

Expected for early 2007



www.aor.ru

AR-alpha Digi-receiver



The Digital Processing Radio

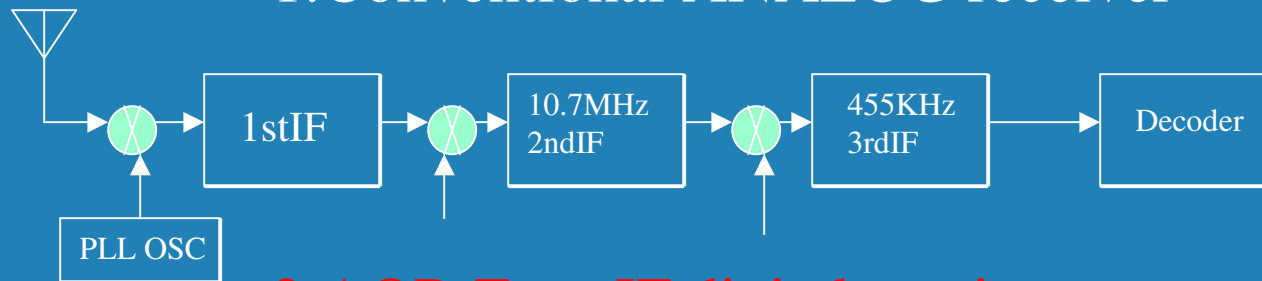
1. Zero-IF and DDS local generator
2. Video Decoder & Display (FM/ AM)
3. Wide Band I/Q digital output
4. Fast FFT Spectrum display
5. All mode (P-25 optional)
6. Special Digital Functions

Pre-release information

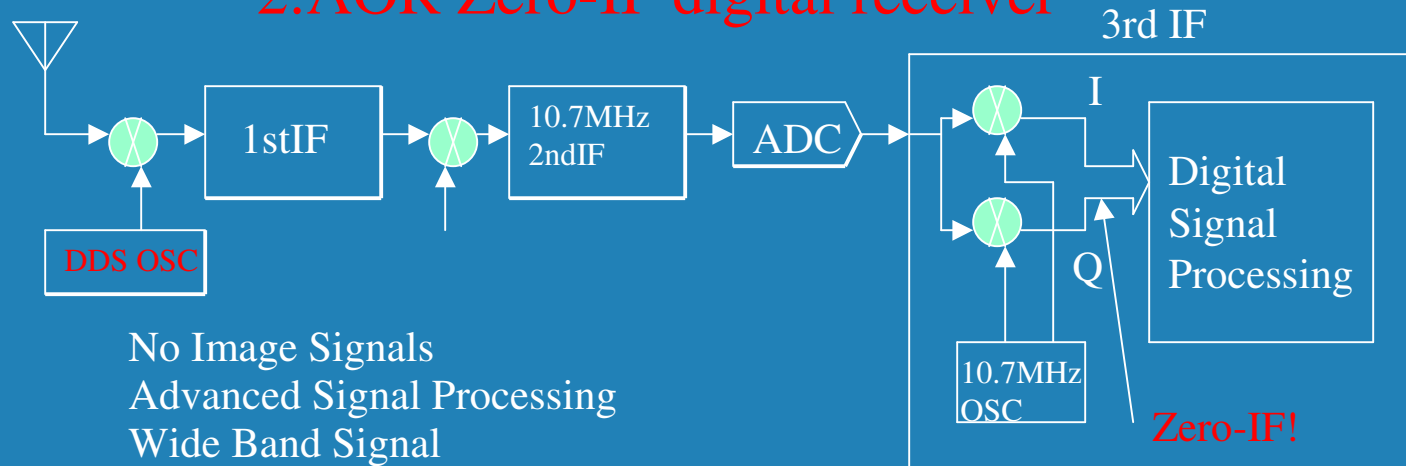
Specifications subject to change without notice or obligation.

