ADLINK
LEADING EDGE COMPUTING

Durable Display for Car Wash HMI



Application Story

Overview



Worldwide labor shortages have made it difficult for car wash operators to keep their car washes going. So now, car wash operators are turning to automation to keep the cars rolling through. Automated or semi-automated systems put car washes on autopilot by automating some or all of the processes from collecting payment through to the final wipedown.

For integrators looking to develop a range of car wash systems, it's important that the HMI touch screen monitor is robust and reliable enough to withstand the rigors of semi-outdoor use, such as water and dust, UV and high temperatures, and electrical interference from other machines in the car wash setup.

Challenges

1

Wet and dirty

In the outdoors, car washes are exposed to the dirt in the air and the splashes of water coming from the car wash machines or other items like wet rags or squeegees. An IP65 rating is a minimum for these conditions.

2

UV and high temps

Bright light and electronics don't mix. Neither do high temperatures. UV light quickly damages delicate electronic parts, and computers already generate their own heat, so more heat exacerbates this problem. A system for the outdoors must be protected against these harmful elements.

3

EMC interference

Electrical noise from the conveyor tracks, sprinkler drive shafts, pre-soak jets, and other machines in the car wash disrupt the normal operation of the touch screen. To ensure correct operation, the touch screen must be tuned to compensate for this electrical noise.

4

Shock and vibration

Conveyor tracks, sprinkler drive shafts, pre-soak jets, and cars moving in the wash machine generate shock and vibration that can affect the HMI control machine. The touch screen must have a durable design to protect against shocks and vibration to assure reliable long term operation.

> Car washes are a popular business opportunity and a value-added income-generating service for gas stations. In fact, according to Grand View Research, the global car wash services market size was valued at USD 29.3 billion in 2021 and is anticipated to grow at a CAGR of 3.1% from 2022 to 2030.

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ADLINK Solution

The OM series of open-frame industrial touch screen monitors, featuring industrial-grade panels from AUO Display Plus, are designed to withstand the rigors of semi-outdoor applications. The OM series has water and dust resistance, robust touch, and UV protection for semi-outdoor use, and comes in a range of sizes to suit different applications.

Multiple sizes

The OM series is available from 7" to 43" screen sizes. These sizes provide integrators with options for different price points by using a larger or smaller screen. The touch screen monitors are suitable for the operator station and for the user-facing screen.

IP65 flat bezel

The open frame design fits neatly into the predefined cutout. Once installed, it is completely flat against the surface and seals the rear of the screen and the connectors inside the enclosure. The front panel is protected against the ingress of dust and water, with an IP65 rating.

Tunable touchscreen

To ensure accurate user input detection, the touch screen firmware is fine-tuned to compensate for the effects of EMC noise interference from machines and motors in the car wash. The touch screens on the OM series touch screen monitor can be tweaked for optimal touch resolution and responsiveness.

UV protection

The OM series has the option of an added protective UV film to filter out heat-producing infrared rays while maintaining high visibility. This extra layer of protection enables industrial screen monitors to stay cooler, reducing the risk of thermal fracture of the glass.

Benefits

For integrators looking to streamline their development processes, expand their product range, and ensure the longevity and functionality of their car wash systems, ADLINK's OM series industrial touch screen monitors come in multiple sizes, are weather resistant, install perfectly flat, are protected from UV damage, and have touch screens that can be tuned for best performance.

At the end of the day, integrators can rest easy knowing that the HMI will function flawlessly once installed, car wash operators will make fewer maintenance calls, and car wash customers will be delighted with their sparkling vehicle after a smooth and reliable car wash experience.

ADLINK OM Series

Model	OM-101	OM-156	OM-215	OM-238	OM-270
Size	10.1"	15.6"	21.5"	23.8"	27"
Resolution	1280 x 800	1920 x 1080			
Aspect Ratio	16:9				
Brightness (w/ touch)	400 nits			200 nits	240 nits
Backlight Life (Hrs)	50,000		30,000		40,000
Touchscreen	10-point, PCAP, Anti-fingerprint coating				
Op. Temp	-20°C to 70°C		-20°C to 60°C	0°C to 50°C	
IP Rating	Front IP65				
Mounting	VESA/Panel				

*More screen sizes and resolutions, please visit our website

www.adlinktech.com

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AUO Display+