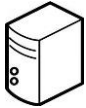




# WVCAserver Hardware Recommendations



## Minimum Hardware Recommendations:

- **HDD:** 256GB  
(Required for OS and applications)
- **Network:** 1 Gigabit
- **16GB RAM**



## Optimal Camera Configuration:

- **CODEC:** H.264
- **PROFILE:** Main
- **BITRATE:** VBR/MAX kbpsavailable
- **RESOLUTION:** 640 x 480
- **FRAME RATE:** 15

*Note:* WVCA will accept higher resolutions and frame rates but they will increase the CPU overhead and result in a reduction in channel capacity without necessarily increasing accuracy.

*All performance benchmarks were performed against WVCAserver v1.6.0.*

## CPU Channel Capacities

\*Applies to all license types

### Windows 10

Tested CPUs (alternative comparable CPUs can be used. AVX2 feature required.)  <i>Recommend using the top model range from each series</i>	Tracker/Classifier			
	Object Tracker <sup>[1]</sup>	DL Filter (appropriate GPU required)	DL Object Tracker (appropriate GPU required)	DL People Tracker (appropriate GPU required)
Intel i3 (10th Gen) <i>Tested: i3-10100</i>	up to 40	up to 30	up to 20	up to 18

Intel i5 (10th Gen) <i>Tested: i5-10600</i>	up to 64	up to 56	up to 24	up to 24
Intel i7 (10th Gen) <i>Tested: i7-10700K</i>	up to 82	up to 72	up to 36	up to 32
Intel i9 (10th Gen) <i>Tested: i9-10900K</i>	up to 100	up to 96	up to 48	up to 36
Intel Xeon Silver 4210	up to 84	up to 64	up to 44	up to 42

### Ubuntu 18.04

Tested CPUs (alternative comparable CPUs can be used. AVX2 feature required.)  <i>Recommend using the top model range from each series</i>	Tracker/Classifier			
	Object Tracker	DL Filter (appropriate GPU required)	DL Object Tracker (appropriate GPU required)	DL People Tracker (appropriate GPU required)
Intel i3 (10th Gen) <i>Tested: i3-10100</i>	up to 58	up to 32	up to 26	up to 24
Intel i5 (10th Gen) <i>Tested: i5-10600</i>	up to 88	up to 76	up to 36	up to 30
Intel i7 (10th Gen) <i>Tested: i7-10700K</i>	up to 100	up to 90	up to 46	up to 38
Intel i9 (10th Gen) <i>Tested: i9-10900K</i>	up to 120	up to 104	up to 56	up to 48
Intel Xeon Silver 4210	up to 108	up to 100	up to 58	up to 48
Raspberry Pi4b	up to 3	-	-	-
Jetson Nano (4GB) <sup>[2]</sup>	up to 9	up to 7	1	1
Jetson TX2 NX	up to 18	up to 16	up to 3	up to 2
Jetson Xavier NX	up to 34	up to 32	up to 6	up to 4

## NVIDIA GPU Channel Capacities

### Windows 10

Tested NVIDIA GPUs (alternative comparable NVIDIA GPUs can be used)	DL Feature		
	DL Filter (appropriate CPU required)	DL Object Tracker (appropriate CPU required)	DL People Tracker (appropriate CPU required)
T1000	up to 80	up to 12	up to 8
GTX1660	up to 80	up to 22	up to 16
RTXA2000	up to 80	up to 40	up to 28
RTX2080 ti	up to 88	up to 37	up to 29
RTX3070	up to 120	up to 36	up to 34
RTX4000	up to 130	up to 37	up to 35

### Ubuntu 18.04

Tested NVIDIA GPUs (alternative comparable NVIDIA GPUs can be used)	DL Feature		
	DL Filter (appropriate CPU required)	DL Object Tracker (appropriate CPU required)	DL People Tracker (appropriate CPU required)
T1000	up to 80	up to 16	up to 15
GTX1660	up to 104	up to 21	up to 19
RTXA2000	up to 104	up to 44	up to 39
RTX2080 ti	up to 128	up to 49	up to 23
RTX3070	up to 130	up to 50	up to 46
RTX4000	up to 145	up to 51	up to 46

Feature	Description	licence Type required
Deep Learning Filter (DLF)	Provides classification for people or vehicles detected by WVCA which have passed through defined zones and rule	Presence Ai, ProAi
Deep Learning Object Tracker (DLOT)	Used for the accurate classification and tracking of people, vehicles and select objects.	ProAi
Deep Learning People Tracker (DLPT)	Used for the accurate classification and tracking of people, usually in a well-lit area.	CountAi, ProAi

## Metadata Data Rate

Analytic metadata is available from all channels and is processed in real-time, metadata can be received via **SSE** or **RTSP** metadata streams. The volume of metadata produced will vary based on the number of objects tracked and rules configured for a given channel. As a guide, a video stream with an average of 10 objects tracked will generate between 420 and 550 kbps of metadata.

**Note:** mentioned system requirement is not applicable on WVCA which are embedded in WVMS