



MAPLE SYSTEMS

Touchscreen HMIs

Powerful Industrial Control Solutions

Basic HMIs • Advanced HMIs • Open HMIs



MAPLE SYSTEMS

POWERFUL INDUSTRIAL CONTROL SOLUTIONS

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ABOUT US

MAPLE SYSTEMS COMPANY PHILOSOPHY

Maple Systems Specializes in Operator Interface Solutions

We are committed to quality, reliability, and affordability. Our products deliver the quality you deserve, the reliability you demand, with a value that will drive your growth. Whether your customers are residential, commercial, or industrial; whether you create custom automation and integration solutions or manufacture products that require 21st century control, Maple Systems adds value and improves your bottom line.

We Make Machine Control Easy

With modern touchscreens, unrivaled value and functionality, combined with intuitive software, Maple Systems provides a versatile offering of products to complement your machine's design. Our products include:

- Touchscreen HMIs
- Open HMIs
- HMI + PLCs
- PLCs
- Light Industrial Panel PCs
- Heavy Industrial Panel PCs
- Text-Based Alphanumeric OITs

Our goal is to offer high-quality control solutions at affordable prices. We strive for continuous product improvement by being experts in our field, employing the latest technologies, and ensuring that every product is fully tested and inspected before leaving our facility. Paired with an outstanding support team and our comprehensive technical website, you'll see that Maple Systems truly is *your* industrial control solution.

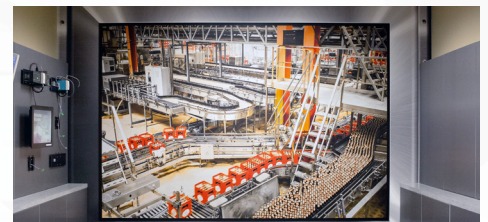
Contact Us Today

We invite you to explore our product offerings and contact us to discuss how Maple Systems can help solve and support your automation and control needs:

Phone: 425.745.3229

Email: sales@maplesystems.com

Website: www.maplesystems.com



HMI SERIES



HMI Solutions for Every Machine

Our products offer the best value in today's HMI marketplace with benefits including modern touchscreens, intuitive software, great functionality, and outstanding pricing. Our Basic and Advanced Series both come with **free*** configuration software, making Maple HMIs an even better choice.

Basic HMI Series

The Basic HMI series offers a great solution for organizations focused on cost-driven and OEM-related projects. Basic HMIs deliver the ability to display data in several formats: bar graphs, trend graphs, and analog meters/gauges. They display speed, pressure, and temperature in a visual format the operator can quickly understand.



Advanced HMI Series

Our Advanced HMI series offers the best value in today's Human Machine Interface marketplace. Enjoy enhanced data handling features, trusted performance, affordable pricing, and unparalleled support. With features like Wi-Fi functionality, dual-Ethernet, remote access, aluminum enclosures, and Class I Division 2, we have an HMI to meet your company's unique requirements.



Open HMI Series

Does your automation process require specific capabilities and customization? Maple Systems OMI6500 series offers a Windows Embedded Compact 7 operating system that can be paired with the SCADA software of your choice and is the perfect solution for OEMs running custom applications.



*Free software is EZwarePlus or EBPro Configuration Software

Maple Systems Basic HMIs are a Great Option for Organizations Focused on Cost-Driven and OEM-Related Projects.

The Basic HMIs are a great option for OEMs and end users looking for essential machine control that doesn't require UL or other enhanced software features offered by the Advanced and cMT HMI products.

With hardware features comparable to the Advanced and cMT HMIs, the Basic HMI series is a cost effective way for companies to upgrade their machines at a minimal cost.

Basic Data Handling and Display

Basic HMIs offer the ability to display data in several formats. PLC register content can be displayed in numeric or ASCII format and can send data to the PLC using these formats. Bits in the PLC can be displayed as buttons or lamps. Colors can be chosen in the configuration software. The Basic HMI series can also display bar graphs, trend graphs, and analog meters and gauges. This allows for the display of speed, pressure, and temperature in a visual format the operator quickly understands.

	HMI5040B	HMI5070B	HMI5100B
Display			
Dimensions	5.04" x 4.05" x 1.26"	7.88" x 5.79" x 1.34"	10.67" x 8.39" x 1.42"
Size	4.3"	7.0"	10.0"
Resolution	480 x 272	800 x 480	1024 x 600
Bezel Color	Black	Black	Black
Memory			
Flash	128MB	128MB	128MB
DRAM	128MB	128MB	128MB
CPU	600MHz	600MHz	600MHz
Ethernet Ports	1	1	1
Serial Ports	1	1	1
SD Card	No	No	No
USB	Host	Host	Host
Input Current	400mA @ 24VDC	500mA @ 24VDC	650mA @ 24VDC
Input Voltage	10.5 ~ 28VDC	10.5 ~ 28VDC	10.5 ~ 28VDC
Enclosure	Plastic	Plastic	Plastic
Operating Temp.	32° ~ 122° F	32° ~ 122° F	32° ~ 122° F
Storage Temp.	(-4) ~ 140° F	(-4) ~ 140° F	(-4) ~ 140° F
Rating	IP65 Front Panel (NEMA4X Indoor Only)	IP65 Front Panel (NEMA4X Indoor Only)	IP65 Front Panel (NEMA4X Indoor Only)
UL Listing	No	No	No
CE	Yes	Yes	Yes
RoHS	Yes	Yes	Yes

Simple Security

Secure project files to prevent unauthorized program changes with our HMI Configuration Software. Basic security accounts can also be created within the program to prevent unauthorized access to password protected screens or objects.

