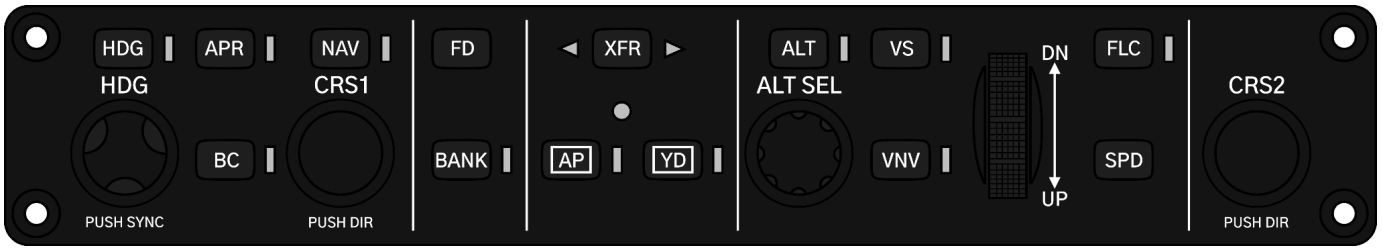
# GMC 710

## Autopilot control panel




AVIONIQUE Simulation

*Version 1.0 - April 2024*

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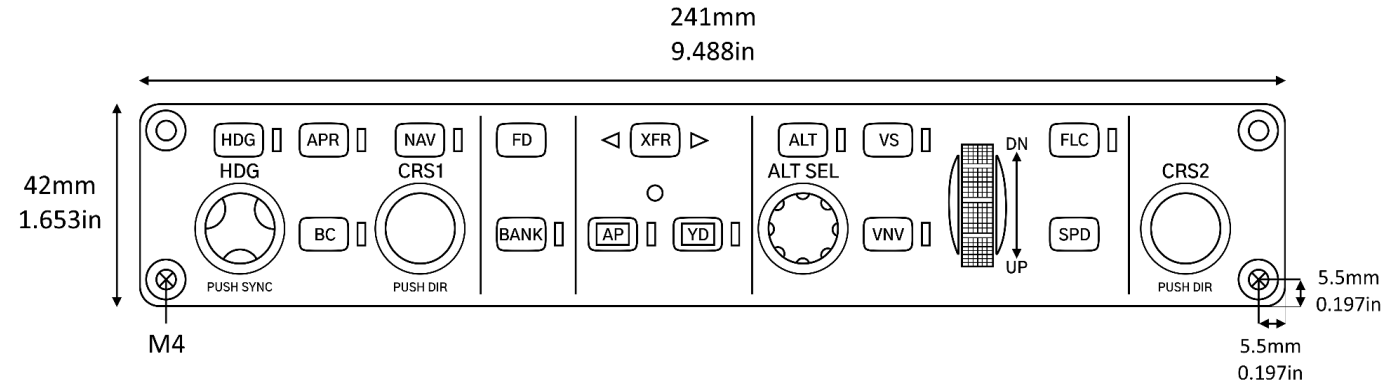
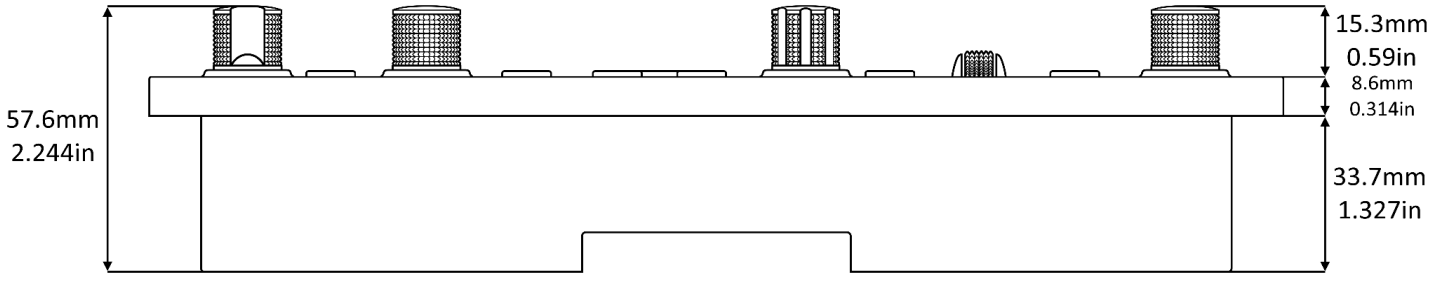
# 1. GENERAL DESCRIPTION

## 1.1. Presentation

The GMC 710 refers to the Garmin Automatic Flight Control System (AFCS) commonly used in the G1000 integrated flight deck with 2 PFDs and an MFD. It supplies many aircraft such as the Daher TBM, Piper Meridian, Cessna Citation, and many others.

