HY-eVision² Product Family

Highly Robust Operator Interfaces

Key Benefits

- Excellent sunlight readability
- Best-in-class CPU performance/boot-up time
- Robust and easy to clean
- Up to 4 CAN interfaces (CANopen support)
- Optionally mobile, GPS and WLAN enabled
- High-end graphics (3D, transparency effects)
- Direct connection of two cameras
- Pre-designed Dashboard Design Elements
- Programming and debugging facilitated by CODESYS®

TTControl's HY-eVision² product family sets new standards with respect to maximum resolution, programmability with CODESYS® 3.x, and user-friendliness, for example through the ability to display PDF documents. Visualization tools and an extensive Dashboard Design Element library allow fast, hence cost-effective and innovative application design. These robust display products offer automotive and off-highway customers fully integrated operator terminals and can be mounted either in landscape or in portrait orientation.

Different Solutions for Different Needs

The HY-eVision² product family offers various possibilities to build a smart and unique Human Machine Interface (HMI) that clearly differentiates the vehicle or machine from competitive products. Realizing the different needs in various applications, TTControl has expanded its portfolio of operator interfaces giving a wide choice of variants. All have in common that they may either be mounted in the vehicle dashboard or through an arm elsewhere in the cabin and in portrait or landscape orientation. Enhanced visualization possibilities enable full integration into the cabin design which starts with a customizable OEM logo shown during boot up. In combination with the integrated ambient light sensor sophisticated day and night designs are possible.

Optimal Readability and 3D Effects

With HY-eVision², the operator has the advantage of a very fast display with high resolution, comparable to a tablet PC and optimal readability in any lighting condition. This allows the design of user-optimized HMI applications whose ergonomics, thanks to hardware acceleration, can be further increased using 3D effects.

Maximum Modularity

The modularly designed interfaces are available in a large 10.4-inch variant with a touchscreen, and a smaller 7-inch version optionally available with and without touchscreen. The 7.0 version can also be equipped with a GPS/GSM or WLAN module.

Application Fields

- Construction
- Agriculture
- Municipal
- Etc.

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User-Friendliness

Using an USB stick, operating data can easily be transferred via the built in USB port, just like new application software can be installed. The TTControl download master feature enables easy software updates not only of the HY-eVision² operator interface but also of all connected ECUs. A picture-in-picture function enables the software controlled superimposition of a camera image onto the cockpit. Another function enables not just to display documents in the widely used PDF format, but also to move freely within them, zooming in and out.

Built for Harsh Environments

The HY-eVision² products are part of a complete and compatible product family and are protected by very robust housings against electromagnetic disturbance and mechanical stress. The recommended ambient operating temperature ranges from -30 °C to +60 °C.

Flexibility in Design and Development

All members of the product family enable the fast and therefore cost-effective development of graphical HMIs and offer vehicle manufacturers plenty of freedom with respect to usability and ergonomics. The easy-to-use programming platform CODESYS® 3.x with specific additions, such as transparency effects, is part of the standard package. An extensive Dashboard Design Elements library is included which contains over 6000 elements, like buttons, gauges, icons, lamps, progress bars and switches. With the provided software tools fast and easy set-up of virtual lamps, gauges, progress bars and bar graphs is enabled. Also, Unicode fonts are supported, which allows the creation of multi-language interfaces.

All units feature built-in CANopen functionality, which makes it easy to create smart networks containing I/O modules or ECUs from different suppliers.

	HY-eVision² 7.0	**HY-eVision² 10.4**
System CPU	Freescale 32 bit Multimedia Processor based on ARM Cortex A8, 800 MHz, 3D hardware acceleration, real-time clock	
Memory	512 MB flash, 256 MB RAM (optional 1 GB Flash, 512 MB RAM)	1 GB flash, 512 MB RAM
	Optional internal SD-card slot for memory extension	
Programming	C, CODESYS 3 with dedicated target visualization	
Communication Interfaces	2 CAN (optional 4 CAN) 1 RS-232 1 USB 2.0 (Host) 1 Ethernet (100 Mbit/s) K15 for ignition input Wake-up pin 2 x 5 soft keys Buzzer Optional GPS/GSM or WLAN module	4 CAN 1 RS-232 1 USB 2.0 (OTG) 1 Ethernet (100 Mbit/s) K15 for ignition input Wake-up pin 7 soft keys/3 hard keys Buzzer 2 programmable LEDs
Display	Built-in 7” display 800 x 480 pixel With our without touchscreen operation	Built-in 10.4” display 1024 x 768 pixel With touchscreen operation (optional polarized)
Cameras	2 video inputs for external composite video cameras	
		Two simultaneous video feeds and built-in circular DIN connectors
Sensor and Actuation	Two temperature sensors measuring CPU and internal housing temperature, ambient light sensor	
	Through CAN-connected I/O modules like HY-TTC 30	
Housing	IP65	
Mounting	Panel Mount (Standard) Cabin Mount (Optional) Landscape or portrait orientation	

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