



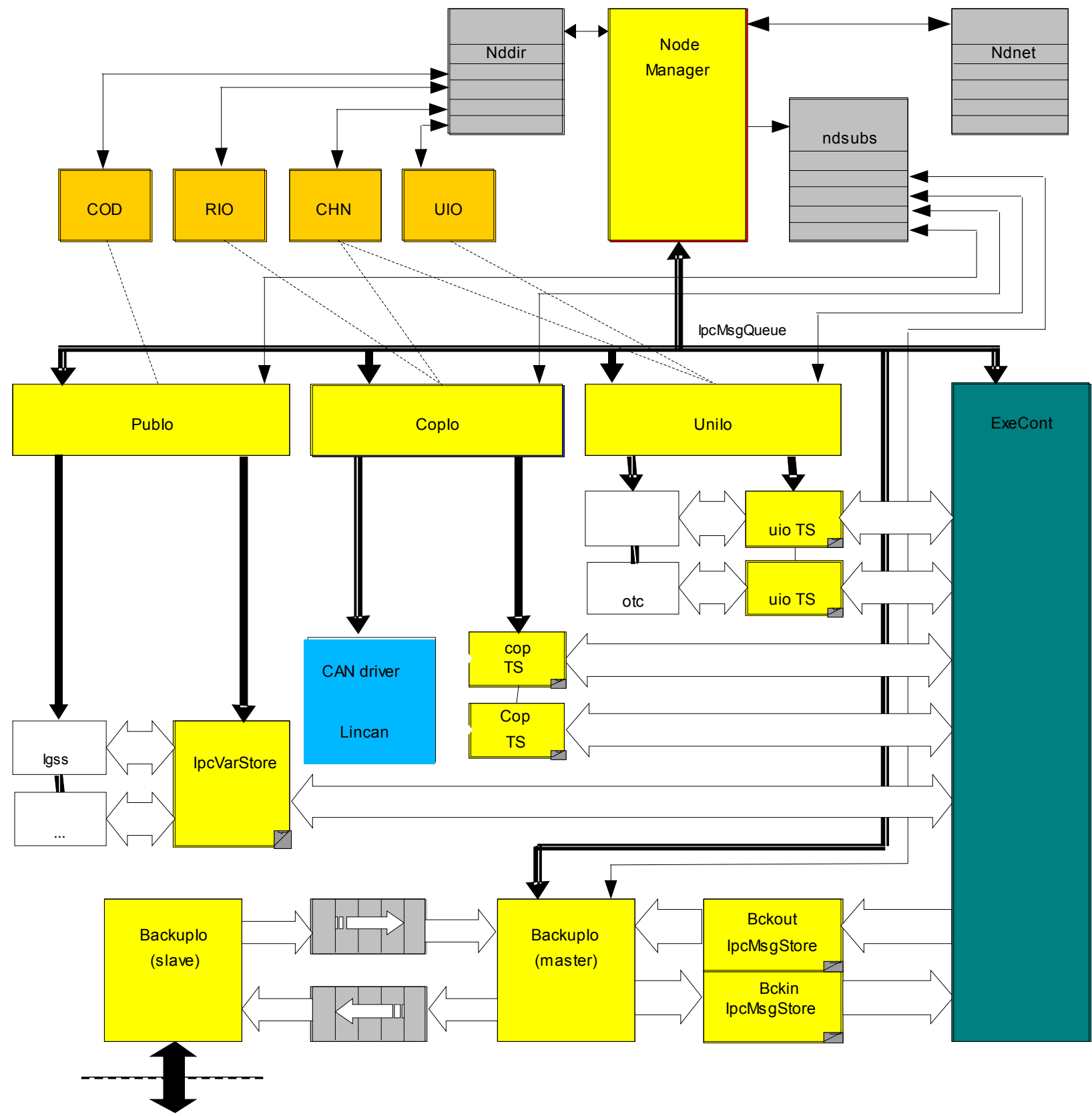
OPEN COMPONENTS FOR EMBEDDED REAL-TIME APPLICATIONS

Process Control Application  
UniControls a.s.

Goals:

Process Control Application validates Ocera Linux+RTLinux components. It consists in porting real-time part of UniCAP, as a complex tool for designing and application programming of distributed information and control systems, from OS9 to Linux+RTLinux operating systems

SW architecture of UniCAP (real-time part in target systems) :



Developed components :

- Interface IpcMsgStore (message store)
- Interface IpcMsgQueue (interprocess message queue)
- Interface IpcVarStore (publish variables for external nodes)
- Node manager - process NdMan
- IO Subsystems – CopIO, PubIO, UniIO

Tested Ocera components :

- POSIX Timers
- POSIX Messages
- POSIX Signals
- POSIX Mutexes
- POSIX TRACE
- Dynamic memory allocator
- CAN driver Lincan
- PowerPC implementation

UniControls's proprietary SW :

- Interpreter of control algorithms process ExeCont

Brief description :

The control system kernel is an interpreter of control algorithms which meets the requirements of ISO 61131. The other system modules ensuring control system node management, communication between nodes and data transmission from process interfaces are connected to the interpreter.

PowerPC implementation on control system equipped with VMP1 processor board produced by Kontron GmbH, Germany :

System Configuration – Control System