Protocols

Our **free*** HMI configuration software has all of the communication drivers you need. Unlimited tags and multiple protocols are supported at no extra cost, with no fees for runtime licenses. Maple HMIs support over 300 controllers, including:

- Allen-Bradley
- Siemens
- Mitsubishi
- Omron
- GE
- Emerson
- Modbus
- Koyo
- Yaskawa
- Bosch
- Hitachi



Advanced Features

The Advanced HMI series offers the best value in today’s HMI marketplace with benefits including modern touchscreens, intuitive software, and great functionality. Enjoy enhanced features, trusted performance, affordable pricing, and unparalleled support to meet your most demanding automation needs.

Control Any Industry

These units are used across many industries including packaging, food and beverage, oil and gas, medical, pharmaceutical, and more. The Advanced HMI series uses the same **free*** HMI configuration software as our Basic series, but with many enhanced software features such as IIoT data handling, remote access, enhanced security features, recipe management, email notifications, and more.

*Free software is EZwarePlus or EBPro Configuration Software

Model Number	Display				Memory	CPU	Ethernet Ports	Serial Ports	CANbus	SD Card	USB
	Dimensions (W" x H" x D")	Size	Resolution	Bezel Color	Flash/DRAM						
HMI5043L	5.04 x 4.02 x 1.26	4.3"	480 x 272	Light Grey	128 MB/128 MB	600MHz	1	2	-	No	Host
HMI5043LB	5.04 x 4.02 x 1.26	4.3"	480 x 272	Dark Grey	128 MB/128 MB	600MHz	1	2	-	No	Host
HMI5043DL	5.04 x 4.02 x 1.26	4.3"	480 x 272	Light Grey	128 MB/128 MB	600MHz	2	2	-	No	Host
HMI5070NL	7.89 x 5.76 x 1.34	7.0"	800 x 480	Light Grey	128 MB/128 MB	600MHz	1	3	-	No	Host
HMI5070L	7.89 x 5.76 x 1.34	7.0"	800 x 480	Light Grey	128 MB/128 MB	600MHz	1	2	-	No	Host
HMI5070LB	7.89 x 5.76 x 1.34	7.0"	800 x 480	Dark Grey	128 MB/128 MB	600MHz	1	2	-	No	Host
HMI5070DL	7.89 x 5.76 x 1.34	7.0"	800 x 480	Light Grey	128 MB/128 MB	600MHz	2	3	-	No	Host
HMI5071L	7.89 x 5.76 x 1.34	7.0"	800 x 480	Light Grey	128 MB/128 MB	600MHz	1	3	-	No	Host
HMI5070P	7.89 x 5.76 x 1.34	7.0"	800 x 480	Dark Grey	256 MB/256 MB	1GHz	1	2	Yes	Yes	Host/Client
HMI5097NXL	10.26 x 8 x 1.44	9.7"	1024 x 768	Dark Grey	512 MB/256 MB	1GHz	1	2	-	No	Host
HMI5097DXL	10.26 x 8 x 1.44	9.7"	1024 x 768	Dark Grey	512 MB/256 MB	1GHz	2	3	Yes	No	Host
HMI5100L	10.26 x 8 x 1.57	10.1"	800 x 480	Light Grey	128 MB/128 MB	600MHz	1	2	-	No	Host
HMI5102L	10.26 x 8 x 1.43	10.1"	1024 x 600	Light Grey	128 MB/128 MB	600MHz	1	2	-	No	Host
HMI5103L	10.26 x 8 x 1.43	10.1"	1024 x 600	Light Grey	128 MB/128 MB	600MHz	1	2	-	No	Host
HMI5121XL	12.48 x 9.61 x 1.81	12.1"	1024 x 768	Dark Grey	256 MB/256 MB	1GHz	1	2	-	Yes	Host/Client
HMI5121P	12.48 x 9.61 x 1.81	12.1"	1024 x 768	Dark Grey	256 MB/256 MB	800MHz	1	2	Yes	Yes	Host/Client
HMI5150XL	14.41 x 11.54 x 2.24	15.0"	1024 x 768	Dark Grey	256 MB/256 MB	1GHz	1	2	-	Yes	Host/Client
HMI5150P	14.41 x 11.54 x 2.24	15.0"	1024 x 768	Dark Grey	256 MB/256 MB	800MHz	1	2	Yes	Yes	Host/Client
RMI5001	5.12 x 4.53 x 1.06	-	-	Charcoal	256 MB/256 MB	600MHz	1	3	-	Yes	Host

Advanced HMI Hardware Features:

- 4.3" to 15" models
- Easy-to-use configuration software
- Class I, Division 2 available
- Wi-Fi option available
- IP65/IP66/NEMA 4X, CE, and RoHS certified
- Aluminum enclosures available
- MQTT, OPC UA, & EasyAccess 2.0
- Data logging, recipes, and advanced security
- Remote Access
- High-Resolution screen options

Our Advanced HMIs offer robust features, high-quality components, fast processors, and affordable pricing. All programmed with our free* configuration software.



