For information processing in the vehicle, this means that both the data from the command and information system and the sensor information and video signals generated in the vehicle must be relayed so that they can be interpreted by the crew and effective measures can be taken promptly.

ATM ComputerSysteme GmbH (ATM) offers a battlefield-tested system solution for such applications in the form of the VistaMaster family of displays and panel PCs. With devices ranging from standard displays with video interface to panel PC systems and beyond to multi-function displays with video processing, the VistaMaster family provides a broad base supporting all manner of applications.

Form follows function

A VistaMaster consists of two parts: the electronics box and the display box. The display electronics can be integrated completely into the remote electronics box, with the flat screen reducing the amount of depth required. ATM supplies displays between 7” and 17” depending on intended purpose and customer requirements. The scaling of device dimensions and functional adaptability mean that a wide and varied range of applications can be supported: from display only with graphics interfaces, slave display outside the vehicle and rear display for monitoring the area around a vehicle, to display with terminal function to assist driver and commander. The devices can even be configured to serve as central control and display units.

In view of this wide spectrum of application, ATM has paid particular attention to ensuring that its displays are clearly legible in the dark, in mixed light conditions and even in strong sunlight. Readability can be impaired and thus the transmission of mission-critical information put at risk simply by opening a hatch or the door of a vehicle, or by the sun suddenly coming out from behind a cloud.

VistaMaster displays are therefore designed and built to minimise reflections and to ensure high-contrast readability in sunlight through their design and automatic brightness adjustment function. The multi-level dimming range allows you to make individual adjustments in order to reduce the brightness for use at night, as well as enabling operation with night-vision goggles. Even camouflage mode is supported if, for example, the door of a vehicle is opened (i.e. the device stops emitting light but remains switched on). VistaMaster buttons are backlit for operation in the dark. The background lighting can be switched off.

From display to panel PC

The VistaMaster panel PC (PPC) combines the display with a fanless all-in-one PC. The VistaMaster MFD PPC takes the...
panel PC to the next level, adding graphics interfaces to broaden the functional scope of the device. The VistaMaster MFD PPC supports video processing and can display overlay symbols.

The VistaMaster MFD PPC is able to control multiple PCs connected via USB and show their view, so that the user can see the application in progress on the selected device. ATM combines this display with support for various functional modes which can include video processing mode, battle management system mode or weapon station mode, for example. Views are switched in via buttons, i.e. the user can switch between the connected functions. Overlay symbols display the function of the currently active buttons. The function executed by each of the buttons is determined by the active mode. The button functions assigned to the alternative operating modes remain active in the background so that a restart is not required after changing mode.

Central and multi-functional terminal

Multi-functional capabilities make the VistaMaster MFD PPC a central information and operating unit which puts all relevant data in the area of operations at the disposal of the vehicle commander at all times. This data includes the various camera views, the view of the battle management system, the status of the weapon station or the connected thermal imaging or night vision equipment.

The picture-in-picture function (PiP) of the VistaMaster MFD PPC allows two views to be displayed simultaneously, e.g. the data from the battle management system and up to two video sources. As well as boosting efficiency, this increases the ability of users to protect themselves by increasing situational awareness.

The VistaMaster MFD PPC can show all analogue and digital video sources on the display. Analogue sources are displayed by the VistaMaster in real time. Video sources can be scaled at will, e.g. for picture-in-picture functionality.

The panel PC component supports the simultaneous operation of a BMS or other applications such as monitoring, management or communication software.

The numerous PC and display interfaces such as Gigabit LAN, USB, CAN bus, serial interfaces and DVI facilitate the integration of the VistaMaster family of displays and panel PCs into existing IT systems. The panel PCs also impress with the latest Intel processors, variable storage configurations and the freedom to select an operating system.

The modular hardware architecture can be installed in military vehicles, where space is usually at a premium.

Ready for operation in the harshest conditions

As the devices in the VistaMaster family have been designed for use in wheeled and track vehicles, they conform to the military environmental specifications for electromagnetic compatibility, salt fog, humidity, altitude, vibration and shock, as well as temperature. The devices in the VistaMaster family are suitable for operation in the extended temperature range from -46°C to +63°C.

Combining information display with video functionalities, overlay symbols and PC functionality, the VistaMaster family of display and panel PCs is the “defence vehicle’s eye”.

Flexibility, modularity and adaptability in configuration, from simple display to multi-function panel PC, provide the ideal hardware basis for C4I systems.

VistaMaster 12” MFD PPC is capable of displaying videos from different sources and combines this with various functional modes.