14. AR5700D SPECIFICATIONS

Frequency range	9kHz～3.7GHz
Tuning steps	1Hz～999.999kHz
Operation modes	VFO (A～E), memory channel, memory channel scan, select scan, program search, FFT search (cyber search), analog video demodulation
Analog receive modes **Digital receive modes** (encrypted signals not supported)	FM, FM-stereo, AM, synchronous AM, USB, LSB, CW, analog I/Q, FM video. D-STAR / GMSK / AMBE DV mode only YAESU / C4FM / AMBE+2 V/D narrow mode only ALINCO / GMSK / AMBE EJ47 (F1E) mode only D-CR / C4FM / AMBE+2 NXDN / C4FM / AMBE+2 6.25kHz mode only P25 Phase 1 / C4FM / IMBE Conventional mode only dPMR / C4FM / AMBE+2 Tier 1 only DMR / C4FMx2 / AMBE+2 Tier 1 and Tier 2 only TETRA direct mode (T-DM) / π/4 shift QPSK / ACELP TETRA traffic channel (T-TC) / π/4 shift QPSK / ACELP
Number of VFO's	5
Memory channels	2000 (50 channels x 40 memory banks). Banks customizable from 5 to 95 channels.
Priority channel	1
Select memory channels	100 (via memory banks)
Search banks	40
Pass frequencies	1230 (30 per memory bank + 30 for VFO search)
Typical scanning speed	100 channels / steps per second (for analog modes)
Temperature range	0℃～+50℃ (32°F～122°F)
Frequency stability	0.1ppm (after 5 min. warm-up) or 0.01ppm with optional GPS unit.
Power requirements	DC10.7V～16V (2.0A@12V)
Audio output	>1.5W into 8Ω load
Current consumption	Stand-by: Approx. 200mA, Max. audio: Approx. 1.8A
Grounding method	Minus grounding
Dimensions	Approx. 304mm(D) x 220mm(W) x 97mm(H) (excluding projections)
Weight	Approx. 5kg
Circuit type	9kHz～25MHz: Direct conversion 25MHz～3.7GHz: Double super heterodyne
Intermediate frequencies	First: 321.95MHz / 412.05MHz Second: 45.05MHz
Demodulation method	Digital signal processing
IF filter bandwidths	200Hz, 500Hz, 1kHz, 3kHz, 6kHz, 15kHz, 30kHz, 100kHz, 200kHz (choice is mode dependent) Automatically selected and non-changeable for digital modes.

Selectivity (typical values)	CW 500Hz 380Hz (>-3dB) 500Hz (<-60dB) AM 6kHz 5.5kHz (>-3dB) 6.9kHz (<-60dB) SSB 3kHz 2.7kHz (>-3dB) 3.1kHz (<-60dB) NFM 15kHz 14.2kHz(>-3dB) 15.6kHz(<-60dB) WFM 200kHz 200kHz (>-3dB) 250kHz (<-60dB)
IIP3 (typical values)	14.1MHz +20dBm Preselector off 50MHz +6dBm Preamp off 620MHz +5dBm Preamp off 1250MHz +3dBm Preamp off 2450MHz +3dBm Preamp off
Spurious rejection (typical values)	40kHz～25MHz >60dB Preamp off 25MHz～2GHz >60dB Preamp off 2.0GHz～3.7GHz >60dB Preamp off
Noise figure (typical values)	25MHz～1GHz <12dB Preamp off 1GHz～2.75GHz <16dB Preamp off 2.75GHz～3.7GHz <16dB Preamp off

Sensitivity	**SSB** **10dB S/N** **3kHz**	**AM** **10dB S/N** **6kHz**	**NFM** **12dB SINAD** **15kHz**	**WFM** **12dB SINAD** **200kHz**
40kHz ～ 50kHz	<6.0μV	<15.0μV		
50kHz ～ 60kHz	<4.0μV	<10.0μV		
60kHz ～ 80kHz	<3.0μV	<7.0μV		
80kHz ～ 100kHz	<1.5μV	<4.0μV		
100kHz ～ 25MHz	<0.7μV	<2.0μV		
25MHz ～ 2.75GHz	<0.5μV	<1.0μV	<0.4μV	<1.5μV
2.75GHz ～ 3.7GHz	<0.7μV	<1.7μV	<0.6μV	<3.5μV

Simultaneous reception:	**(analog modes only)**
Dual band reception	One frequency below and one above 25MHz.
Offset reception	Main frequency + sub-frequency within +/-5MHz from main frequency. Over 25MHz only.
Triple reception	Combination of one HF frequency + offset reception
Squelch modes	CTCSS, DCS, data-mute
Demodulation support	Auto-notch filter (NOTCH), de-noiser (NR), noise blanker (NB), analog voice descrambler (SCR), IF shift (IF-SFT), CW pitch (CW PITCH), AGC, AFC, DTMF
FFT features	FFT search (cyber search), spectrum display

Digital signal info display:	
D-STAR	Call sign (sender & repeater)
D-CR	User ID, 15-bit scramble code
NXDN	RAN code, 15-bit scramble code
P25	NAC code
DMR	Color code, slot number
TETRA traffic channel	Slot number

Audio recording	
Types of recording	Received audio recording / playback and logging via SD card.
SD card compatibility	SD or SDHC type, 256MB to 32GB. File system FAT 16 or FAT 32 only. MiniSD and microSD cards require an SD card adapter.
File format compatibility	Windows compatible WAV file format. RIFF (little-endian) data, WAVE audio, Microsoft PCM, 16-bit mono 17.578kHz.
Recording time	Approx. 8h of continuous recording per 1GB. Squelch synchronization possible to eliminate inactive time.
Log recording	Logs are written into the audio wav file and can be accessed and played back with a special PC utility.

Inputs & outputs:	
Antenna inputs (ANT1) **(ANT2)**	25MHz～3.7GHz N-J socket 50Ω 9kHz～3.7GHz N-J socket 50Ω
10MHz reference input	SMA-J socket Typical input +2dBm, 50Ω
45.05MHz IF output	BNC-J socket, 45.05MHz±7.5MHz Typical output: Antenna input + 10dB, 50Ω
Digital I/Q output	0.9MHz bandwidth via USB 2.0 compatible isochronous transfer. Use supplied PC software AR-IQ-III. USB type B socket
Analog I/Q output	12kHz offset output via 3.5mm stereo phone socket Mode: AIQ, via LINE socket
LINE output	3.5mm stereo phone socket. -10dBm (600Ω)
Headphones output	3.5mm stereo phone socket
External speaker output	3.5mm mono phone socket. (8Ω)
(ACC1) **(ACC2)**	8-pin miniature DIN socket for optional GP5001 GPS receiver unit. RJ-45 socket for optional antenna selector
(AUX1)	RS232C, 9-pin D-subminiature (male). For firmware updates and remote control per PC.
(AUX2)	8-pin miniature DIN socket for future applications.
USB	USB 1.1/2.0 compliant, USB type B socket. For remote control per PC.
Analog video out	RCA socket, 75Ω 1V p-p
DC power input	DC barrel socket (5.5/2.1mm), center positive

Supplied accessories:
AC power adapter, SD card, operating manual, PC control software with license dongle, two USB cables.

A list of optional accessories is available at: http://www.aorja.com/accessories/receiver_accessories.html

Specifications are subject to change without notice nor obligation.