## 1.2. Diagram

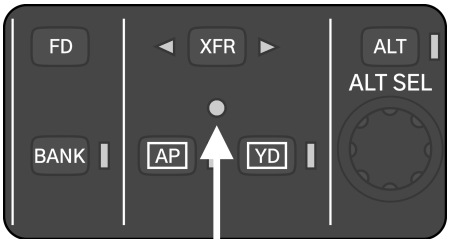


# 2. FEATURES

## 2.1. Automatic backlighting

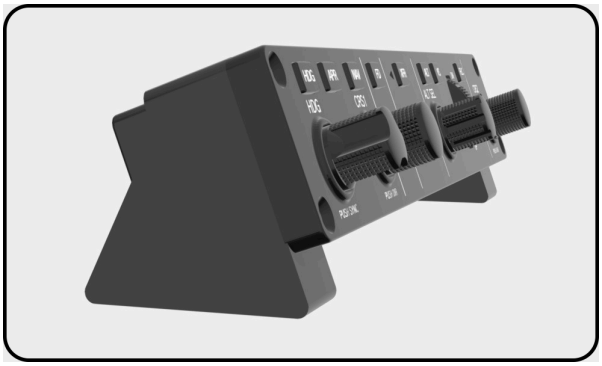
The GMC 710, equipped with a photoresistor, intelligently adapts its backlighting to match the ambient lighting conditions, mirroring the functionality of the authentic unit.




Photoresistor

## 2.2. **Desktop stand** (sold separatly)

Sleek and discreet, the desktop stand for the GMC 710 autopilot panel allows you to enjoy the panel anywhere you desire. It's designed to seamlessly integrate into your cockpit panel setup, but it's equally functional as a standalone unit on your desk, featuring rubber pads for secure adherence.



Desktop stand

# 3. SYSTEM OVERVIEW

The GMC 710 autopilot control panel is delivered with the firmware and his hardware config file uploaded. The software config file is configured and available on the website.

## 3.1. Arduino

The system is based on an Arduino board to which all buttons, encoder, leds are connected. It serves as the link between the hardware inputs/outputs and the computer.

## 3.2. Mobiflight

To translate the actions coming from this board, we use the industry-leading software MobiFlight, which is reliable and allows extensive customization. In order to operate, MobiFlight needs to have its firmware installed on the Arduino board of the panel, along with a configuration file (.mfmc), referred to as the **Hardware config file**.

For more information on MobiFlight, please refer to the official website.

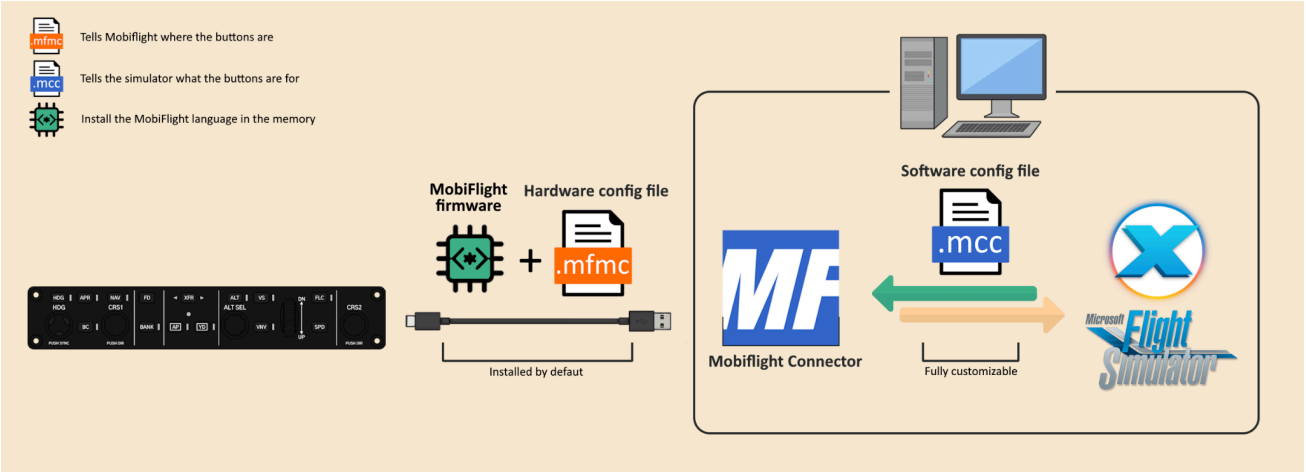
## 3.3. Hardware config file

The Hardware config file (.mfmc) provides MobiFlight information about the components present in the panel and connected to the Arduino board. It is installed alongside the firmware on the Arduino board and can be updated through **MobiFlight Modules** in the software menu. It can have multiple modules connected and used by MobiFlight simultaneously. This config file is not used to configure commands for the simulator, unlike the software config file.

## 3.4. Software config file

The software config file (.mcc) assigns commands to the components identified by the hardware config file. It is constantly open in the main window of the MobiFlight software and is activated using the **Run/autorun** button. Only one software config file can be active at a time. Therefore, in the case of multiple connected hardware modules, all commands from the modules are added to the active software config file.

## 3.5. System diagram




# 4. BACKLIGHTING

The backlighting is powered via the USB-C cable. There are 3 modes for controlling the backlighting :

1. AUTOMATIC (default) : Automatically adjusts backlighting to ambient brightness.
    1. Press HDG rotary selector for 2 seconds to active

2. MANUAL : Adjust the desired backlighting level manually.
    1. Press and hold CRS1 rotary selector
    2. Adjust backlight level using HDG rotary selector
    3. Release CRS 1 rotary selector

3. SIMULATOR : The backlighting level is synchronized with an aircraft setting in the simulator. Require customization.
    1. Press ALT rotary selector for 2 seconds to active

You can easily switch between backlight modes using the Keys combinations above.

# 5. INSTALLATION

For detailed and updated installation instructions, please visit the website in the **INSTALLATION** section or click here to be redirected.