HMI OF THINGS

VERSATILE TELEMATICS PLATFORM

INFORMATION SYSTEM

ENTERPRISE CONNECT
CLOUD SOLUTION FOR FLEET WIDE MONITORING AND MANAGEMENT

SMART CONNECT
LOCAL ACCESS WITH SMARTPHONES AND TABLETS

CONNECTIVITY & TELEMATICS PRODUCTS

CROSSLINK TG
ADVANCED, STAND-ALONE TELEMATICS MODULE

CROSSLINK AI
WIRELESS EXTENSION MODULE FOR CCPILOT DISPLAYS

CROSSFIRE IX
CONTROLLER WITH SMARTPHONE INTEGRATION

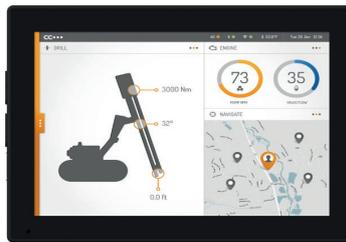#### CCPILOT VI
DISPLAY WITH SMARTPHONE INTEGRATION

MACHINE SYSTEM

CCPILOT VS
MULTIFUNCTIONAL VEHICLE DISPLAY

CrossControl has been working with the IoT and connecting machines since before the phrase was coined in 2002. Our current platform is designed with the goal to satisfy different stakeholders' needs for interaction with an individual machine or a fleet; we call it HMI of Things - the Human-Machine Interaction of Things.

crosscontrol
making machines smart, safe and productive

THE HMI OF THINGS

CrossControl offers a versatile telematics platform supporting a broad variety of applications. From lean solutions that leverage smart device technology and infrastructure to advanced solutions with dedicated telematics hardware and the ability to maintain and service equipment remotely.

INFORMATION SYSTEM

On the information system level the platform offers two distinct software products. **Enterprise Connect** is a full-blown cloud solution which now comes with an improved, more intuitive user interface for monitoring KPIs at the fleet or unit level. It now also supports easy over the air distribution of software updates to fleets or individual units. Using our LinX software tool chain OEMs can easily configure the system, including which vehicle data to collect and how to manage vehicle software updates. **Smart Connect** enables easy integration of Smart devices with the vehicle control system. This opens up for a lean way of transporting data to the cloud and it also enables the use of smart devices as a complementary user interface in or around the vehicle. Both of these software products can be integrated together or taken on their own.

COMMON SOFTWARE PLATFORM – LINX SOFTWARE SUITE

The telematics platform is powered by the LinX Software Suite, the open and modular software application platform that is available with all CrossControl products and provides cross device compatibiltiy. A telematics system designed with the powerful LinX tools can then be deployed on the hardware set-up best suited for the application. This enables OEMs to have a common and scalable telematics solution for their entire product portfolio, driving major savings through software re-use and ease of maintenance.

A platform supporting a broad variety of applications, providing OEMs with a common and scalable telematics solution

CONNECTIVITY & TELEMATICS PRODUCTS

Our platform offers several options for on-board data collection and wireless connectivity. The **CrossFire IX** machine controller offers a very lean cloud connectivity solution. With built in Wi-Fi, it efficiently collects and processes machine data and communicates selected information via a smart device to the cloud. The **CCpilot VI** 3.5'' display offers the same capabilities, but uses Bluetooth for wireless communication to a smart device. Both these products have proven to be a successful fit, even for very cost-sensitive machines and equipment, like tools and implements, enabling that category of OEMs to adopt telematics and offer end customers a smarter product.

For machines and equipment that require a more advanced solution CrossControl offers dedicated wireless and telematics modules. The CCpilot range of multifunctional displays can run advanced data logging and diagnostic applications shared through Enterprise Connect or an existing OEM cloud solution. The wireless communication is then realized via the **CrossLink AI** module which features 3G modem, GPS and Wi-Fi. In some cases, OEMs prefer to realize telematics with a dedicated telematics unit. The new **CrossLink TG** collects vehicle information via sensor inputs, CAN and Ethernet. It has a powerful computing core that can run advanced applications including; data logging, diagnostics and Enterprise Connect soft telematics controller or an OEM's own mobile client. With 3G, Wi-Fi, GPS and Bluetooth it enables communication with a cloud solution, a local network or individual smart devices.

CrossFire IX
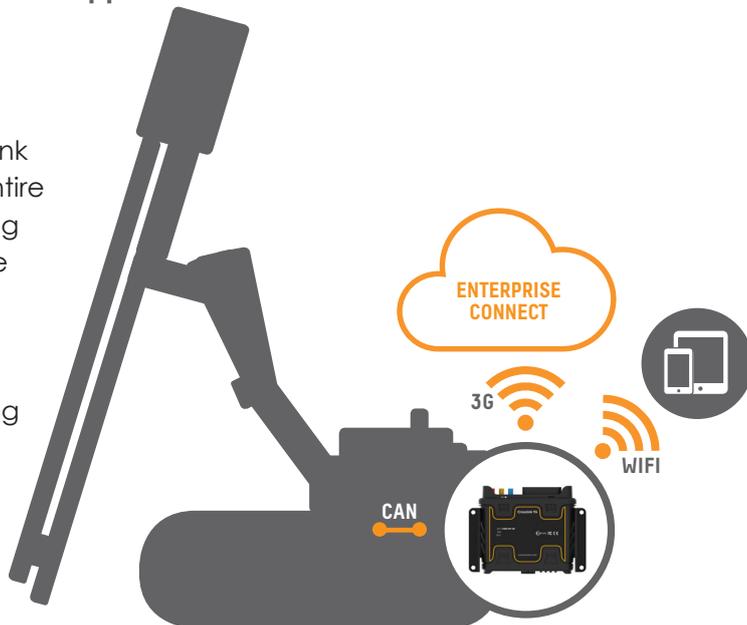

CCpilot VI

CrossLink AI

CrossLink TG

HMI OF THINGS APPLIED

To illustrate the versatility of our telematics platform, below you can find examples of how the modular approach is applied to different applications.

Drilling equipment telematics

A drilling equipment OEM has realized an advanced telematics solution where CrossLink TG is used for monitoring operation of the entire vehicle system, performing deep data mining and computation. The system uses Enterprise Connect to support the OEM's Service and Maintenance business, including trouble shooting and distributing software upgrades remotely. Smart Connect is used for providing access to vehicle data in the vicinity of the equipment.

ENTERPRISE CONNECT

3G

WIFI

CAN

Tool implement control system

An implement OEM uses the CCpilot VI display, a controller and a joystick in a dedicated control system for the implement. System usage and production data like handled weights are logged in the CCpilot VI and pushed to the OEM's bespoke cloud system with Smart Connect. The cloud solution includes service and maintenance support for the implement.

3G

CAN

Truck tipping system

The provider of the tipping hydraulics offers a system in which they, the truck OEM and the fleet owner can monitor the tipping hydraulics and functionality including weights handled and operation outside the system specification. The system uses CrossFire IX, Smart Connect and Enterprise Connect. The smart device app pushes data to the cloud and provides a user interface for the driver that shows loaded weight and warnings.

ENTERPRISE CONNECT

3G

WIFI

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