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'2021

## BROCHURE

### HMI LCD SOLUTIONS

- Quick and Easy GUI
- Technical Support
- Cost-effective HMI Solution

## COMPANY INTRO

Airhmi is a leading provider for industrial grade of Touch All-in-One System and Embedded Platform System. We provide the professional grade Touch IT solution, and focus in Medical Healthcare, Industrial Automation and Business Commercial markets. AIRHMI Visual Screen Creator is a GUI Designer (Graphical User Interface Designer) used to create the configured on project. It provides an intuitive and easy-to-use environment to create Human-Machine Graphical Interfaces very quickly. With capabilities spanning the value chain, and by taking full advantage of the latest technologies, Airhmi is committed to deliver products with forward-thinking features and best-in-class customer service.

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- HMI LCD SCREENS

## OUR MISSION

- Time Save**  
Airhmi led screens have prepared many functions related to driving led screen and screen for you. In this way, you can easily perform many functions related to the screen. The time and money you spend on design is yours.
- Fast Design**  
You can realize your project very quickly with airhmi screens. Because airhmi offers an easy interface and rapid prototyping for you.
- Easy Prototype**  
It allows you to create a rapid prototype by easily interfacing the devices you want to control with airhmi.

## COMPANY FEATURES

- Technical Service**  
The airhmi team supports you from the beginning to the end of your project.
- Quick and Easy GUI**  
AIRHMI Editor software offers an easy way to create the intuitive and superb touch user interface even for beginners.
- Cost-effective HMI Solution**  
Easy-to-use components, touch event programming and customized GUI in screen side allow you to develop projects rapidly in cost-effective way.

## PRODUCT PRINCIPLE

Overall intelligent display solution with fast GUIs makes professional and creativity in your industry.

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## HARDWARE

Touchscreen and Graphics Driver completely handled by LCM. You can complete your project with one touch.

- CODING**  
No coding skills required. But AIRHMI supports direct language for professional designs.
- PROGRAMMING**  
It is very easy to program AIRHMI screens. Programming via UART and SD CARD.
- COMMUNICATION**  
It communicates with your hardware via the uart interface. It also has GPIO.

## VISUAL DESIGNER

AIRHMI Visual Screen Creator is a GUI Designer (Graphical User Interface Designer) used to create the configured on project. It provides an intuitive and easy-to-use environment to create Human-Machine Graphical Interfaces very quickly.

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- Visual " Drag&Drop " Editor**  
Interface Objects (Elements) are placed simply by dragging and dropping over the Screen canvas. All Interface Objects' Properties (eg. Font Color, Position, etc.) can be selected Objects can be quickly edited on the "Properties" pane.
- Library Editors**  
Create and modify image, icon and Font libraries very quickly. Any modifications on the libraries update the project structure automatically when they completed. Just drag and drop images file to the Image and Icon Library editors to add new resources to the project.
- No coding skills required**  
Software Developers, Graphical Designers, Businessmen, anyone can use the software and collaborate to the project development process.
- Easy to learn**  
Extensive documentation, including Video Tutorials, Demonstration Projects, Quick Tip and Examples, Complete Advanced Documentation.
- Integrated Serial Terminal**  
Built-in Serial Terminal lets quick JTAG debugging and communication. Download Images, Configuration Files (icon and font) directly to the LCM in screen side. AIRHMI Visual Screen Creator. Send commands (eg. "New Line, clear rectangle, create icon empty by selecting the objects on the screen and clicking "Send"").

## OUR VISION

### INDUSTRY 4.0 AND HMI

Industry 1.0: Mechanization  
 Industry 2.0: Mass production  
 Industry 3.0: Automation, computerized machinery  
 Industry 4.0: Cyber-Physical Systems, Industrial IoT, Cloud

Lots of attention has been focused on the application of HMI technologies in consumer use cases like virtual assistants. Instead of repeating that message, we will focus on a few specific applications which are impacting industrial computers.

Industrial machines control is an obvious area of focus. The machinery utilized in industries ranging from oil & gas to healthcare is often plagued with under-use interfaces which can reduce productivity on the machines which are commonly amongst the most expensive in the facilities where they are located. Integrating state-of-the-art HMI into these assets can create new efficiencies on many levels.

Machine operators benefit from receiving physical feedback from haptic technologies, or wearable AR glasses free their hands and attention to focus on their primary jobs. New levels of safety are often achieved, which is far more important than efficiency ever will be.

Maintenance professionals can quickly visualize machine status in real-time, enabling them to prioritize their workload and anticipate tooling and material requirements for a scheduled task. Remote collaboration also allows off-site specialists to consult or guide local technicians through tasks that would require travel otherwise.

Across these categories, deployment of advanced HMI technology can help attract young people to join an aging workforce in a field which is otherwise with an industry 4.0 reality.

