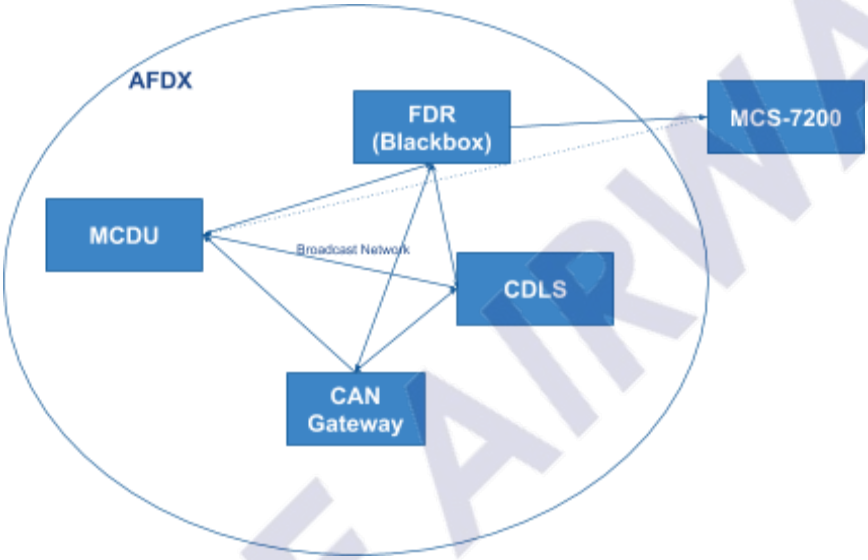
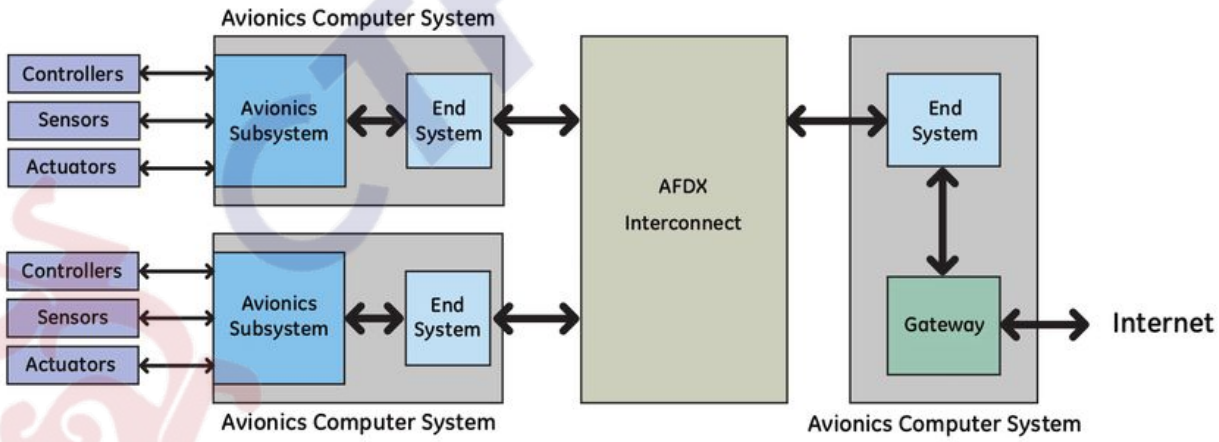
The AFDX network is a safety-critical ethernet network that is isolated from the rest of the aircraft's networks.

