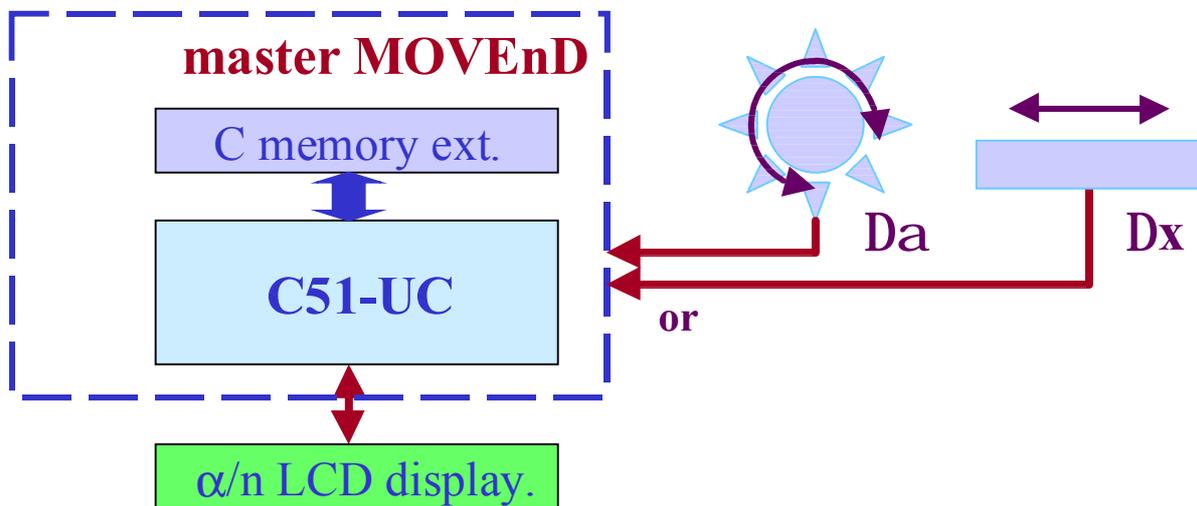The MOVEnD^{tm}/DIGInS^{tm} survey.
The MOTRIX^{tm} concept.

The MOVEnD^{tm}/DIGInS^{tm} line is dedicated to distribute process control setups in applications where displacements, speed and statuses are the main interest parameters as well as, possibly, other analog acquisition and action parameters.
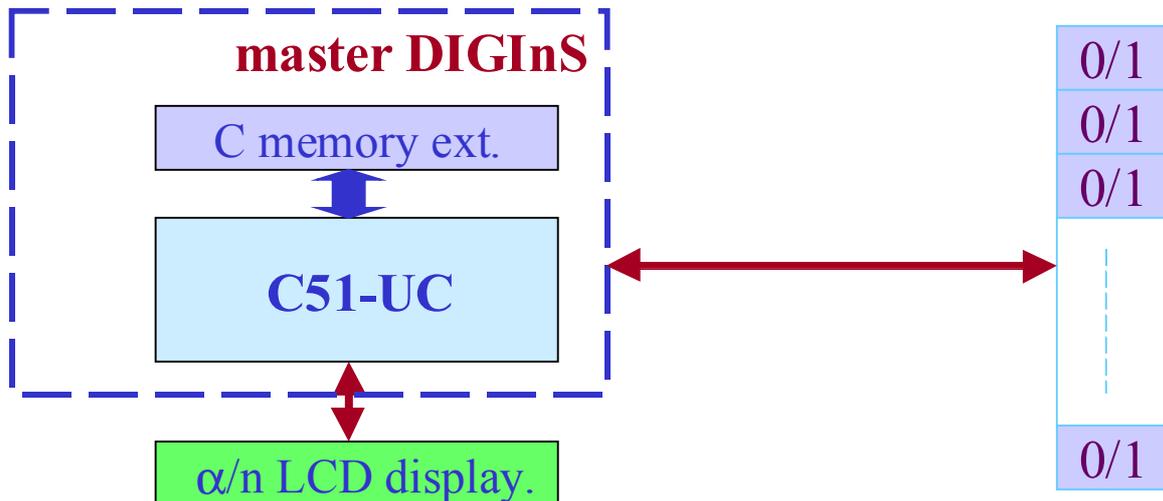The added value of the MOVEnD^{tm}/DIGInS^{tm} line is fully understandable in the larger context of MOTRIX^{tm} [1]) movement application concept developed by OnlineSolutions Media srl around the MOVEnD^{tm}/DIGInS^{tm} line and the ACTOReX^{tm} family, as it will be explained further.

The MOVEnD^{tm}/DIGInS^{tm} line.