Input Current	Input Voltage	Enclosure	Operating Temp.	Storage Temp.	Rating	UL Listing	CE	RoHS	EasyAccess 2.0 Included	Wi-Fi
300mA @ 24VDC	24 ± 20% VDC	Plastic	32° ~ 122° F	(-4°) ~ 140° F	IP65 Front Panel (NEMA4X Indoor Only)	cULus	Yes	Yes	-	-
300mA @ 24VDC	24 ± 20% VDC	Plastic	32° ~ 122° F	(-4°) ~ 140° F	IP65 Front Panel (NEMA4X Indoor Only)	cULus	Yes	Yes	-	-
300mA @ 24VDC	24 ± 20% VDC	Plastic	32° ~ 122° F	(-4°) ~ 140° F	IP65 Front Panel (NEMA4X Indoor Only)	cULus	Yes	Yes	-	-
450mA @ 24VDC	24 ± 20% VDC	Plastic	32° ~ 122° F	(-4°) ~ 140° F	IP65 Front Panel (NEMA4X Indoor Only)	-	Yes	Yes	-	-
300mA @ 24VDC	24 ± 20% VDC	Plastic	32° ~ 122° F	(-4°) ~ 140° F	IP65 Front Panel (NEMA4X Indoor Only)	Class I, Division 2	Yes	Yes	-	-
300mA @ 24VDC	24 ± 20% VDC	Plastic	32° ~ 122° F	(-4°) ~ 140° F	IP65 Front Panel (NEMA4X Indoor Only)	Class I, Division 2	Yes	Yes	-	-
600mA @ 24VDC	24 ± 20% VDC	Plastic	32° ~ 122° F	(-4°) ~ 140° F	IP65 Front Panel (NEMA4X Indoor Only)	cULus	Yes	Yes	Yes	-
450mA @ 24VDC	24 ± 20% VDC	Plastic	32° ~ 122° F	(-4°) ~ 140° F	IP65 Front Panel (NEMA4X Indoor Only)	cULus	Yes	Yes	-	-
400mA @ 24VDC	24 ± 20% VDC	Aluminum	(-4°) ~ 122° F	(-4°) ~ 158° F	IP66 Front Panel (NEMA4X Indoor Only)	cULus	Yes	Yes	-	-
500mA @ 24VDC	24 ± 20% VDC	Plastic	32° ~ 122° F	(-4°) ~ 140° F	IP65 Front Panel (NEMA4X Indoor Only)	-	Yes	Yes	-	-
650mA @ 24VDC	24 ± 20% VDC	Plastic	32° ~ 122° F	(-4°) ~ 140° F	IP65 Front Panel (NEMA4X Indoor Only)	cULus	Yes	Yes	Yes	-
600mA @ 24VDC	24 ± 20% VDC	Plastic	32° ~ 122° F	(-4°) ~ 140° F	IP65 Front Panel (NEMA4X Indoor Only)	cULus	Yes	Yes	-	-
650mA @ 24VDC	24 ± 20% VDC	Plastic	32° ~ 122° F	(-4°) ~ 140° F	IP65 Front Panel (NEMA4X Indoor Only)	cULus	Yes	Yes	-	-
650mA @ 24VDC	24 ± 20% VDC	Plastic	32° ~ 122° F	(-4°) ~ 140° F	IP65 Front Panel (NEMA4X Indoor Only)	cULus	Yes	Yes	Yes	Yes
800mA @ 24VDC	24 ± 20% VDC	Aluminum	32° ~ 122° F	(-4°) ~ 140° F	IP66 Front Panel (NEMA4X Indoor Only)	cULus	Yes	Yes	-	-
850mA @ 24VDC	24 ± 20% VDC	Aluminum	32° ~ 122° F	(-4°) ~ 158° F	IP66 Front Panel (NEMA4X Indoor Only)	cULus	Yes	Yes	-	-
1000mA @ 24VDC	24 ± 20% VDC	Aluminum	32° ~ 122° F	(-4°) ~ 140° F	IP65 Front Panel (NEMA4X Indoor Only)	cULus	Yes	Yes	-	-
900mA @ 24VDC	24 ± 20% VDC	Aluminum	32° ~ 122° F	(-4°) ~ 158° F	IP65 Front Panel (NEMA4X Indoor Only)	cULus	Yes	Yes	-	-
230mA @ 24VDC	24 ± 20% VDC	Plastic	(-4°) ~ 122° F	(-4°) ~ 158° F	IP20	cULus	Yes	Yes	-	-



Create and Deploy Custom Control Applications for Your Unique Process.

Our **free***, powerful HMI software gives you the flexibility to design the screens you want quickly - pick and place graphical objects and assign communication (PLC) drivers easily. With support for over 300 communication protocols including Allen-Bradley, Siemens, Omron, Emerson, GE, Panasonic, Mitsubishi, and many more, we can seamlessly integrate into your existing system. Visit our Support Center at MapleSystems.com for full a list of PLCs we integrate with.

Here are just a few of the features our Advanced HMIs support:

Alarm & Event Messages (Import/Export, Histories, Backup, Display)	Fonts	Recipe View
Analog Meters	Graphics (Libraries, Bit Maps, Custom Libraries, Lamps, Pushbuttons, Multi-state Switches)	Remote Access (EasyAccess, cMT Viewer, VNC)
Animation - Flow Block	Grid Display	Scheduler
Animation (Objects, Word Lamps, GIFs, Moving Shapes)	Languages (up to 24 languages supported)	Security Levels (Simple)
ASCII Characters	Library - Label, Picture, Shape	Security Levels (Enhanced)
Bar Graphs	Library - Tag	Siemens PLC Pass-Through
Circular Trend Display	Macros	String Table
Combo Button	Meters & Gauges	Table
Data Logging (Backup, Display, Historical Data Display)	Modbus	Text Object
Data Sampling	Interlock, User Restriction, Safety Control	Time Synchronization
Data Transfer (with Retentive Memory)	Objects (Grouping, Layering, Aligning, Flipping)	Timer Object
Date/Time	Off-line Simulation on HMI	Trend Display
Design up to 1,999 Screens	Pass-Through Mode	Trend Graphs
Display (Numeric, Set Word, Multi-State Switch, Set Bit, Toggle Switch, Combo Button)	Picture Object/Viewer	USB Disk Download
Dynamic Drawing	Pie Chart	USB Tethering
Dynamic Scale	PLC Tag Embedded in Project	User-Defined Startup Screen
Email	Project Password	Utility Manager
Enhanced Security Mode	Project Protection	VNC Server/Viewer
Event Alarm Log	Recipe Database	Windows Open/Cycle/Close Macro
File Browser	Recipe Import/Export	XY Plot