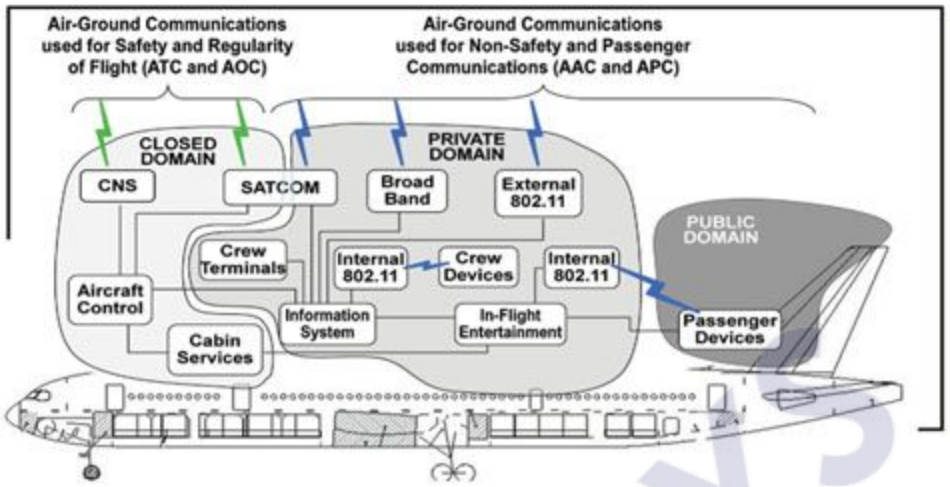


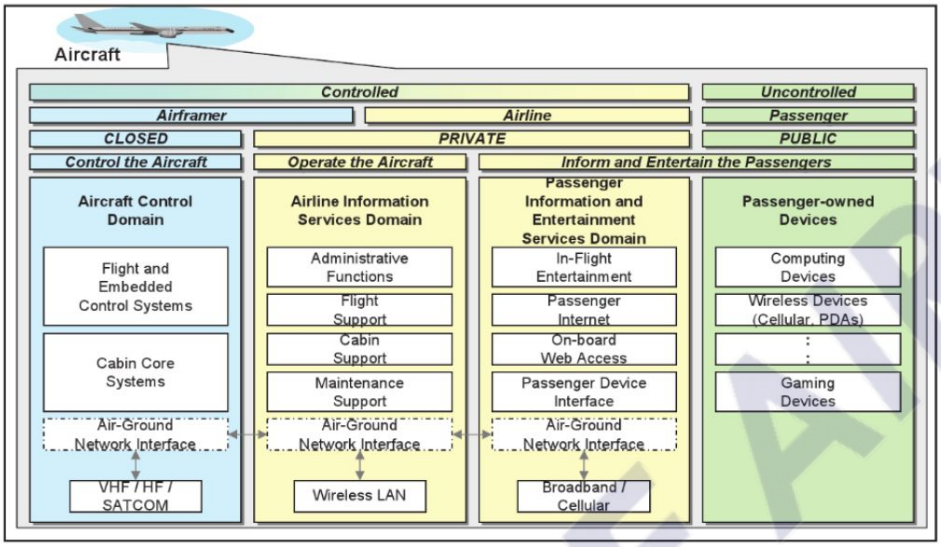


None of the cables or components from the AFDX network should be accessible from inside the cabin during flight. The MCS-7200 router is located in the equipment bay, but is out of reach (it is only accessible from the cockpit). No components are allowed to be internet connected except the FDR, and the FDR is only allowed to connect to the internet for flight data recording backup.

The protocol used inside the AFDX is PMC825-UDP instead of ARINC664.

The AFDX network is on what is known as the closed domain. Besides the information system (which is protected by a one-way data diode), only the SATCOM (MCS-7200) router is shared between the private domain (crew network) and the closed domain.

