



PT. INTEGRA TEKNIK ASIA

Engineers Provider - Control and IT-embedded

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PRODUCTS PROFILE

We have developed range of Automation software based-on OPC and SQL technologies, as follows :

1. InTek Hybrid Multi-OPC Server

The first OPC Server product in the world that capable to run multi-protocol over single serial communication port/channel.

2. InTek HistLog

OPC to mySQL/ODBC

3. InTek GraphHist & GraphAnalyst

Graphical Trend Viewer and Trend Comparison

4. InTek Field&PlantView

Real-time Graphical Presentation with Multi-media Alarm

5. InTek XLS Report

Automatic Periodic Report in Excel Spreadsheet

6. InTek IEDsView

Detail Access and Setup of Intelligent Electronic Devices (IED).

7. InTek Excel Add-In

Turn the excel spreadsheet to become simple MMI, and connect to any OPC Server directly via just select-and browse.

and we have bundled the above software modules for a specific application area, that is:

InTek PowerView for Electrical's IEDs Monitoring and Control :

- InTek MeterView (Digital Power Meter)
- InTek RelayView (Protection Relay and Recloser)
- InTek MotorView (Motor Controller)

InTek WellsView for Oil and Gas' IEDs Monitoring and Control :

- InTek ESPsView
- InTek InjectionView
- InTek BeamView
- InTek WellsSurveillance



InTek Hybrid Multi OPC Server

As far as we know until the releasing of this product, InTek Hybrid OPC Server is **the first** OPC Server product **in the world** that capable to **run multi-protocol over single serial communication port/channel**.

The **Serial protocols** that currently supported/developed on InTek Hybrid OPC Server are :

- IEC 60870-5-101
- IEC 60870-5-103
- DNP 3.0 Serial Level 1, 2, and 3
- ABB SPAbus
- Modbus RTU / Jbus
- Modbus ASCII
- EDF HNZ (multi versions)
- KIM-LIPI Micromint
- Rosemount ROC (Q2 2004)
- AB DF1 (Q2 2004)

(please contact us to find the latest serial protocols list and development plan, as the schedule may be changed depend on the project urgency)

and all of the above (or combination of several protocols) could be set **to run on single serial port**, such as single Radio channel, one Power Line Carrier channel, etc.

InTek Hybrid OPC Server also supports **Ethernet TCP/IP protocols** such as :

- IEC 60870-5-104
- DNP 3.0 over LAN/WAN
- Modbus TCP/IP
- IEC 60870.6 Tase.2 (mid of Q1 2004)
- IEC 61850 / UCA.2 (end of Q1 2004)

and support the utilization of Port Server (Serial to Ethernet) for serial communication over Ethernet TCP/IP network.

InTek Hybrid OPC Server featured with **Hot-standby redundancy**, in terms of :

- channel redundancy
- PC/computer redundancy

Facilities for **devices template** (*pre-defined devices with all of its tags*) allow the user to just select that Device without any requirement to define any tags further. Also, the template will include direct collection of the historical log within the device, and the collection could be triggered by a point change and/or periodic regular base. The acquired history log will be directly presented as interpreted data on CSV/text file, or any other required file format.



With this template capability, build-up OPC Server database could be done less than one hour to define hundreds of Devices (that already has a template database).

Facilities to export all of that "template" tags database to other standard MMI software application, provide a really easy-to-use and time shortcut in development of MMI tags database, where the MMI is only need to import all of the database based-on their standard supported format, and no manual database definition is required.

Currently, InTek Hybrid OPC Server already has a built-in Database/Tags Template and Historical collection for the following IED (Intelligent Electronic Device) :

- Siemens Siprotec series Protection Relay
 - . IEC 60870-5-103 Siprotec 7SJ60**
 - . IEC 60870-5-103 Siprotec 7SJ61**
 - . IEC 60870-5-103 Siprotec 7SJ62**
 - . IEC 60870-5-103 Siprotec 7SJ63**
 - . IEC 60870-5-103 Siprotec 7UT51**
 - . IEC 60870-5-103 Siprotec 7UT61**
 - . IEC 60870-5-103 Siprotec 7UM61**
- Schneider MG Sepam 2000
- ABB SPAJ 140C Protection Relay
- PML ION-7xxx series Power Monitor
- HC 6xxx series Power Monitor
- Keltronics ESP (Electrical Submersible Pump) Controller
- Vortex ESP (Electrical Submersible Pump) Controller
- CTI ESP (Electrical Submersible Pump) Controller

(please contact us to find the latest IED devices list and development plan, as the schedule may be changed depnd on the project urgency)

The InTek protocols scanner, that is part of the InTek Hybrid Multi OPC Server, capables to acquire directly any of IED's historical/log data, and present it as TXT and/or CSV file, independently to the OPC interface.

Any historical data collected by the IED that accessible via standard protocol could be collected by the OPC protocol scanner, such as Well start/stop summary, failure condition list, snapshot periodic measurement, etc.

Disturbance Log (Fault Recording / Waveform capture) for Siprotec Relays or any Relay that support IEC 60870-5-103 protocol, will be presented as .TXT file under Logs directory/folder, and could be imported by MS Excel for viewing as waveform graph to trace the fault and occurred time.

Fault recording time and history of event on the Digital Protection Relay could be acquired directly by InTek Protocol scanner.



Max/Min recorder value/time on Digital Power Meter (DPM), as well as the Waveform Capture on Power Quality Meter, are also available to be handled by the InTek Protocol scanner.

