AIRFRAMES.IO FEEDER SHOPPING LIST (and other information)

1. Raspberry Pi 3 (minimum for ACARS/VDL2), Pi 4 (recommended), or equivalent; or a mini PC, NUC or other computer that can be left running 24x7
2. Debian Linux-based operating system
3. 50 ohm coaxial cable with SMA male connectors, RG58 or better (low-loss LMR-style coax only needed for SATCOM) plus one or two short RG316 or RG174 jumpers and any SMA male-male and female-female "gender-bender" adapters needed
4. SDR (see below)
5. Antenna (see below)
6. Software for the ingest you wish to feed to (see below)
7. SDR application (optional, but very useful for troubleshooting): sdr++ free on GitHub; cubicsdr and/or gqrx should be in your distro's repository. Omit if using a headless Raspbian/Linux installation
8. NanoVNA (optional): nice to have when tuning homemade antennas for lowest SWR and best performance but not essential

For ACARS and VDL2 Ingests
1. RTL-SDR dongle (minimum, works well: you may use an Airspy or SDRPlay SDR instead if you wish)
2. Vertically-polarized air band antenna 118-137MHz: homemade quarter wave ground plane, half wave dipole, off-center broadband dipole, coco or other, placed in an upstairs window, loft or on a pole. Clear view of he horizon not essential. If using a ground plane or dipole tune it for resonance on 131MHz (ACARS) or 136MHz (VDL2) for best performance. Do this by adjusting the length. 300 divided by frequency in MHz = wavelength, divide this by 4, set vertical element(s) and radial lengths accordingly. Or buy a commercial airband antenna
3. acarsdec (ACARS), dumpvdl2 or vdlm2dec (VDL2), free from GitHub
4. FM broadcast filter (optional, use if needed)

For HFDL Ingest
1. Pi 4 (minimum)
2. SDRPlay RSP1A (minimum), other SDRPlay SDR, Airspy HF+ Discovery (best), other Airspy SDR plus a Spyverter upconverter. (RTL-SDR dongles lack enough selectivity, sensitivity, bandwidth and high sampling to work well so a premium SDR is needed)
3. Broadband HF antenna suitable for weak signal reception: long end-fed wire, sloper, horizontal dipole, large horizontal loop, all as high as possible; loop on the ground (LoG); vertical antenna with radials/counterpoises; balun of the proper ratio (i.e. 1:9 for end-feds & verticals, 1:4 for loops, 1:1 for dipoles); or active magnetic loop (MLA-30, Wellbrook, K-180WLA: the latter must be switched from FMDX to HF inside the amplifier box.) YouLoop antenna not recommended except for use with Airspy HF+, and then only if other antennas don't work due to strong local noise sources at or near your location
4. dumphfdl (free from GitHub)
5. AM and/or FM broadcast filters (optional: shouldn't be needed with most premium SDRs unless a broadcast station's antenna is very nearby)

For SATCOM C-band Ingest
http://thebaldgeek.net/index.php/2019/04/15/c-band-adsc-aka-satellite-adsb/
https://thebaldgeek.github.io/C-Band.html

For SATCOM L-band Ingest
https://thebaldgeek.github.io/L-Band.html

USEFUL LINKS
https://github.com/TLeconte/acarsdec
https://github.com/szpajder/dumpvdl2
https://github.com/TLeconte/vdlm2dec
https://github.com/szpajder/dumphfdl
https://github.com/wiedehopf/hfdlscript
https://www.hamqsl.com/solar2.html
https://www.sws.bom.gov.au/HF_Systems/6/9
https://on8alt.files.wordpress.com/2017/05/easy-antennas-for-the-swl.pdf
https://frugalradio.com/hfdl-resources/
https://vk1nam.wordpress.com/2019/12/04/airband-antenna-118-to-136-mhz/
https://wiki.radioreference.com/index.php/Homebrewed_Off-Center_Fed_Dipole
http://www.bvarc.org/pdf/HF_Antennas_by_KD5FX.pdf
https://www.hamradiosecrets.com/ham-radio-hf-antenna.html

OTHER INFO
Airframes.io feed URL: feed.airframes.io (plus the appropriate port number for the ingest)

Software command-line examples/port numbers:
https://app.airframes.io/about and scroll down

Recommended station ID format: XX-YYYY*-ZZZZ where XX are your initials, YYYY is the ICAO code of the nearest airport to your location, * is number 1, 2, 3 etc. (incremented) in case you add more stations, and ZZZZ is the ingest: ACARS, VDL2, HFDL etc.