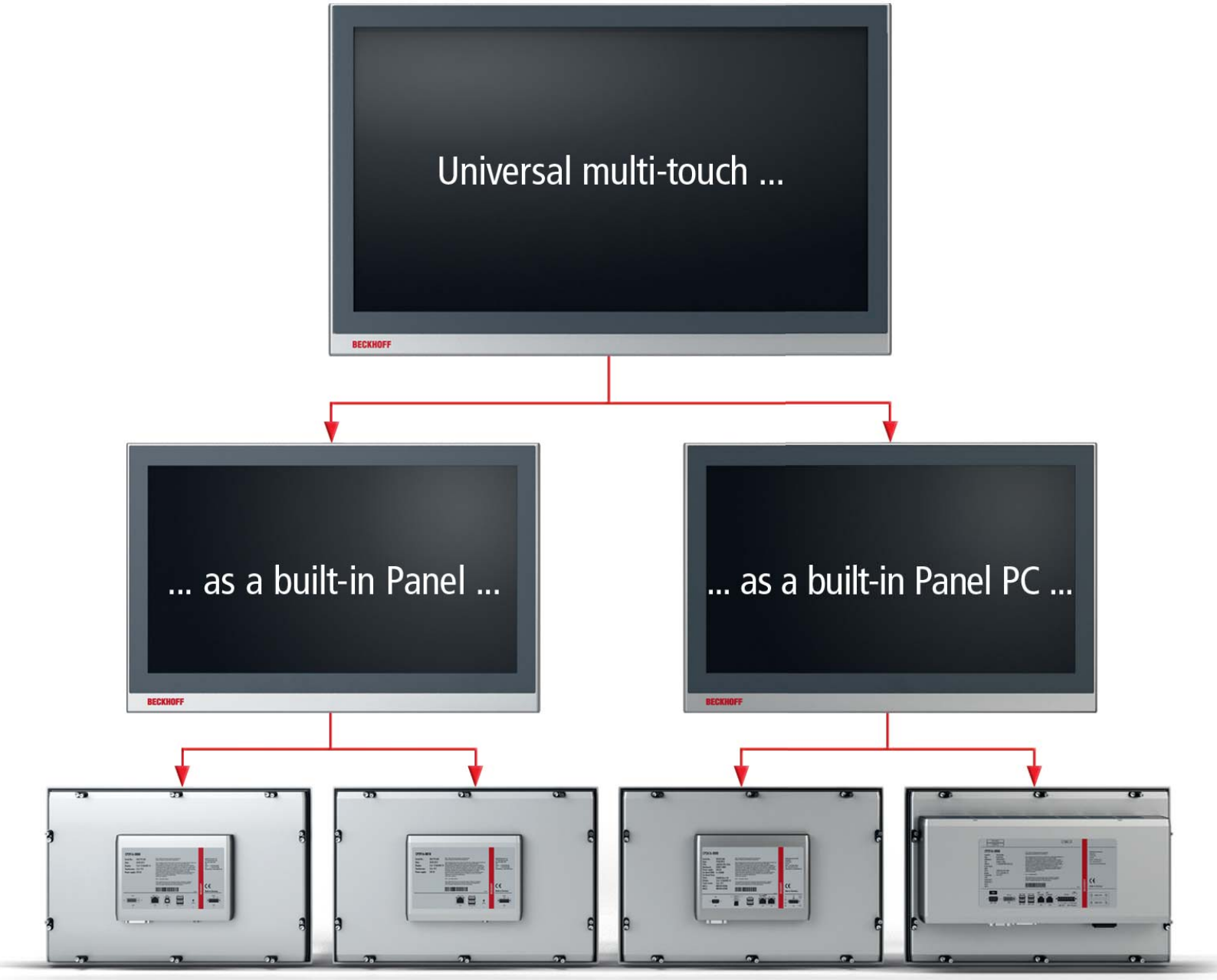


... with DVI/USB Extended ...

... or CP-Link 4 interface.

... with ARM Cortex™ A8 ...

... or Intel® Core™ i3/i5/i7.

Multi-touch panel series gives users maximum flexibility

Universal multi-touch for the complete machine

The CP2xxx and CP3xxx Control Panel and Panel PC series from Beckhoff further establish familiar multi-touch functions for use in machine operation. Admittedly, for a truly optimal HMI experience, it is necessary to fulfill diverse industrial requirements for specific applications. These panels therefore offer an extremely flexible and modular product range that has been proven in practice and is being continuously developed with new variants. The maximized product diversity makes it possible to achieve a consistent, uniform and elegant appearance throughout the machine environment while fulfilling modern multi-touch operating philosophies.