INDUSTRIAL INTERNET of THINGS



IIoT/MQTT

The Industrial Internet of Things (IIoT) enables you to connect to your machines and data through the Internet. The IIoT connects powerful data from a manufacturing environment to informational technologies on-site and in the cloud. It offers improved access to data which can lead to better informed decision-making, increased productivity, and higher profits.

IIoT-Ready

Maple Systems HMIs are IIoT-Ready with support of over 300 different communication protocols including MQTT, Profinet, and Ethernet IP. Our solutions can ensure an OEM's machines are IIoT-Ready today, so when customers request this functionality today, tomorrow, and well into the future they'll already be there. With IIoT-Ready products in a range of sizes and features, we have the flexibility today to meet a variety of needs.

Let us serve as your partner for the IIoT, making your jump to a connected factory an easy one. Our HMI interfaces offer a gateway access point to the IIoT, enabling operating equipment on the plant floor to connect to informational technologies of the world wide web, databases, smart phones, analytics software, and more. Achieve better access to invaluable data and open up a world of possibilities for your business when you connect to the IIoT.

Maple Systems IIoT-Ready Interfaces Offer Convenient Remote Access and Control.

IIoT-Ready HMIs offer numerous benefits for OEMs and their customers:

- View how systems are performing and optimize production or machine use to automatically track maintenance and operations costs.
- A secure connection safely allows for advanced remote functionality such as email alarms, remote monitoring and programming.
- Reduce on-site visits, travel expenses, and costly downtime with off-site troubleshooting and configuration. Stay ahead of the game by scheduling predictive maintenance.

*Free software is EZwarePlus or EBPro Configuration Software

CASE STUDY: LINDSAY TRANSPORTATION SERVICES



HMI5150XL

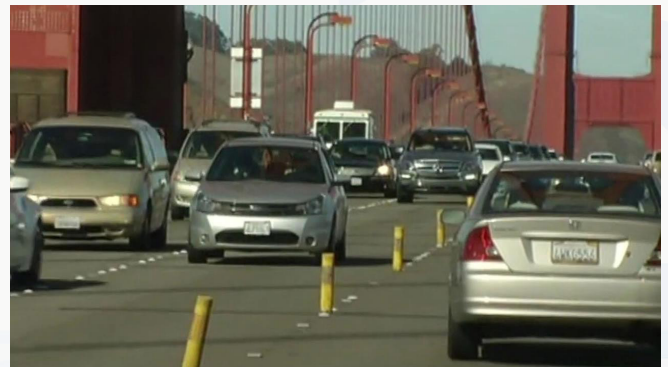


For over 65 years, the philosophy of Lindsay Corporation has always been to manufacture and distribute machinery that could withstand the growing pains of a flourishing nation. In doing so, Lindsay also strives to maintain a high standard for safety while collecting and providing valuable data. The roots of the company were started in the farming industry and eventually expanded into road and railroad safety. This expansion led them to branch into Lindsay Irrigation Solutions and Lindsay Transportation Solutions under the Lindsay Corporation umbrella.

Lindsay Transportation Solutions' (or LTS) main focus is road safety. A common concern with road safety is dealing with high-volume traffic, especially related to specific settings such as on a bridge.

The Golden Gate Bridge

Opened in May of 1937, the Golden Gate Bridge has increasingly been an area of concern for residents of San Francisco. The city's population has grown to over 17,000 people per square mile according to the latest US census in 2015. With six lanes spanning the width of the bridge, the only barrier separating the North and South-bound lanes were 19" tall plastic tubing set at 25 foot intervals (as seen in the picture). With this insufficient barrier system, the likelihood of head-on, fatal collisions was always going to be at its peak.



The Road Zipper

After over 70 years without an appropriate boundary, a movable barrier system called the Road Zipper, was adopted in 2015 as the solution to a safer Golden Gate Bridge. The use of a movable concrete barrier and barrier moving machine allows for traffic lane adjustments by creating/eliminating lanes at certain times of the day based on traffic conditions. This ability to open, close, and change lanes can be used for protecting work zones, eliminating crossover-road fatalities, and creating contraflow lanes.

Road Zipper Upgrades

After the Golden Gate Bridge project, it was discovered that the current controller hardware was soon to become obsolete. The Road Zipper itself has been around since the 1980's, meaning it was due for enhancements. LTS saw this as an opportunity to upgrade the Road Zipper's control system to ensure it would run on future-supportable hardware, and provide new, additional real-time data displays. Enter the Maple Systems high-speed, high-resolution HMI5150XL. A 15" touch screen unit with Ethernet, 2 serial ports, 2 USB ports and a VNC server which allows for remote monitoring.