Zero-IF and DDS local generator

1: Conventional ANALOG receiver

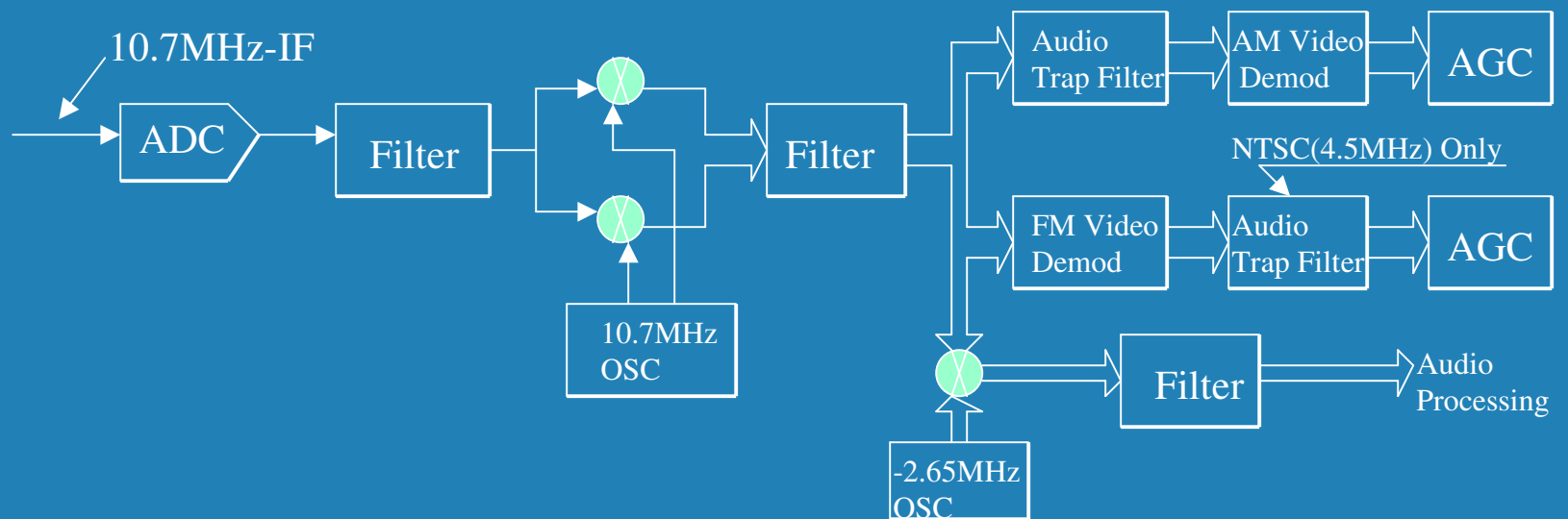


2: AOR Zero-IF digital receiver



No Image Signals
Advanced Signal Processing
Wide Band Signal
Supper Fast scan by DDS

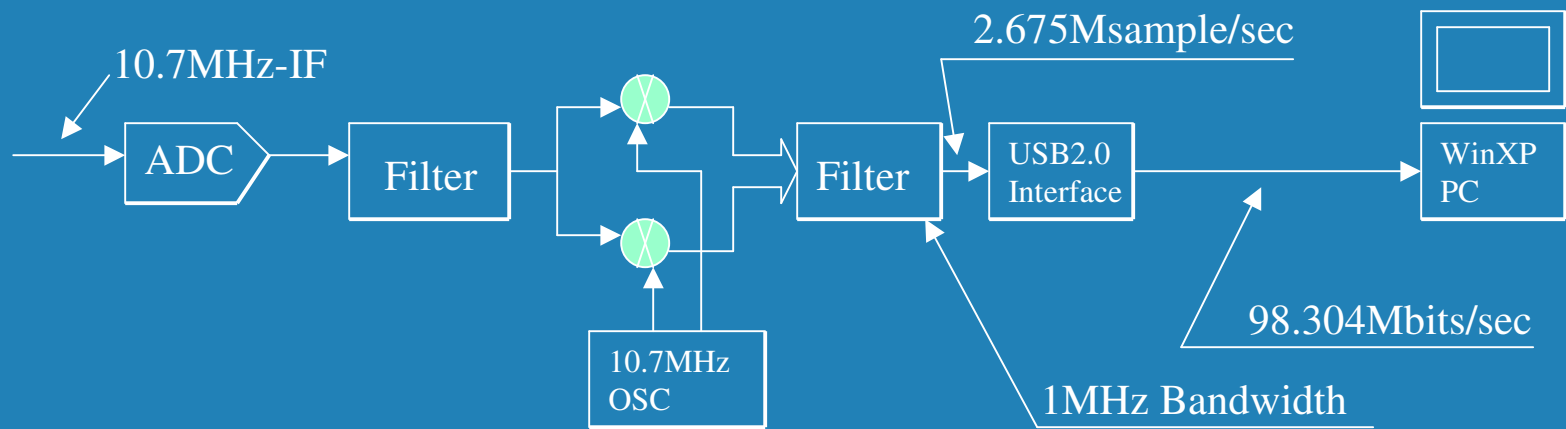
Video Decoder



Decode NTSC, PAL, SECAM, PAL-M Broadcasting Analogue Video

Wide Range FM Video Decoder (no audio)

