



Technical Brief

Monarch Interactive Kiosk

The Monarch kiosk is a new dimension in customer-facing technology. For the first time, x86-64 architecture is incorporated into a small-form factor, low-power stationary kiosk. The power and performance of the Monarch opens the door to a broader range of application possibilities and elevates the user experience to a whole new level.



The Monarch was specifically designed for “always on” commercial applications, utilizing industrial-grade components for long term reliability, and contemporary design elements that allow it to complement any commercial or retail setting while offering the durability required for customer facing applications. **The Monarch delivers enterprise performance and reliability, in a form factor that is intuitive and inviting to use.**

x86

Product Life

As the Monarch was developed for commercial use, it is slated for a **long production cycle**, alleviating the concerns associated with consumer-grade devices of frequent model changes and short-lived products. The target market for the Monarch is the enterprise commercial user, and while some enhancements may be incorporated over time, the **same form, fit and function will be maintained over the life of the product.**

User Input

The capacitive touch screen delivers stunning images and videos while allowing the user to utilize gesturing moves for navigation in the same way they would with a smartphone or tablet, making for an inviting and intuitive experience.

The imaging technology barcode scanner will read virtually any barcode in any orientation, including barcodes presented on smartphones.



Power

The Monarch is the first x86-based kiosk that consumes so little power it can be powered over a standard **Power-over-Ethernet** equipped network, making deployment easier, quicker, and less expensive than implementations requiring AC line voltage. It can be positioned anywhere conventional Ethernet cabling can be deployed, ensuring that accessibility of the device is maximized.

The Monarch is a true kiosk and as such operates “battery free”. Tablets are portable devices that draw their power from batteries that are always in the power circuit, even when plugged into a wall outlet and used as a faux-kiosk. The tablet battery cannot be removed from the circuit and will eventually fail as all batteries do. The obvious result is a device failure rendering it useless to customers, requiring manual intervention to replace the device, and then action to repair it, or worse, discard it. No such ticking time-bomb exists in the Monarch.



Operating Systems

The Intel x86-64 technology incorporated in the Monarch puts it in a class by itself. Other devices utilizing ARM-based architecture are limited to using embedded and mobile-oriented operating systems. The Monarch can run **virtually any desktop operating system** including Windows 8.1, Windows 10, Android and Linux, freeing software developers from the limitations of embedded systems and offering IT departments a true enterprise device for integration onto their networks.



Upgrade Path

ARM-based devices offer the user virtually no path for upgrade or growth. It is what it is the day it is put into service and will never be anything more. The Monarch, on the other hand, is designed for long term service. The x86-based platform can host a variety of different operating systems. Should corporate IT needs be re-defined and it becomes necessary to move to a different OS, it's simply a matter of re-imaging the device. This is not an option with ARM-based devices. In addition, the modular design of the electronics would allow upgrading the CPU in the event a more desirable processor becomes available in the future. Even the barcode scan engine can be refitted with different makes or models to dial in the best possible performance for specific environments and applications. **No other device can offer the versatility and flexibility of the Monarch.**



Housing

In a commercial setting, especially retail, branding is extremely important and fixtures and equipment that don't participate in the branding effort actually work to dilute and counter the effects. The Monarch can be produced in **custom-color cases** to support the branding effort and ensure continuity in the visual experience. The housing is injection molded in the desired color, not painted, ensuring durability and alleviating any concerns about scratching or abrasion from long term use.



A VESA 75 mounting pattern is an integrated feature of the Monarch making mounting to virtually any surface easy and inexpensive. Accessories are available for pole and wall mounting, but there are also a plethora of third party mounting devices designed for TVs and monitors that will work as well.

Monarch Customers

In the short life of the product, several retailers have purchased the Monarch with varying degrees of deployment including Target, Whole Foods, Belk, Hamrick's, and Fresh Market. It has also been deployed in several non-retail applications such as in churches for membership attendance management and office environments as a human resource portal.

Made in America

The Monarch is engineered and manufactured in Dallas, Texas and as such the knowledge base resides there as well. Depot repair is also performed in the factory in Dallas, and in Halifax, NS Canada. Third party repair facilities are available in other parts of the world.



Monarch Specifications

Operating System Support	Windows™ Embedded 8.1, Windows™ 10 Android Marshmallow, Linux Mintmate
Processor	Intel® Atom™ E3825 1.33GHz Dual Core processor, with 512kB L2 cache
Display	10.1" - 1280 x 800 IPS Projected Capacitive Multi-touch display
Video	HDMI 1.4a
System Memory	2GB DDR3L 1333 MT/s
Graphics	Intel® HD Graphics with support for DirectX11, OpenGL 3.0, OpenCL 1.2, OpenGLES 2.0, full HW acceleration for decode/encode of MPEG2, H.264, MVC and dual simultaneous display support
Storage	4GB onboard eMMC 4.5 30GB mSATA SSD
Scan Engine	2D Imager
USB Ports	USB 2.0 External x2 USB 2.0 Internal x1
Wireless Data Communication	801.11 b/g/n with BT 4.0 (Optional)
Ethernet Ports	1 x RJ-45 Gigabit Ethernet with PoE (PoE+ option)
SD/MMC Card	SDHC Port capable up to 64GB
Mounting Options	75 x 75 mm VESA Mount
Power Input:	5VDC or Power Over Ethernet
Audio	Built-in Stereo Speakers