The upgrade project for the Road Zipper was led by Dave Blankenship, Senior Electrical Designer at LTS: "When I first came to work for LTS, I reviewed their current control system and was surprised to discover that some of the currently used PLC hardware components were going obsolete. A closer look also revealed that the PC and view monitors in use were running a single page display-only screen using a legacy Visual Basic code. I approached the Applications Engineers at Maple Systems with my idea of replacing the current control system with an HMI and PLC (ControlLogix) combination. One that would not only function-as-needed, but provide a multi-page touchscreen display with enhanced features, including custom screens with push buttons, machine status indications, custom faceplates for multiple operational modes, etc." Blankenship went on to say:



"The Maple Systems HMI does a beautiful job showcasing all the improvements LTS required and really makes it pop. And, despite all the work that's been done using a remote cellular modem, CANbus gateway, remote IO, and PLC program, the central focus is still on the HMI"

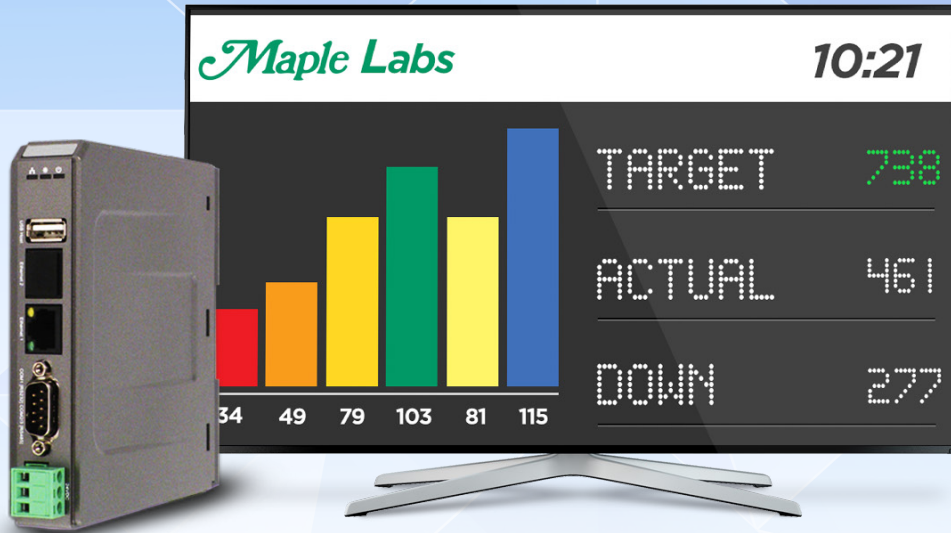
- Dave Blankenship, Senior Electrical Designer
Lindsay Transportation Services



In addition, LTS appreciated the ease of use in integrating Maple's HMI5150XL seamlessly into the Road Zipper. From their standpoint, the addition of this controller added value to the Road Zipper with increased visibility, intuitiveness, and supportability (compatible hardware). A few other noteworthy features LTS utilized on the HMI5150XL include the USB feature, which allowed for recipe uploads, and the touch screen. Engineers at LTS also applauded the following features of Maple: Alarm Notifications; VNC Server Feature; Unlimited Free Tech Support; and Easy-to-Software.

When asked how Maple compares to other brands in the HMI market, Dave said that he has personally worked with many other, very well-known brands in the industry, and he concluded that Maple Systems value is unmatched. **Dave stated that the price, functionality, value, and support were all aspects of a service that "is a pleasure to work with" and simply cannot be compared to other HMIs in the market today.** Maple Systems is proud to have been and continues to be LTS's ideal solution for such a complex upgrade. The most recent recipient utilizing Maple's HMI is the Walt Whitman Bridge connecting Philadelphia to New Jersey, hosting two newly upgraded Road Zippers in 2016. It is an honor for Maple Systems to be part of history with this partnership in creating safer roadways across the world, from New Jersey to New Zealand!

RMI5001 OVERVIEW



Status Display Station

Remote HMI = RMI. The RMI5001 units are "remote" in the fact that the monitoring/control element is physically separated from the display. The RMI5001 is an HMI with no display that converts any compatible TV or monitor into a Status Display Station in which the HMI data is displayed via an HDMI cable. It divides the traditional all-in-one HMI into two parts: a data processing unit and a separate visual display. No longer is your screen size limited to the available HMIs on the market – you can now display your real-time production data on a large wall-mounted Status Display Station, easily visible from any plant floor location.

Connectivity Options

The RMI5001 data processing unit is a fully functional Advanced HMI and can be thought of as the "brain" data processing center which allows you to monitor and control your automation process. This unit offers one Ethernet port, three COM ports on one physical DE-9 Serial port, a USB Host port, an SD card reader slot, and support for more than 300 major brands of PLCs and controllers, including the standard industrial/IIoT protocols Modbus and MQTT.



Display Options

This compact, powerful unit turns any HDMI-compatible TV or industrial monitor into a Status Display Station via HDMI cable – efficiently delivering crisp, high-definition graphics. The HDMI interface is also easily converted to DVI/VGA/Display Port with an adapter (not supplied).

Because the display is user-selectable, you can choose the features you need in your display independent of the features you need in your HMI. Choose a daylight readable display with an extended temperature range for outdoor applications. Choose a large display for indoor applications that need to be easily viewable from far away. Or choose to have no display at all for applications where you only need data logging or mobile access to the HMI through VNC. You can even connect it to a projector for the largest display needs.