The CP2xxx and CP3xxx Control Panel and Panel PC series constitute a highly flexible and modular system that gives machine builders immense potential for innovation through modern operating philosophies. They can rely on an identical panel appearance from any part of the machine while retaining complete freedom of design. In addition to the numerous housing options – built-in or mounted on a support arm, for 7 to 24" screens with aspect ratios 16:9, 5:4 and 4:3, plus landscape and portrait mode – there is also a wide and finely scalable range of CPU classes, including Intel® Celeron® and Core™ i3, i5 or i7 processors, plus ARM Cortex™ A8 CPUs.

The scalability goes even beyond choosing the optimal screen size and CPU class, because the HMI can be implemented either as an active Panel PC or as a remote, purely passive Control Panel, as required – and the option is there to integrate directly in a cabinet or mount on a support arm. There is even more flexibility in the Control Panel's possible connection options: a USB 3.0 input allows direct connection to any of the standard USB outputs on an IPC at distances up to 3 m; DVI/USB extension technology allows panels to be placed up to 50 m away; when connected via CP-Link 4 with standard CAT 7 cables, they can be up to 100 m away. Altogether this amounts to an ideally tailored HMI solution both in terms of functionality and cost.

Built-in Panel family for all HMI tasks

Using the versatile multi-touch Panel family is an excellent way to achieve a consistent look and feel for your machine's front end and improve general appearance. For example, the CP2xxx series – designed with IP 65 at the front and IP 20 at the back – it offers all the scaling options of the multi-touch portfolio from Beckhoff, all with the same elegant panel appearance. The built-in panel family includes:

- CP22xx: high-performance Panel PC series with Intel® Celeron® or Core™ i3, i5, i7 processors
- CP26xx: compact Panel PC series with ARM Cortex™ A8 processor
- CP29xx-0000: Control Panel with DVI/USB Extended interface (up to 50 m from the PC)
- CP29xx-0010: Control Panel with CP Link 4 interface (up to 100 m from the PC)

CP22xx: Multi-touch convenience plus maximum processor performance

The built-in Panel PCs from the CP22xx series equipped with multi-core CPUs – Intel® Celeron®, Core™ i3, i5 (all with two cores) and i7 (four cores) – combine multi-touch technology with maximum computing power.

The built-in CP22xx Panel PC features the very latest generation of Intel® Core™ i processors, making it ideal for applications that demand a high level of computing power.

This makes it possible to solve even the most demanding control and HMI tasks very flexibly, and, with screen sizes from 12 to 24", to tailor them precisely to the requirements of the specific application.

The performance features offered by the CP22xx series include a Mini PCI slot available for cards installed at the factory, 2 GB DDR3 RAM (expandable to 16 GB), hard drive, CFast card or SSD, on-board dual Ethernet adapter supporting 10/100/1000Base-T and an on-board SATA RAID 1 controller (Intel® Rapid Storage Technology). A serial RS232 port and four USB 2.0 ports are also included.

