

PRELIMINARY - Product Brief



Video Surveillance System Solution

TES' **MAGIK-2 family** of platforms comprises various COM (Computer-on-Module) products as well as application specific carrier cards and associated software packages. Dedicated system solutions targeting certain application areas are composed of these aforementioned components and represent market ready but still customizable platforms. In particular, the following application areas are addressed:

- Human Machine Interface (HMI)
- Audio processing
- Video processing
- Video combined with graphics
- Network and Connectivity
- Wireless Remote Controls

These system solutions are reducing time-to-market and the risk of a product development significantly and are therefore the ideal basis for such endeavors.

All Magik-2 System Solutions are available as complete packages consisting of hardware and associated ready-to-go software. All software components are alternatively also offered as IP cores for use on existing hardware. Porting on request.

Standard operating system is Linux, but versions for Windows Embedded Compact 7 / 2013 or Android are available on request.

Product development made easy, with the industry leading, complete system solution packages from TES!

The **Surveillance System Solution** consists of the following components:

- TES SMARC module based on Freescale i.MX 6 applications processor either with dual core (M2-SM6-2D) or quad core (M2-SM6-4Q) ARM Cortex A9 CPUs
- Application specific carrier card with 4 inputs for analog video cameras, interfaces for digital / IP video cameras and a large variety of interfaces that allow the integration of the solution into a larger system context like e.g. in a residential or industrial surveillance environment
- Ready-to-go software package with Linux OS, optimized BSP, middleware, media suites, GUI
- Mechanical enclosure (optional)

The **Surveillance System Solution** leverages TES' outstanding expertise in graphics and video technologies which enables a market leading system performance.

One key value of TES' system solutions is the ready-to-go software package described above.

TES **Surveillance System Solution** addresses the traditional video surveillance technology based on analog video inputs as well as network-based surveillance with IP cameras.

The adoptions to newer digital equipment like IP-network provides many functional and financial benefits to companies who need to provide better protection for people and assets. There is an increased adoption of IP camera technology as high-quality cameras can now be plugged in wherever there's a suitable port - enjoying the flexibility and

manageability of today's computer systems.

On the video output side, analog video (TV Out) and digital (HDMI or LVDS) outputs are available.

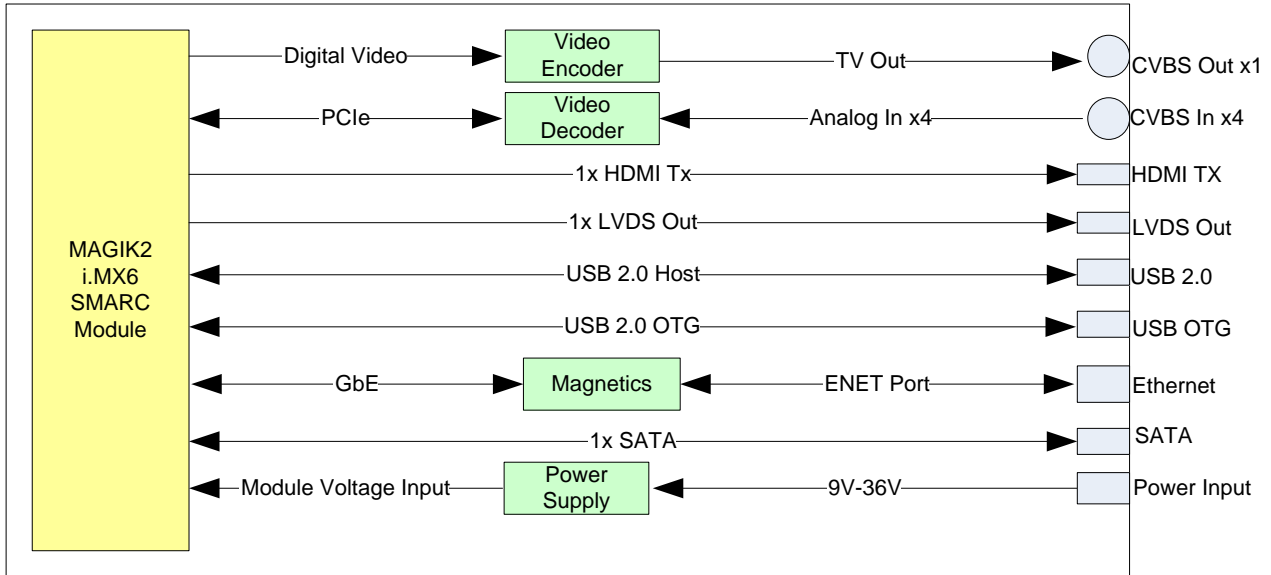
Live and recorded video can be accessed from network attached PCs across local area networks (LANs) or the Internet using familiar network technologies such as Ethernet and Internet Protocol (IP).