Extended Temperature Range

With the RMI5001's extended operating temperature range of $-4^{\circ} \sim 131^{\circ}\text{F}$ ($-20^{\circ} \sim 55^{\circ}\text{C}$) and the versatility of choosing the right display for your needs, this unit gives you more installation environment flexibility than most HMIs on the market. It can be paired with high-brightness displays suitable for outdoor use or placed in colder environments than most LCD displays are capable of operating in.

Applications

The RMI5001 can also be used as an Andon or Annunciator System, creating a Status Display Station. It can collect equipment and quality management data from the production line, process the data, and then send visualization and sound to a large screen monitor via HDMI, allowing real-time monitoring and control for on-site operators.

Andon Systems are widely used in manufacturing plants for instant visual management. Alarm messages and key productivity indicators from the production line can be collected, displayed and monitored in real-time. Overall Equipment Effectiveness (OEE) information can be displayed, and identifies the percentage of planned production time that is truly productive.





4.3"

7.0"

9.7"

Dual-Ethernet

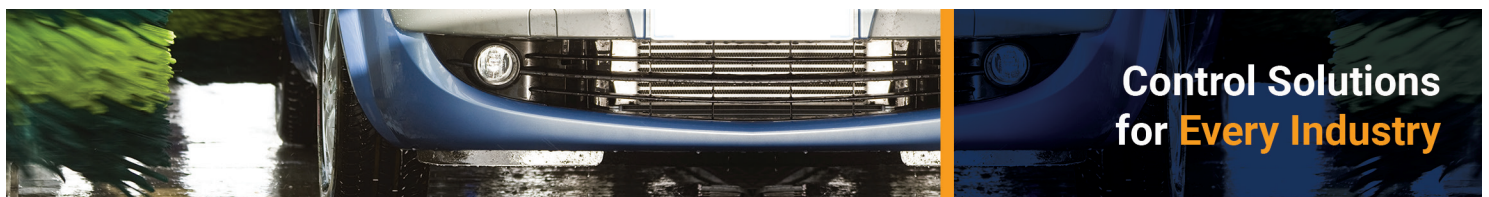
Security is paramount in today's technologically advanced times and so is connectivity. Many PLCs take advantage of Ethernet communication to transmit data to a monitoring device such as an HMI. Plant corporate networks, of course, can also run via Ethernet and Wi-Fi networking. But how do you get data from the PLC to your corporate network without the bandwidth or security sacrifices entailed by placing your PLC on the same network?

Our Dual-Ethernet models and Wi-Fi HMIs conveniently divide competing connectivity demands between two separate networks. This offers the benefits of connecting to the Industrial Internet of Things (IIoT) for your customers, while increasing the reliability and security of a private control network dedicated to keeping machinery operating at peak performance. The HMI becomes a gateway into your control network. The PLC can transmit everything to the HMI without having to deal with slowdowns or network traffic and the HMI can maintain a connection to the plant network for VNC monitoring, sending status reports, data log files, and e-mail alarms.

In the event of a catastrophic issue causing the main company network to go down, the HMI maintains its PLC connection, which means the machine stays up and running. Only data that is intentionally shared with the Internet will be accessible from the outside world. PLC and other machine hardware on the control network cannot be directly accessed, greatly improving security and preserving bandwidth for time critical control tasks. Maintaining separate networks is a best practice for the security-conscious, and our Dual-Ethernet and Wi-Fi models allow that to happen at a great price.

Dual-Ethernet Features:

- Gigabit speeds: 10/100/1000 Base-T
- EasyAccess 2.0 included for secure (VPN) remote access from outside the local network
- Separate LAN and WAN networking
- DHCP or Static IP options





Wi-Fi

As Wi-Fi becomes more readily accepted and accessible in today's industrial controls marketplace, the devices we use must evolve with it. The industrial control network must function in real-time, be highly available, responsive, and most of all, secure. These demands are often in direct conflict with the pressure to reduce costs, increase connectivity, and enable remote access.

The HMI5103L offers a secure access point to an existing Wi-Fi network that can provide a unified, reliable, and easy way to manage production. Some benefits of implementing a Wi-Fi network in your smart factory include:

- **Cutting Costs by Creating a Wireless Network on Your Factory Floor:** Wi-Fi can solve applications where wiring is impractical or too expensive. There's no need to run expensive Ethernet or Serial cables throughout your plant. Add a Wi-Fi router to your network and you're ready to go.
- **Flexibility in Communications and Troubleshooting:** Use a Wi-Fi enabled laptop to troubleshoot your machines without having to find a network access point or carry around extra cables.
- **Ease of Expandability:** Aside from the initial ease of setup for a Wi-Fi network, wireless networks can serve a suddenly-increased number of clients with the existing equipment. In a wired network, additional clients would require additional wiring.

HMI5103L Wi-Fi Features:

- IEEE 802.11 b/g/n
- WPA-PSK/WPA2-PSK Encryption
- EasyAccess 2.0 included for secure (VPN) remote access from outside the local network
- DHCP or Static IP options
- Ability to turn Wi-Fi radio on/off within program
- Project upload/download over Wi-Fi



Advanced HMIs
Enhanced features
& Performance

REMOTE ACCESS

VNC | Universal Support



Remotely Monitor and Control Your HMI and Connected PLC From Anywhere in the World.

From an operator using a smartphone on the plant floor, to a corporate executive on the other side of the globe, Maple Systems products integrate perfectly with a wide variety of smartphones, tablets, and PCs, with apps for Apple, Android, and Windows operating systems. This makes it easier than ever to connect to operational equipment in the field. Achieve secure connections, increased monitoring mobility, and reduced downtime to increase your organization's bottom line.

