

# AVLYTICS SPECIFICATIONS V8.0



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# AVT-804/8 – Entry-Level 8-Channel Analytics Unit

The Avlytics AVT-804/8 is a compact, energy-efficient device designed for up to 8 channels of AI-powered video analysis. It is ideal for entry-level deployments, small sites, or mobile installations where basic object detection and intrusion alerts are required. The unit analyzes a maximum of eight(8) x CIF or four(4) x VGA resolution RTSP streams at up to 6 FPS per channel and is best suited for short-range detection zones of up to 20 meters.

This lightweight system is built on the Raspberry Pi 5 architecture and includes a high-endurance SD card and original power supply, making it plug-and-play ready for rapid deployment.

Relay functionality for triggering alarms,lights, or other systems is supported via the optional AVT-1/0 module, sold separately.

## Device Specifications - Lightweight System

- **Architecture:** Raspberry Pi 5 ARM64
- **Cores/Threads:** 4 cores / 4 threads
- **Base Clock Speed:** 1.5 GHz
- **Memory:** GB DDR4-2666
- **Storage Drive:** High-Endurance SD Card 128GB
- **Power:** Original power supply included
- **Relay Control:** Available via the AVT-EXP module (I/O accessory sold separately).

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## LAN Connection

- **LAN Port:** YES
- **Transmission:** 10 /100 / 1000 Based - T

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## Video Performance

- **Maximum Resolution:**
  - 2 x VGA (640 x 480)
  - 8 x CIF (320 x 240)
- **Frames Per Second (FPS):** 6 FPS



 **Important:** This device must be installed per the Avlytics documentation. Visit [avlytics.co.za/docs](https://avlytics.co.za/docs) or scan the QR code for usage instructions and warranty terms.

## AVT-808 = Mid-Range 8-Channel System with Enhanced Processing

The Avlytics AVT-808 is a mid-tier video analytics device designed for moderate-scale surveillance deployments. Supporting up to 8 RTSP video streams at VGA resolution (or 16 CIF channels), it delivers reliable AI performance for detection zones up to 30 meters. Built on an Intel Celeron platform with 8GB RAM and NVMe storage, it is ideal for use in commercial properties, retail environments, or perimeter monitoring where dependable performance and compact form factor are key.

Relay functionality for triggering alarms, lights, or other systems is supported via the optional AVT-1/O module, sold separately.

### Device Specifications - 8 Channel System

- **Architecture:** Intel Celeron amd64
- **Cores / Threads:** 4 cores / 4 threads
- **Base Clock Speed:** 3.6 GHz
- **Cache:** 6 MB Intel Smart Cache
- **Memory:** 8 GB DDR4-2666
- **Storage Drive:** NVME 256GB
- **Power:** Original power supply included
- **Relay Control:** Available via the AVT-EXP module (1/O accessory sold separately).

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### LAN Connection

- **LAN Port:** YES
- **Transmission:** 10 /100 /1000 Based - T

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### Video Performance

- **Maximum Resolution:**
  - 8 x VGA (640 x 480)
  - 16 x CIF (320 x 240)
- **Frames Per Second (FPS):** 6 FPS



## AVT-816 - High-Performance 16-Channel AI Analytics Engine

The Avlytics AVT-816 is engineered for larger installations that require up to 16 channels of high-resolution video analysis. Capable of handling streams at up to 1 megapixel per channel, it supports larger detection zones of up to 50 meters, making it ideal for logistics hubs, industrial facilities, or campus environment. Built on an Intel Core i5-class architecture with NVMe storage and 8GB RAM, it offers a powerful blend of processing power and deployment flexibility for professional-grade analytics.

Relay functionality for triggering alarms, lights, or other systems is supported via the optional AVT-1/0 module, sold separately.

### Device Specifications- 16 Channel System

- **Architecture:** Intel Core i3 amd64
- **Cores/Threads:** 4 cores / 8 threads
- **Base Clock Speed:** 3.6 GHz
- **Cache:** 6MB Intel Smart Cache
- **Memory:** 8 GB DDR4-2666
- **Storage Drive:** NVME 256GB
- **Power:** Original power supply included
- **Relay Control:** Available via the AVT-EXP module (1/0 accessory sold separately).