The automotive sector has also become a need adopter of new HMI technology. Automakers all strive to deliver differentiated in-car trends centered on a green brand model. New HMI technologies are most commonly found in the instrument panels of high-end models, but the redesign of instrument clusters for these operators has also demonstrated their applicability.

Many of the use cases identified here may not feel like they're on the cutting edge of technology in today's internet age. However, the combination of industry and manufacturing expertise of the Airhmi Business underpinning the industry 4.0 trend. As such, the integration of technologies being utilized in consumer technology and industry is a significant investment and productivity boom, and that's to say nothing about the potential of open-of the-art technologies currently in development.

## HDMI LCD SCREENS

HDMI displays are used as monitor and control interface for mikro computers. The connector structure is directly compatible with the Raspberry Pi. In this way, it provides the opportunity to make industrial control cards integrated with raspberry pi. It will be an integral part of your automation system with its touch screen feature.

It is compatible with Windows. There is support for Raspian and Ubuntu operating systems for Raspberry Pi models. It works with all systems with HDMI interface. However, touch control over HDMI is not used. It uses HDMI for display and USB for touch interface.

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## HARDWARE FUTURES

- 800x480, 1024x600 pixel resolution
- Direct connection with Raspberry Pi
- Compatible with Windows
- Working directly with Raspbian / Ubuntu
- Works with 5V micro usb adapter.
- External use as an HDMI display

## HDMI TO HDMI CONNECTOR

It plugs the Raspberry Pi into the 40 pin connector located on the back of the screen. Between the Raspberry Pi and the screen connecting with HDMI2HDMI connector without HDMI cable never has never been so easy.

## 40 PIN IDC CONNECTOR

You can use all raspberry pi pins with the IDC 40 pin connector on the screen.

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## AIRHMI LCD SCREENS

AIRHMI is a Human Machine Interface (HMI) solution combining an onboard processor and memory touch display with AIRHMI Editor software for HMI GUI project development.

Using the AIRHMI Editor software, you can quickly develop the HMI GUI by drag-and-drop components (graphics, text, button, slider etc.) and Function instructions for coding how components interact at display side.

AIRHMI HMI display connects to peripheral MCU via TTL Serial (5V, TX, RX, GND) to provide event notifications that peripheral MCU can act on, the peripheral MCU can easily update progress and status back to the AIRHMI display utilizing simple function based instructions.

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## HARDWARE FUTURES

Built-in RTC support  
GPIO support  
SD Card interface: support maximum 32G Micro TF / SD card (FAT32 file format)  
Flash data storage space: 16MB  
RAM: 32 MB  
Color: 24 bit color  
Resolution: 480x272, 800 x 480 pixels  
Adjustable Brightness: 0 ~ 230 nits, the adjustment range is 1%  
Touch type: Resistive, Capacitive

## Quick and Easy GUI

The AIRHMI Editor software offers an easy way to create the intuitive and superb touch user interface even for beginners. Add a static picture as background, define functions by components, you can make a simple GUI in minutes. The easy Drag-and-Drop components and simple function based instructions will dramatically reduce your HMI project development workloads.

## AIRHMI Technical Support

AIRHMI technical support team offers a basic hardware technical service with prompt response through all time zones.

As for further enhanced technical assistance to your project, Enhanced Support is available for you.

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The Future is in your touch...

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## PRODUCT LIST

### AIRHMI

Model	Resolution	RAM	Flash	RTC	GPIO	SD	UART	Touch	Screen	Dimensions
AIRHMI01E	480x272	16	64000	128	16	16	%	%	%	121-115
AIRHMI02E	800x480	32	128000	256	16	16	%	%	%	21-115
AIRHMI03E	1024x600	64	256000	512	16	16	%	%	%	21-115
AIRHMI04E	1280x800	128	512000	1024	16	16	%	%	%	21-115
AIRHMI05E	1920x1080	256	1024000	2048	16	16	%	%	%	21-115
AIRHMI06E	2560x1440	512	2048000	4096	16	16	%	%	%	21-115

### AIRHDMI

Model	Resolution	RAM	Flash	RTC	GPIO	SD	UART	Touch	Screen	Dimensions
AIRHDMI01E	480x272	16	64000	128	16	16	%	%	%	121-115
AIRHDMI02E	800x480	32	128000	256	16	16	%	%	%	21-115
AIRHDMI03E	1024x600	64	256000	512	16	16	%	%	%	21-115
AIRHDMI04E	1280x800	128	512000	1024	16	16	%	%	%	21-115
AIRHDMI05E	1920x1080	256	1024000	2048	16	16	%	%	%	21-115
AIRHDMI06E	2560x1440	512	2048000	4096	16	16	%	%	%	21-115

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