VNC

Our Advanced HMIs come with a built-in VNC (Virtual Network Computing) server. VNC is a Remote Frame Buffer protocol used for remote operation and screen sharing. It enables you to instantly monitor and control a remote HMI as though you were standing in front of it. When enabled, any third party VNC viewer client (available for Apple, Android, Windows, and Linux devices) can log into a Maple HMI to see and control exactly what's shown on the HMI screen.

Configurable VNC Options on Maple Systems HMIs Include:

- Require a password or allow password-free access
- Set a timeout to automatically log remote users out
- Enable monitor mode (view only)
- Allow single or multiple connections

VNC is ideal for situations where the remote device is on the same local network and bandwidth is not limited. For situations where users need the ability to view different screens without affecting the local unit, or when access from outside the local network is desired without needing to configure your router ports, EasyAccess 2.0 may be a better solution. (More details on the EasyAccess 2.0 available on the next page).

Note: HMI IP address required for VNC access. VNC client applications for many different platforms are available online.

EasyAccess 2.0 | Secure HMI & PLC Access



EasyAccess 2.0

EasyAccess 2.0 allows you to instantly and securely communicate with your Maple Advanced HMI from anywhere in the world.

Accessibility from outside the plant provides the opportunity to troubleshoot or add new features to the HMI/PLC program by qualified personnel without ever setting foot inside the plant. An administrator grants access to specific HMIs and groups, and traffic is encrypted and secured via VPN. Remote troubleshooting saves money by reducing downtime, travel, and personnel costs.



Security

EasyAccess 2.0 uses a VPN (Virtual Private Network) over the public Internet to securely transmit encrypted data to your internal network. Doing so ensures the same security and reliability you've come to expect when transmitting online banking data.

The HMI Manager is a project management tool enabling easy management of your EasyAccess 2.0 HMI fleet. HMI Manager allows the administrator to manage users, HMIs, locations, and notes, granting and restricting operator access to your entire HMI fleet.

Pass-Through Technology

Remote Pass-Through is made simple with EasyAccess 2.0, giving you the ability to monitor and update a PLC connected to your remote HMI. Simply log into the remote HMI with EasyAccess 2.0, enable Pass-Through mode, and upload, download, or go online with your PLC project. During the Pass-Through process, communication between the HMI and PLC remains.



Note: EasyAccess 2.0 is available on all Maple Advanced HMIs, but requires an activation card for some models.

CASE STUDY: SILVERSTONE AUTOMATION



HMI5100L



Silverstone Automation has been in the automated manufacturing equipment business since 2000. Their reputation is in delivering outstanding automated manufacturing equipment, meeting their customer's needs through innovative designs, robust engineering, quality fabrication and thorough testing.

If you've ever required hospitalization, odds are you've received an IV. Most patients remember this part of their visit because it's often the first event that happens after admission—it can also be painful if the provider has a hard time finding a vein. But rest assured, there are ways to maximize comfort in this when you need it most.

Take for example the plastic tubing that runs from the IV bag into your arm. Have you ever wondered why your IV stopped hurting once placed? Aside from being on the receiving end of the *good* medicine, this added comfort is mainly attributed to the way the catheter tip (plastic tubing) was expertly shaped to glide into your arm. If you are wondering who to thank, the folks at Silverstone Automation are the ones who have perfected equipment used for tipping these essential medical devices with their SilverCATH 1100 and 2200 series catheter tip forming machines.

The fundamental idea behind creating Silverstone Automation was to help manufacturers reduce production costs by creating operator friendly, reliable and compact automated assembly equipment. For their standard SilverCATH 1100 and 2200 catheter tipping machines, the machine's purpose is to accurately form introducer and catheter tips so that when used, a smooth and gentle transition is provided for each and every patient.



Maple Systems
offers **free***
configuration software

The Project Requirements

When Silverstone was designing their SilverCATH 1100 and 2200 series, they had high expectations for the display, requiring:

- High-Resolution Touch Screen
- Built-In Recipe Functionality
- USB Port for Saving Recipe Data
- Friendly Programming Software
- Password-Protected Screens
- Excellent Pricing
- Trustworthy Local Technical Support

Silverstone met these requirements by integrating Maple Systems HMI5100L into their design for their *Precision Catheter Tip Forming Machines*. The HMI5100L offers a slim form, sleek look, and an affordable price. The 1.57" depth of this HMI granted an easy mounting experience and the 10" color touch screen allowed for quick parameter setting and selection for the end user.



HMI5100L



“Silverstone’s SilverCATH Series allowed for the same operator to produce *three times* their normal rate of catheter tips in *half the space*, which resulted in six times the production compared to competitor machines.”

- Corey Bodily, CFO
Silverstone Automation

Much of this increased efficiency was related to the machine's design. With the 10" easy-to-read Maple touchscreen and separate screens for operators and technicians, the operator's interactions were simplified and unintended interactions were mitigated. In addition, using pre-programmed recipes, operators had less information to enter reducing changeover time and minimizing errors.

In addition to their popular SilverCATH 1000 and SilverCATH 2000 series, Silverstone has integrated Maple HMIs into a number of custom one-off machines for their proprietary customers. Having an established relationship proved to be rewarding when creating these custom designs since Maple offers controllers in a range of sizes from 4.3"-15" for any size project. This has made Maple Systems the sought-out name for displays at Silverstone.

With such success in their standard SilverCATH series, Silverstone has no plans of slowing down anytime soon. Silverstone Automation likes the benefits of Maple HMIs for their customers and for Silverstone's bottom-line.