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### LAN Connection

- **LAN Port:** YES
- **Transmission:** 10/ 100/ 1000 Based-T

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### Video Performance

- **Maximum Resolution:**
  - 16 x MP (1280 x 720)
  - 28 x VGA (640 x 480)
- **Frames Per Second (FPS):** 6 FPS



⚠ Important: This device must be installed per the Avlytics documentation. Visit [avlytics.co.za/docs](https://avlytics.co.za/docs) or scan the QR code for usage instructions and warranty terms.

# AVT-832 - Enterprise-Grade 32-Channel AI Platform

The Avlytics AVT-832 is a top-tier, enterprise-ready platform for high-density video analytics deployments. Designed to handle up to 32 channels at IMP resolution, it supports expansive detection coverage up to 50 meters per channel. With 16GB RAM, Intel i5-class processing, and NVMe storage, the AVT-832 is ideal for city surveillance, critical infrastructure, or large retail and security operations. It provides exceptional throughput for AI analysis at scale - all in a compact, efficient form factor.

Relay functionality for triggering alarms, lights, or other systems is supported via the optional AVT-1/0 module, sold separately.

## Device Specifications- 32 Channel System

- Architecture: Intel Core i3 amd64
- Cores/threads: 4 cores / 8 threads
- Base Clock Speed: 3.6 GHz
- Cache: 6 MB Intel Smart Cache
- Memory: 16 GB DDR4-2666
- Storage Drive: NVME 256GB
- Power: Original power supply included
- Relay control: Available via the AVT-EXP module (1/0 accessory sold separate).

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## LAN Connection

- **LAN Port:** YES
- **Transmission:** 10/ 100/ 1000 Based-T

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## Video Performance

- **Maximum Resolution:**
  - 32 x MP (1280 x 720)
  - 50 x VGA (640 x 480) with Additional RAM
- **Frames Per Second (FPS):** 6 FPS



⚠ Important: This device must be installed per the Avlytics documentation. Visit [avlytics.co.za/docs](https://avlytics.co.za/docs) or scan the QR code for usage instructions and warranty terms.

# Benchmark Specifications for Installations

## CHANNEL CAPACITY

| HARDWARE MODEL | 1MP | VGA | CIF |
|----------------|-----|-----|-----|
| AVT-804/8      | 0   | 4   | 8   |
| AVT-808        | 2   | 8   | 16  |
| AVT-816        | 16  | 28  | 32  |
| AVT-832        | 32  | 48  | 64  |

### Channel Capacity

| Device    | MP Capacity | What it Means                                   |
|-----------|-------------|-------------------------------------------------|
| AVT-308PS | 1 MP        | Can handle: 8 x CIF (0.125MP each) or 2 x VGA   |
| AVT-808PS | 2.5 MP      | Can handle: 2 x 1MP + 2 x VGA (or combinations) |
| AVT-316PS | 16 MP       | Can handle: 4 x 4MP, or 16 x 1MP, ect.          |
| AVT-332PS | 32 MP       | Can handle: 8 x 4MP, 32 x 1MP, 48 x VGA         |
| AVT-364PS | 64 MP       | Highly flexible; scalable use at any resolution |

### What These Capacity Values Mean

These numbers define the total megapixel (MP) budget each AVT hardware model can handle at one time across all its connected video channels. It's a processing capacity.

**Limit** - essentially the maximum combined resolution the device can handle from all connected cameras.

# Usage Scenario Example (AVT-316PS-16MP)

If a Client wants:

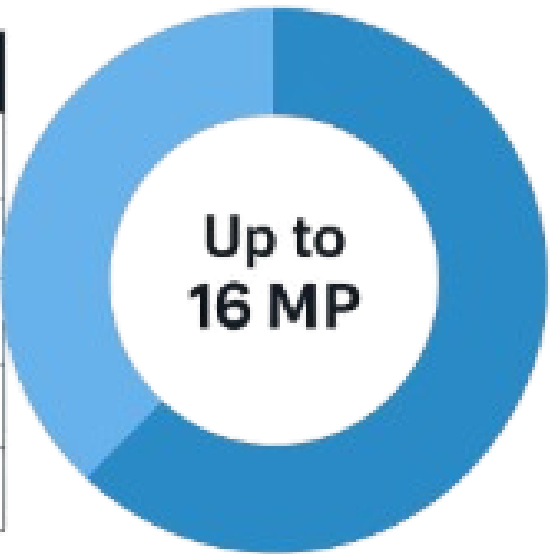
- 4 x 2MP cameras = 8MP
- 4 x 1MP cameras = 4MP
- 8 x VGA cameras = 2MP
- Total = 14MP

 Fits under 16MP limit

This is a **critical planning metric** - it determines how many streams of which resolution you can deploy **without overwhelming the unit's processor**.

