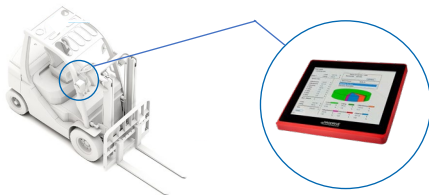# HMI Controller

Capacitive Touch Screen with Embedded Controller

Prodrive Technologies offers 4- to 12-inch customized HMI solutions with integrated controller (NXP iMX8M Mini microprocessor) for various industrial application, such as automotive, compressor, HVAC and other industrial machinery.

Flexible HMI solution fitting the best to your needs

Our HMI Controller offers the flexibility to optimize the design according to your needs. It perfectly fits your application, enabling customized features while ensuring high quality and reliability.

Standard building blocks available for integration

The customized solutions are developed from existing technology building blocks. It accelerates development time while reducing overall costs. The standard building blocks include processor platforms with scalable control & computing power, capacitive touch screens from 4- to 12-inches, commonly-used I/O, and communication interfaces.

Custom features possible

Any customization or development requests are welcome for discussion.

Product features

Customization flexibility

Robust — IP65

Cost-optimized

Certified

Processing & Memory

Processor	4x Cortex-A53 1.6 GHz
Memory	512MB - 4GB LPDDR4 SDRAM
Storage	4GB-64GB eMMC flash

Interfaces

Ethernet	1x 10/100/1000 BASE-T
CAN	2x CAN 2.0 up to 1Mbit/s
Serial	RS232 / RS485
RTC	Real-time-clock with battery backup
External storage	SD-Card
Sensors	Temperature, Barometric pressure, Relative humidity, etc.

Connectivity

Local	WLAN 2.4GHz with WPA2 (Enterprise) Bluetooth Low Energy RFID / NFC

User Interface

Size screen	4- to 12-inch display
Resolution	480x272, 800x480 or 1024x600 pixels
Touch	Capacitive touch

Environmental Compliance

Ambient temperature	-20 to 60°C
Vibrations	IEC 60068-2-6, 1G
Mechanical Shock	IEC 60068-2-27, 15G
Humidity	IEC 60068-2-30
IP rating	IP65

Regulatory

EMC Immunity	EN IEC 61000-6-2:2019
EMC Emission	EN IEC 61000-6-3:2021
Safety	IEC 61000-1: 2010/A1:2016 IEC 61010-2-201:2017

Electrical Compliance

Nominal voltages	24 VDC

Software – BSP & Bootloader

Bootloader	U-Boot (Secure boot)
Operating System	Linux