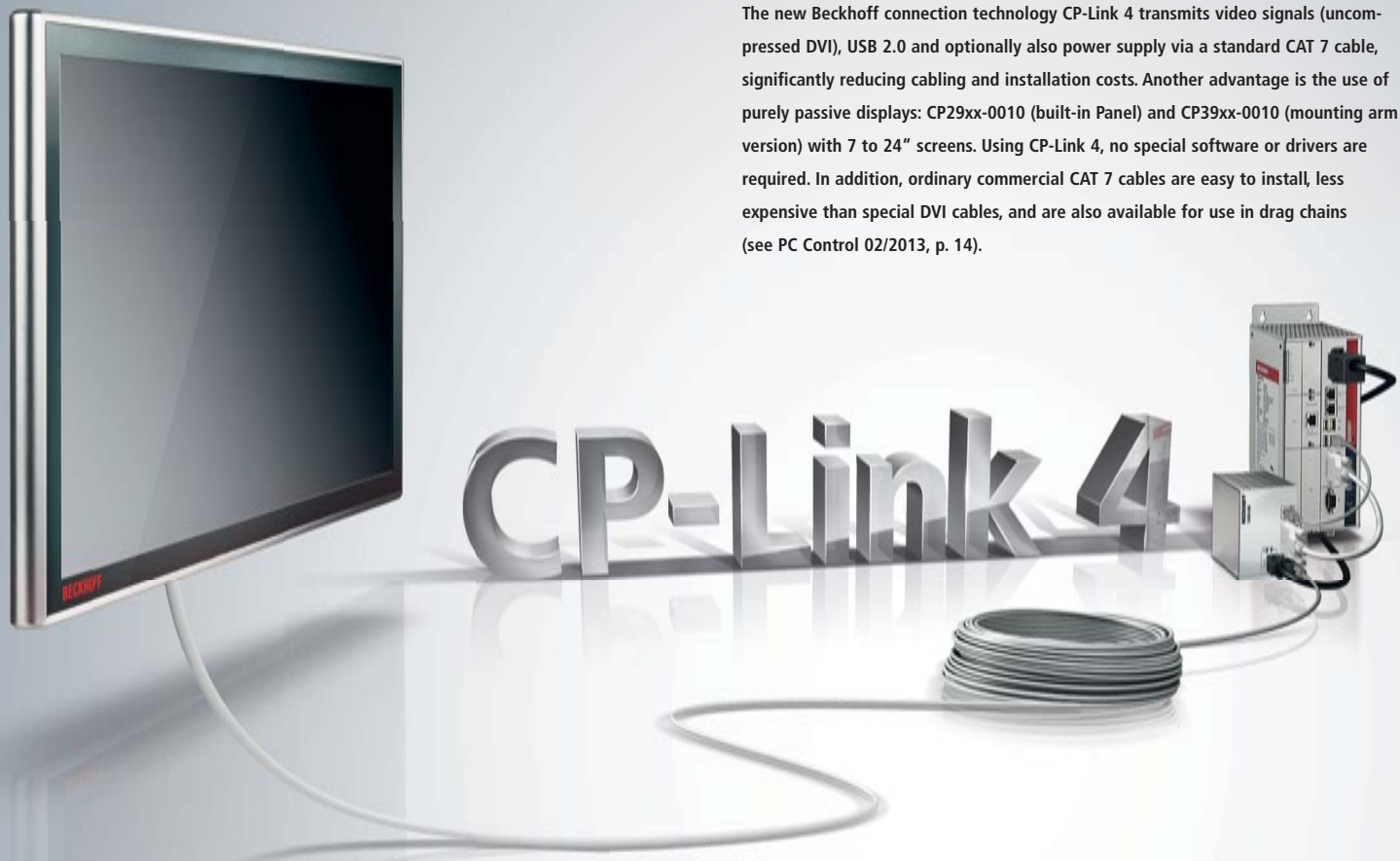
CP26xx: Compact and fanless multi-touch Panel PCs

The extremely compact and fanless Panel PCs in the CP26xx series feature 7 to 24" screens and ARM Cortex™ A8 processors. They are designed for universal use in PLC and motion control applications, such as in small and medium-sized machines and plants. They can be used for implementing both decentralized and centralized control systems, such as for process monitoring tasks.

In contrast to the previously used ARM9 architecture, the ARM Cortex™ A8 processor hardware features a floating point unit, enabling floating point operations (real, LReal) to be processed much faster. This means that the CP26xx can also be used to implement motion control applications. This compact Panel PC is thus a lower cost alternative to the higher performance CP22xx Panel PCs for applications that only require low to medium computing power.

The ARM Cortex™ A8 CPU, which is clocked at 1 GHz, can access 1 GB of internal DDR3 RAM memory. The operating system is Microsoft Windows Embedded Compact 7. The package includes a 256 MB MicroSD card, and upgrades up to 4 GB are optionally available. A 128 kB NOVRAM ensures fail-safe storage of TwinCAT process data. The following on-board interfaces are also available: 10/100Base-T Ethernet, an EtherCAT adapter with a RJ45 port, plus an RS232 interface and two USB 2.0 ports.

Further Information:
www.beckhoff.com/multitouch

The compact CP26xx Panel PC with a 1 GHz ARM Cortex™ A8 CPU is ideal for small and medium-sized PLC and motion applications.

The new Beckhoff connection technology CP-Link 4 transmits video signals (uncompressed DVI), USB 2.0 and optionally also power supply via a standard CAT 7 cable, significantly reducing cabling and installation costs. Another advantage is the use of purely passive displays: CP29xx-0010 (built-in Panel) and CP39xx-0010 (mounting arm version) with 7 to 24" screens. Using CP-Link 4, no special software or drivers are required. In addition, ordinary commercial CAT 7 cables are easy to install, less expensive than special DVI cables, and are also available for use in drag chains (see PC Control 02/2013, p. 14).