Wide Band I/Q Digital Output

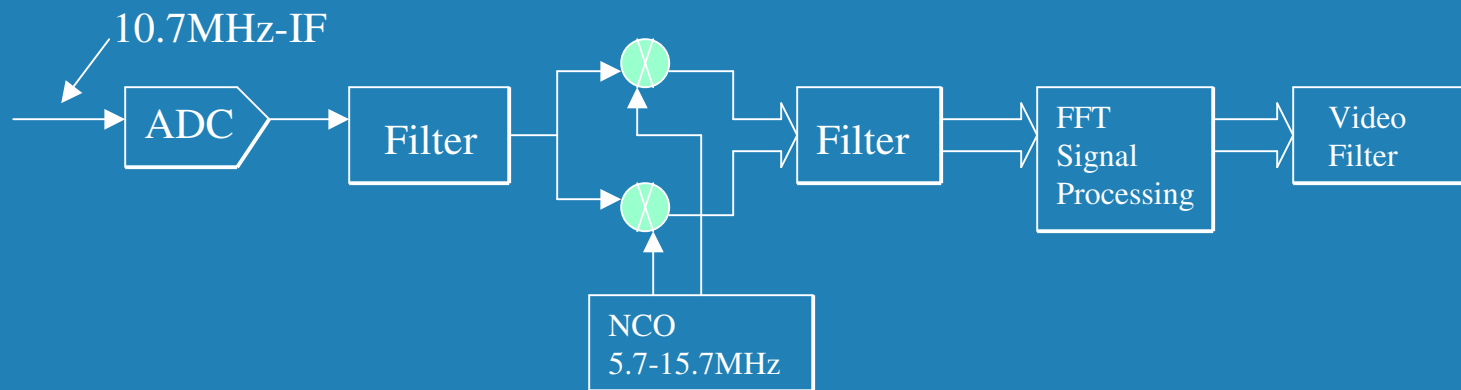


Continues Isochronous USB2.0 Standard Interface

Store the streamed data on a PC HDD with the AOR USB driver
Easy to make your own application software based on the sample software.

Wide Dynamic Range (No AGC processed) floating point data format
Exponent : 4bits Mantissa:13bits (I/Q)

Fast FFT Spectrum Display



Refreshed more than 10 times/sec for 10MHz span/500Hz RBW

Digital I/Q decoder --- NO Quadrature Error

Wide Range Display span up to 1GHz

Up to 10MHz span, with audio signal decoding

10MHz < Span < 1GHz, No audio

FFT Fast search function



All mode digital receiver(1)

1) Wide FM mode with Stereo sound (auto detected).

+De-emphasys 50usec/75usec selectable

2) Narrow FM

+TONE DCS squelch

+Voice Inverter 4,500Hz+-2,000Hz

+AFC

+APCO P-25 digital decoder (option)

3) AM

Envelope Detection(Normal AM decoder)

Synchronous Detection

a) DSB synchronous

b) SSB(USB/LSB) selectable synchronous

c) Side band diversity

+AGC mode/Manual RF gain mode selectable



All mode digital receiver(2)

4) SSB

USB/LSB selectable

+AGC mode/Manual RF gain mode selectable

+Sharp shape factor band pass filter

5) ISB

Simultaneously decode LSB and USB (Stereo output)

+AGC mode/Manual RF gain mode selectable

6) CW

Narrow band IF filter 200Hz/500Hz

CW stereo effect

200Hz IF filter \rightarrow (Right +100Hz/-50Hz, Left +50Hz/-100Hz)

+Pitch frequency adjustable 600Hz \pm 300Hz



All mode digital receiver[3]

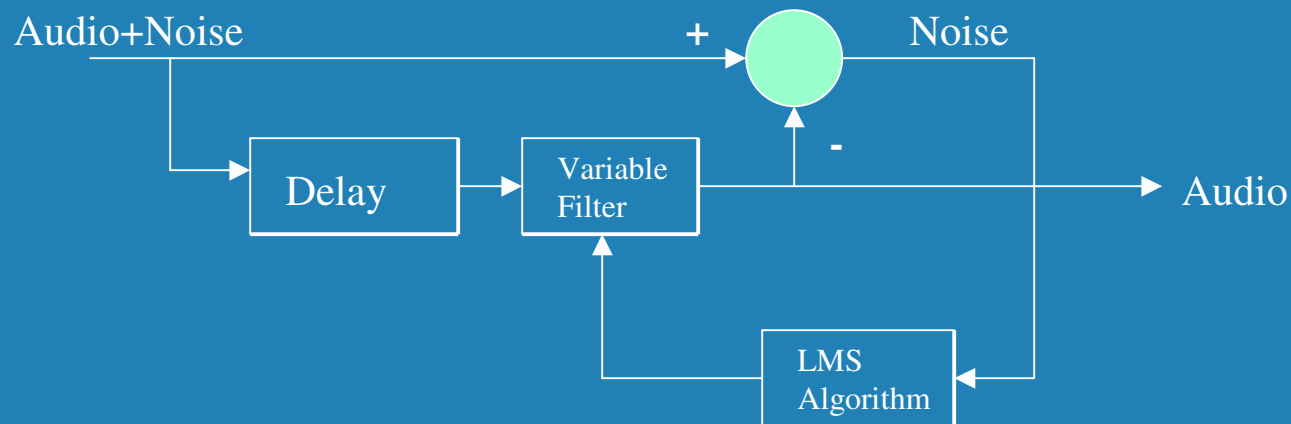
7) RZ-SSB

Real Zero SSB decoder

Decode AM signal by using FM decoder (**NO AGC !**)
You can decode conventional AM signal by this mode.

Special Digital Functions[1]

- 1) Noise Blanker (AM, SSB, ISB, RZSSB)
- 2) Auto Notch Filter
- 3) Adaptive Digital Noise Filter



Special Digital Functions [2]

4) IF shift $\pm 1,200\text{Hz}$ (SSB, AM)

5) Voice Squelch

By using FFT and LMS algorithm

6) Long Voice Memory

for WFM 12min maximum

for other mode 53min maximum



7) 6KHz IF(I/Q) analogue output for DRM PC receiver