem (either RTS, DTR or none keying)
- The driver is portable to any UNIX or Linux based controller or RTU.





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PROYTEK-HARTDrv HART^â driver Specifications:

Software Type	Multithreaded, one thread per serial port. Parent controlled via Operating System's Signals
Driver Control	Termination via SGTERM signal Configuration reload via SIGHUP signal
O.S.Compatibility	Linux, QNX [®] and any Unix system with POSIX extensions
Current Version	1.0 for SIXNET IPm Linux based controllers
Hardware interfacing	Hardware independent. Standard Linux/POSIX I/O interfacing. Serial port device control via IOCTL system calls. Easily portable to other Operating Systems.

PROYTEK-HARTDrv HART^â driver Requirements:

Hardware	VersaTRAK [®] IPm RTU any model SixTRAK [®] IPm Open DCS Controllers SixTRAK I/O Controllers (ST-GT-1210)
	External HART modem, RTS, CTS or data traffic controlled (recommended: MACTek [®] 's VIATOR [®] RS232 HART [®] Interface)
Software	IPm firmware version 1.2 or later
	I/O Toolkit 2.2 or later
	Linux Kernel 2.4.18 or newer
Filesystem Usage	300 KB

Please Note: This driver is easily portable to other Operating Systems.