For non-RBE (report-by-exception) protocol, such as Modbus and part of DNP 3.0, InTek Hybrid OPC Server has a special feature such as :

- Real-Time Poll
- Periodic Poll
- On-Demand Poll - drive by OPC Client

With the facilities to arrange the polling group, user could select and achieve the most efficient polling cycle rate as per their system requirement, for example :

- just select the most important data to be poll as real-time
- assign the regular data to be polled periodically (eg. 5 minutes, 15 minutes, hourly, three times a day, daily, etc.)
- perform on-demand poll whenever they required for any data/tag.

The InTek Hybrid OPC Server also featured with communication analyst, such as :

- data communication (protocol raw-data, presented on native Hex value) log, and could be connected to the off-line InTek Protocol Analyzer for further review.
- number of connected OPC Clients to InTek Hybrid Multi OPC Server, and the count number is presented as an Internal Tag that could be accessed by any OPC Client

Version 2.1 which is released by last August 2003 is available to be downloaded from our web-site :

<http://www.integrateknik.com/download/software/InTekOPCSetup.exe>

and currently we are developing some enhancement feature, where by the mid of November 2003 we will releasing version 2.3 which will include Modbus Slave protocol module, that could be utilized as a protocol converter to convert DNP 3.0, IEC 60870-5-101/103, ABB SPAbus to Modbus RTU.

The setup program is free to be accessed and downloded, and Modbus RTU protocol module is available to be accessed on demo mode.

To have more available protocols and/or device templates to try-on, the user just need to run run the GetInstallInfo application, and e-mail to us the generated "InstallInfo.TXT" file, as well as advising which protocols and/or device templates they would like to try and the required trial period. A new temporary license file will be provided to replace the default demo license, which will allow the user to work with their selected protocols and/or device templates.



The version 2.1 is included Internal Groups and Internal Tags on each defined Device, that could be accessed by any OPC Client, such as :

Channel

Device

CommStat Group

. internal tags

ProcStat Group

. internal tags

I/O Groups / Tags

CommStat - Communication Status and Statistics, group will have the following internal tags :

- poll status (integer) : in-poll, stand-by, skipped, disable (out of service), no response (out of order)
- latest polling-cycle time / turnd-around time (msc.)
- number of poll (since last reset or last start-up)
- number of valid response (since last reset or last start-up)
- number of invalid response (bad CRC, bad frame) (since last reset or last start-up)
- number of no response (since last reset or last start-up)
- number of unrecognized data (with valid frame) (since last reset or last start-up)
- last master/OPC polling time
- last device response time

ProcStat - Process Status - group will have the following internal tags :

- ControlStatus (Ready to Control, Select/Control in Progress, Select/Control Fail, etc.)

Our InTek Hybrid OPC Server has been tested to interface with the following OPC Clients :

- Siemens WinCC and Siemens PowerCC
- Wonderware InTouch 7.x via Wonderware OPClink
- Citect 5.x via Citect OPC Client I/O Driver
- Intellution iFix 2.x
- DeltaV 5.x via DeltaV OPC Mirror and Matrikon Data Manager
- Matrikon OPC Explore
- Siemens OPC Scout



We also develop Automation Add-On Products, from manufacture a simple hardware to develop a firmware application and protocol to the available embedded controller in the market, that is :

1. InTek Serial Port Splitter

- . for Hot-Standby Master Application that connected to single serial port
- . split the data from RTU to each Primary Master and Slave
- . port-powered, no external power is required
- . 19" rack modular/slot or stand-alone version

2. InTek RS232 Null Modem

- Two null-modems in a box
- . one as Full Wired Pair
 - . one as Minimum Wired Pair

3. InTek TTL-to-RS485 and TTL-to-RS232 Converter

- . Ready to be plugged-in directly at Keltronics L095 Display
- . Configurable for other device

4. InTek Dummy CB

- . as Simulator to replace the Real Circuit Breaker (CB)
- . provide Control Open and Close point to be remote controlled
- . provide Status Open and Close as an indication and to response a Control

5. InTek Data Concentrator & Protocol Converter

(under development, will be available by Q2 2003 with some protocols on Q3 2003)

By using OEM-hardware platform, we are implementing several protocols on two (2) types Single Board Controller :

Type #1 :

CPU chip: Motorola PowerPC 855 (true 32 bit data bus)

Ports : 3 x RS-232, 1 x RS-232/RS-485, full/half duplex, 7/8 bits, odd/even/no parity,
300 bps to 115.2Kb
1 x Ethernet Port: 10/100base-T, Auto-detecting.

Memory: 16 Mb SDRAM
8 Mb flash ROM
1 Mb non volatile CMOS RAM

Logic Programming : ISaGRAF IEC-61131-3 (complete languages support)



Type #2 :

CPU chip: Hitachi SH3 @ 120 MHz

Ports : 3 x RS-232, 1 x RS-232/RS-485, full/half duplex, 7/8 bits, odd/even/no parity,
300 bps to 115.2Kb

1 x Ethernet Port: 10base-T

Memory: 8 Mb SDRAM

4 Mb flash ROM

512 Kb non volatile CMOS RAM

On-board I/O: 8 ch. Analog Inputs, 20 ch. Digital Inputs, 12 ch. Digital Outputs

Logic Programming : ISaGRAF IEC-61131-3 (complete languages support)

InTek Data Concentrator / Protocol Converter will have the following protocol :

Master type : DNP 3.0

IEC 60870-5-101/104

Modbus

EDF HNZ

ABB SPA-bus

AB DF1

IEC 60870-5-103 (to Protection Relay)

IEC 61107 (to Tariff Meter)

Slave type : DNP 3.0

IEC 60870-5-101/104

Modbus

EDF HNZ

and a protocol converter application between the above is possible to be performed.