## MP BUDGET GUIDE

| DEVICE    | CAPACITY |
|-----------|----------|
| AVT-804/8 | 1MP      |
| AVT-808   | 2,5MP    |
| AVT-816   | 16MP     |
| AVT-832   | 32MP     |
| AVT-832   | 64MP     |



Up to 16 MP

 Important: This device must be installed per the Avlytics documentation. Visit [avlytics.co.za/docs](https://avlytics.co.za/docs) or scan the QR code for usage instructions and warranty terms.



# Resolution to Distance Chart

## How Detection Distance IS Calculated

Detection depends on:

**Resolutoin** (more pixels = finer detail)

**Lens focal length (mm)** (longer lens = narrower field of view = more detail at a distance)

**Pixel density requirement** (typically ~ 40-60 pixels/ meter to **detect**)

### CIF AI Detection Suitability

#### CIF (352 x 240)

| Lens                                                                                       | Field of View (°) | Max Detection Distance |
|--------------------------------------------------------------------------------------------|-------------------|------------------------|
|  2,8mm    | ~90°              | Up to 10m              |
|  3,6mm    | ~78°              | Up to 10m              |
|  4,0mm   | ~72°              | Up to 10m              |
|  6,0mm  | ~52°              | Up to 20m              |
|  8,0mm  | ~40°              | Up to 30m              |
|  12,0mm | ~25°              | Up to 30m              |

### VGA AI Detection Suitability

#### VGA (640 x 480)

| Lens                                                                                       | Field of View (°) | Max Detection Distance |
|--------------------------------------------------------------------------------------------|-------------------|------------------------|
|  2,8mm    | ~90°              | Up to 20m              |
|  3,6mm    | ~80°              | Up to 20m              |
|  4,0mm   | ~70°              | Up to 30m              |
|  6,0mm  | ~52°              | Up to 30m              |
|  8,0mm  | ~50°              | Up to 40m              |
|  12,0mm | ~25°              | Up to 60m              |

### D1 AI Detection Suitability

#### D1 (720 x 480)

| Lens                                                                                       | Field of View (°) | Max Detection Distance |
|--------------------------------------------------------------------------------------------|-------------------|------------------------|
|  2,8mm  | ~90°              | 10 m                   |
|  3,6mm  | ~78°              | 20 m                   |
|  4,0mm  | ~72°              | 30 m                   |
|  6,0mm  | ~52°              | 40 m                   |
|  8,0mm  | ~40°              | 40 m                   |
|  12,0mm | 25°               | 60 m                   |

### 1MP AI Detection Suitability

| Lens                                                                                       | Field of View(°) | Max Detection Distance |
|--------------------------------------------------------------------------------------------|------------------|------------------------|
|  2,8mm  | ~90°             | Up to 50 m             |
|  3,6mm  | ~78°             | Up to 60 m             |
|  4,0mm  | ~72°             | Up to 70 m             |
|  6,0mm  | ~52°             | Up to 100m             |
|  8,0mm  | ~40°             | Up to 120 m            |
|  12,0mm | ~45°             | Up to 160 m            |

## Important Usage Terms and Indemnity

This product must be installed and used strictly in accordance with the official Avlytics documentation, available via QR code or our website.

By purchasing, installing, or using this product, you acknowledge and agree that:

- Avlytics Solutions accepts no liability for damages or losses resulting from improper installation, use, or maintenance.
- Responsibility for safe operation and compliance lies with the installer and end-user.
- It is your duty to ensure you have read and understood all safety, installation, and operational instructions.

Full product terms, safety guidelines, and warranty information are accessible at:

<http://www.avlytics.co.za>

(or by scanning the QR code on the product)



### Warranty Overview:

All Avlytics hardware includes a 12-month warranty from date of purchase. Warranty covers manufacturer defects only. Damage due to misuse, incorrect installations, power surges, or environmental exposure is not covered.

**⚠ Important:** This device must be installed per the Avlytics documentation. Visit [avlytics.co.za/docs](http://avlytics.co.za/docs) or scan the QR code for usage instructions and warranty terms.

# CONTACT US



[sales@avlytics.co.za](mailto:sales@avlytics.co.za)



+2741 364 25 85



43 Pickering Street, Newton  
Park, Gqeberha, 6045