*Free software is EZwarePlus or EBPro Configuration Software

OPEN HMIs



Open HMIs

Does your automation process require specific capabilities and customization? Maple Systems Open HMIs are the perfect solution for OEMs requiring a low-cost, high-quality HMI for custom applications. Open HMIs offer the software flexibility of a Windows operating system and are affordably priced, allowing you to choose from a variety of the software programs to help you achieve complex process goals.

Our OMI6500 Series is a compact Open HMI designed to operate in an industrial environment. Our Open HMIs come with RISC-based ARM processors and Flash technology embedded with the Microsoft Windows Embedded Compact 7 (WEC7) operating system. These models are SCADA ready and pair well with Indusoft Web Studio software.



Windows Embedded Compact 7

Formerly known as Windows CE, the Windows Embedded Compact 7 operating system is a 32-Bit, small-footprint OS that occupies less storage space and system resources when compared to other operating systems. In the field of industrial automation or for operator interface terminals, this is an appealing feature because the small storage space requirements make operating on small solid-state chips possible.

The per-installed Windows Embedded Compact 7 OS contains the following applications:

- Internet Explorer
- Word Viewer
- Excel Viewer
- Power Point Viewer
- PDF Viewer, Photo Viewer
- WordPad Text Editor
- .NET Compact Framework 3.5
- Command Prompt
- Music Player, Video Player

Hardware Features

The OMI6500 Series are plug-and-play machines. All models feature:

- All-in-one platform: The CPU, DRAM and WEC7 are integrated
 - ARM® Cortex® A8 1GHz
 - 512MB DDR3 DRAM
 - 512MB NAND Flash
- Powerful communications capability: Each model offers 1 serial port, 1 Ethernet port, and 2 USB 2.0 ports
- TFT displays for high brightness and contrast clarity
- Audio out port
- EMI protection meets standards for electrical noise emissions and immunity according to the European CE directives
- Fanless design provides reliable operation and longer lifespan



	OMI6507A	OMI6510A	OMI6512A
Display			
Dimensions	8.03 x 5.91 x 1.67 Inches	11.22 x 7.44 x 2.08 Inches	12.56 x 9.65 x 2.01 Inches
Size	7"	10.1"	12.1"
Resolution	800 x 480	1024 x 600	800 x 600
Operating System	Microsoft Windows © Embedded Compact 7	Microsoft Windows © Embedded Compact 7	Microsoft Windows © Embedded Compact 7
Memory			
Flash	512MB	512MB	512MB
DRAM	512MB	512MB	512MB
CPU	1GHz	1GHz	1GHz
Ethernet Ports	1	1	1
Serial Ports	1	1	1
SD Card	Yes	No	No
USB 2.0	2 Host	2 Host	2 Host
Input Current	0.2 ~ 0.8 A	0.2 ~ 0.9 A	0.3 ~ 1.0 A
Input Voltage	9 ~ 36 VDC	9 ~ 36 VDC	9 ~ 36 VDC
Enclosure	Plastic	Plastic	Plastic
Operating Temp.	32 ~ 122°F	32 ~ 122°F	32 ~ 122°F
Storage Temp.	-4 ~ 140°F	-4 ~ 140°F	-4 ~ 140°F
Rating	IP65	IP65	IP65
Certifications	CE, UL, RoHS, FCC NEMA4X	CE, UL, RoHS, FCC NEMA4X	CE, UL, RoHS, FCC NEMA4X

HMI SERIES COMPARISON CHART



Whether you seek affordability, advanced features, remote access, or open platform, Maple has an HMI available to suit your needs. Explore the comparison table below for a quick comparison of our Basic, Advanced, and Open HMI options.

	Basic Series	Advanced Series	Open HMI Series
Hardware Features			
Dimensions	4.3" , 7" , & 10.1"	HDMI Output, 4.3" , 7" , 9.7" , 10.1" , 12" , & 15"	7" , 10" , & 12"
Touchscreen	Yes	Yes	Yes
Wide Input Power Range	Yes	No	Yes
Enclosure	Plastic	Plastic or Aluminum	Plastic
Dual-Ethernet Available	No	Yes	No
Wi-Fi Available	No	Yes	No
CANbus Available	No	Yes	No
UL Listed	No	Yes (Class 1, Div 2 Available)	Yes
Software Features			
Operating System	Closed	Closed	Open (Windows Compact 7)
Web Browser	No	No	Yes
3rd Party Applications	No	No	Yes
PDF Viewer	No	No	Yes
Remote Access	No	Yes	Yes
MQTT Support (IIoT)	No	Yes	Yes
Audio Output	No	No	Yes
Video Input	No	Available	Yes

*Free software is EZwarePlus or EBPro Configuration Software



SUPPORT



The Maple Standard represents our promise to deliver quality, reliability, and value to help you achieve your business and process goals.

The Maple Standard

Maple Systems is honored to be recognized as a leader in the industrial controls marketplace. The Maple Standard represents our dedication to delivering high-quality control products and unmatched support to our valued customers.

Comprehensive Website and Support Center

Our online support center allows registered users 24-hour access to Maple's technical documentation. Explore tech notes, product specifications, sample projects, drivers, and software upgrades anytime. We also offer complimentary technical support to customers via email and phone, as well as training videos, whitepapers, and controller information sheets.

Visit us at maplesystems.com/support or email us at support@maplesystems.com for assistance.

Contact Us

How can Maple Systems help meet your control needs? Contact our industrial automation experts today.

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