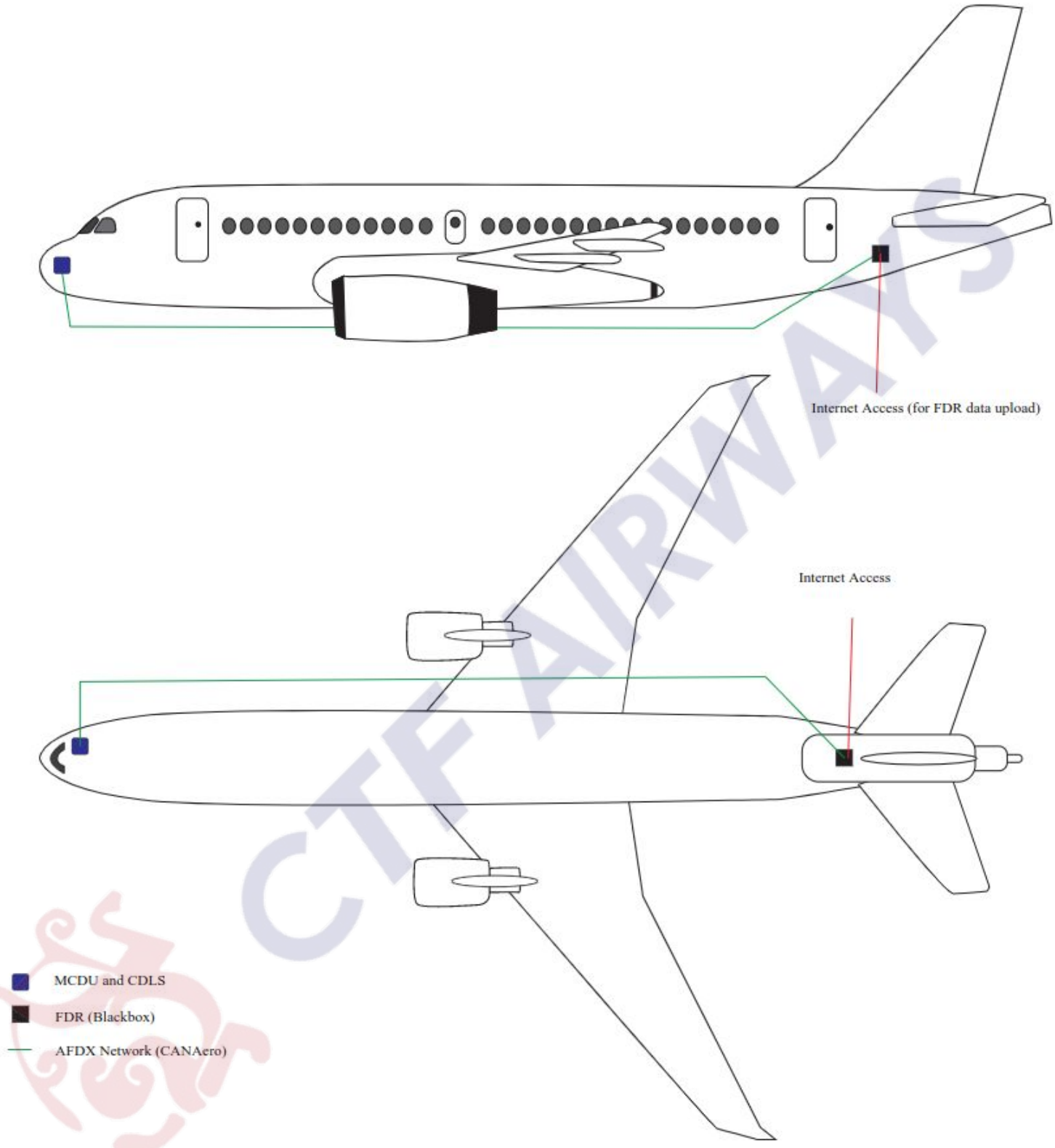




The MCS-7200 is a modem and router. It can act as a DHCP server, however it is not directly connected to the AFDX network, and is only connected to the devices that need internet access. The MCS-7200 exposes a telnet service on the test port, and if enabled, on ethernet port #1 as well.

The SATCOM services are not exposed to the public domain. All internet access by passengers is done through cellular networks, or through an independent satellite network. Some devices inside the cockpit can be internet connected, but those would use the cellular network, rather than the SATCOM network for data transfer. Examples are tablets, or personal devices from the crew.

The AFDX network supports the UDP relay from the ARINC825 CAN bus



Only the FDR has internet access, the MCDU and CDLS can communicate with the FDR, but they can't access the internet.