Let's start with MOVEnD^{tm}, a movement/speed dedicated, intelligent channel, used as an

elementary building block. It can accommodate rotation as well as linear, non-contact incremental transducers and a limited amount of digital I/O statuses. The built-in firmware
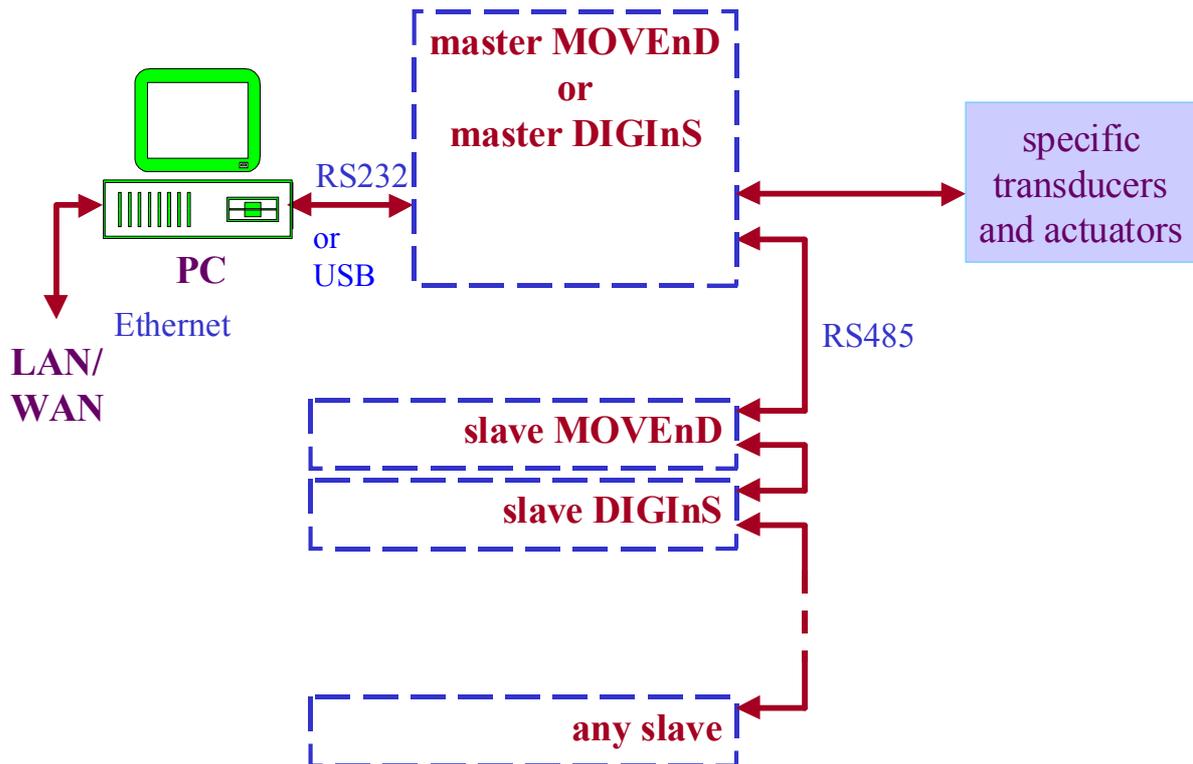

allows speed measurements. The other elementary building block is the DIGInS^{tm} , a status control, intelligent module. In both cases, the microcontroller allow running local loop control

---

[1] A trademark of OnlineSolution Media srl

applications and could facilitate alpha/numeric display, local keypad, magnetic card reader, bar code reader, etc.

The inter-processor communication facility of the MOVEnD^{tm}/DIGInS^{tm} line allow to built complex setups managed by a master module and with several multifunctional slaves. Each module keeps the local facilities of the single module setup. The master slave arrangement allows independent firmware/clientware applications, the connection with and the control of the PC being an application option.

The geometrical flexibility of the multiprocessor setup allows connections between blocks at high speed (1 Mbps) and long distance (up to 100 m total "chain" length). The hardware limitations allow one master + 32 slaves setups. In some particular applications, with severe real-time requirements, the number of slaves could be limited below the hardware permission.

The MOTRIX^{tm} extension.

The Company OnlineSolutions Media srl developed a specific neuro-motric application process control environment around the MOVEnD^{tm}/DIGInS^{tm} line and the ACTOReX^{tm} family products. Complex setups designated to work in human skill enhancement applications are presented.

The mini-ACTOReX^{tm} mastered hierarchical and distributed control setup as well as ACTOReX^{tm} mastered hierarchical and distributed control setups are sketched in the following captures.

The use of evolved family master with the analogue signal processing capabilities beneficially completes the versatility of the MOVEnD^{tm}/DIGInS^{tm} line.

C memory ext.

mini-ACTOReX

RS232

C552-UC　　**FE-IO**

PC

Ethernet

LAN/ WAN

RS485

slave MOVEnD

slave DIGInS

any slave

ADC I/O COUNT TIME

X memory ext.

ACTOReX

USB

USB-UC　　**GEN-IO**

PC

Ethernet

LAN/ WAN

RS232

master

RS485

slave MOVEnD

slave DIGInS

any slave

ADC DAC PWM I/O COUNT