TES Surveillance Solution Software Features
<ul style="list-style-type: none"> Reliable platform from TES provides consistent and stable performance for industrial solutions
<ul style="list-style-type: none"> Easy and configurable storage module to increase scalability
<ul style="list-style-type: none"> Remote management of Surveillance solution which includes camera, storage & network access
<ul style="list-style-type: none"> H264 and MJPEG video compression techniques.
<ul style="list-style-type: none"> Hardware video intelligence capability via OpenCL.
<ul style="list-style-type: none"> High performance storage capability over SATA & USB.
Hardware Encoding:- <ul style="list-style-type: none"> 6 channel H264@D1 resolution(BP) 6 channel MPEG4-SP@D1 resolution MJPEG(BP) @ 160Mpixel/s
Hardware Decoding:- <ul style="list-style-type: none"> 8 channel H264@D1 resolution(BP/MP/HP) 8 channel MPEG4@D1 resolution(SP/ASP) MJPEG(BP) @ 160Mpixel/s

Technical Information	Surveillance System Solution
Processing Unit	<ul style="list-style-type: none"> TES i.MX6 System on Module SMARC Complaint H.264 /MJPEG Codec
Video Input	<ul style="list-style-type: none"> 4 Channel Analog Camera Input 12V Camera Power supply Out IP camera inputs
Video Output	<ul style="list-style-type: none"> 1x Analog Out (CVBS) 1x HDMI Out (HDMI 1.4a) 1x Optional LVDS Out (Single Channel 18/24 bits)
Ethernet	<ul style="list-style-type: none"> 1x 10/100/1000 Mbps M12 Ethernet Connectors PoE support on request
SATA	<ul style="list-style-type: none"> SATA- II Support
USB Host	<ul style="list-style-type: none"> Standard USB 2.0 Host Type A Connector
USB OTG	<ul style="list-style-type: none"> Standard USB 2.0 OTG micro AB Connector
Power Input	<ul style="list-style-type: none"> 9V-36V M12 Connector
Temperature Range	<ul style="list-style-type: none"> Industrial
RoHS	<ul style="list-style-type: none"> The hardware is RoHS compliant



Preliminary Block Diagram*



*Block diagram details are subject to change without notice. Check with TES for updated information.

Ordering Information		
Article	Part No.	Description
Surveillance Carrier Board	M2-CB-4CH-ANAIP-SRVL-IT	Surveillance Carrier Board With 4 Channel Analog and IP camera Input, HDMI Output Industrial Temperature Range
SMARC Module alternatives		
MAGIK-2 SMARC Module (dual core)	M2-SM6-2D1G-1G-4G-IT-S	i.MX6 Dual, 1GHz, 1GB RAM, 4GBytes Flash, Industrial Temperature, 80mmx52mm
MAGIK-2 SMARC Module (quad core)	M2-SM6-4Q1G-1G-4G-IT-S	i.MX6 Quad, 1GHz, 1GB RAM, 4GBytes Flash, Industrial Grade, 80mmx52mm

Refer to MAGIK 2 SMARC Module Product Brief for more possible combinations of Computer on Module part numbers

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