Simple components for effective and fast to market solutions

IPC@CHIP®
The heart of applications

Development-Kit
For simple implementations – Ready to Go

com.tom BASIC
Communication gateway

com.tom RADIO
Communication gateway with GSM/GPRS

com.tom GRAPHIC
Communication gateway with graphic display

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Your IED

Partners for IEC 61850 and IEC 61400-25

Hard-/Software
SystemCORP
- IEC 61850
- IEC 61400-25
- SCL Tool
- Modbus, DNP3
- IEC 60870-5-101/103/104

Hardware
Exor
- HMI & Scada Solutions

Peopleware
NettedAutomation
- Education
- Training
- Consulting

Beck IPC GmbH

Grüninger Weg 24

35415 Pohlheim-Garbenteich / Germany

Tel.   +49 6404 695-0

Fax   +49 6404 695-500

E-Mail   info@beck-ipc.com

Web   www.beck-ipc.com

IEC 61850 Lite Implementation

IEC 61850 Client/Subscriber and Server/Publisher Integration on the IPC@CHIP®.

The IPC@CHIP® embedded platform facilitates the quick and cost-effective integration of your information into a standardized format.

Secure Communication

IEC 61850 and IPC@CHIP® for simple to complex applications

Hardware specifikation SC1x3

- CPU SC186-EX / 96 MHz
- RAM (free) 8 MByte (approx. 7 MB)
- Flash memory SC123: 2 MByte (approx. 1 MB)
  SC143: 8 MByte (approx. 7 MB)
- Ethernet 1 x 10/100BaseT / PHY, 1 x MII
- Temp. range -25 to 85°C

IEC 61850 Software implementation

- MMS over TCP/IP
- GOOSE Publisher/Subscriber
- Sampled Values
- Data sets
- Buffered reporting
- Unbuffered reporting
- Control
- Data Logging
- Time synchronization via SNTP
- File Transfer via MMS and FTP

Programming software included

Program your application in C/C++ or IEC 61131-3 and configure the IEC 61850 API with standard SCL (System Configuration Language).
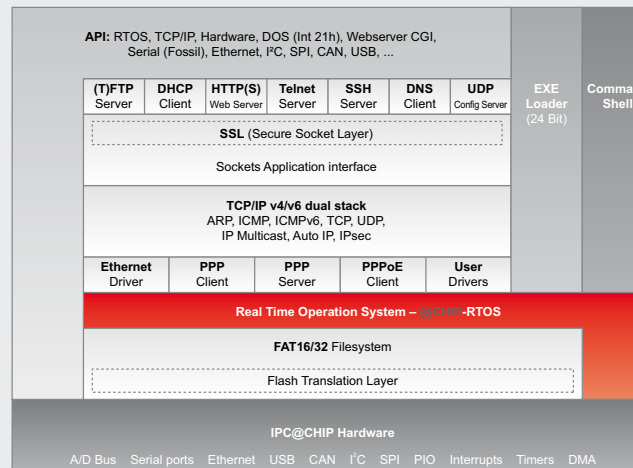
Additional benefits

Useful source code sample files are available for free download from **www.beck-ipc.com/examples :**

- CAN
- Industrial communication (Modbus, EasyIP ...)
- etc.

Software implementation

IEC61850 Information Models	User applications (EXE), executed as tasks of the RTOS
IEC61850 Client/Server Task(s)	
IEC61131-3 Task(s)	
SysLib / CoDeSys-Kernel	

IPC@CHIP® RTOS architecture

API: RTOS, TCP/IP, Hardware, DOS (Int 21h), Webserver CGI, Serial (Fossil), Ethernet, I²C, SPI, CAN, USB, ...

(T)FTP Server	DHCP Client	HTTP(S) Web Server	Telnet Server	SSH Server	DNS Client	UDP Config Server	EXE Loader (24 Bit)	Command Shell

SSL (Secure Socket Layer)

Sockets Application interface

TCP/IP v4/v6 dual stack
ARP, ICMP, ICMPv6, TCP, UDP, IP Multicast, Auto IP, IPsec

Ethernet Driver	PPP Client	PPP Server	PPPoE Client	User Drivers

Real Time Operation System – @CHIP-RTOS

FAT16/32 Filesystem

Flash Translation Layer

IPC@CHIP Hardware

A/D Bus   Serial ports   Ethernet   USB   CAN   I²C   SPI   PIO   Interrupts   Timers   DMA

SC2x
Flexible, simple and powerful

SC1x3
Maximum functionality in a minimum of space

SC2x3
Maximum performance for demanding automation tasks

Simple extension with Add ons
Additional extensions in preparation

- Wireless LAN
- Bluetooth
- GSM/GPRS
- Graphic
- IEC 61131-3 — **CoDeSys**
- EtherCAT — **EtherCAT** Technology Group
- M2M Communication
- Fieldbus

Development Kits for all Hardware Platforms
Up and Running in 15 Minutes