APPLICATION NOTES

DEVA SOLUTION REQUIREMENTS

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This document describes optimal requirements when creating and setting up a complete DEVA Infrastructure for Infotainment and Security solutions.

There are many different considerations that need to be evaluated when designing a Deva Solution, so, as best practice, is always suggested to be supported by our Solution Engineering Team to be sure the system can be created having the right requirements and fulfill all customer needs.

Infotainment & Security

As an advanced multimedia device, Deva is a convergence of multiple devices that can be easily deployed anywhere, enabling automated and direct interaction with the public.

Its camera, high powered speaker and multiple sensors are designed to complement each other and to interact with third-party applications to offer several services spanning from safety to information and entertainment.

DEVA HD, DEVA Audio, DEVA Passive

Deva HD and Deva Audio offer a versatile system of Mains powering and Network connectivity allowing a perfect integration to the central infrastructure. Deva HD and Deva Audio provide a link to connect a Deva Passive device for expanding the audio coverage area.

Mains options*:

- External PoE injector *(Solar Panel may be added on request)*
- External Power Supply *(Solar Panel may be added on request)*
- Solar Panel *(In addition to PoE or to PowerSupply)*

Connectivity options:

- Network cable *(Cat5e or higher)*
- WiFi connected to an existing AP *(signal above -56dBm and Star topology required)*
- Mobile SIM Card *(Used for Voice Calls on SOS Box or SMS Alert)*

Management System:

- PDD *(PC running DSM software on Ubuntu 18.04 LTS)***
- Deva System Manager *(Remote control software with web-based user interface)*
- Gigabit Network Interface Card *(Connected to Deva network)*
- External Soundcard *(suggested to use "Live from Mic" feature)*
- Video-Analysis platform *(V-Track for Win10 OS or Reco for Ubuntu OS)*
- Dedicated GPU supporting Compute Unified Device Architecture *(Required if using Video-Analysis)*

*Internal Battery (12V - 12Ah) is required   ** UPS is required for the correct functionality of PDD and DEVA

DEVA Solution Requirements Chart

Understanding the key elements and the requirements needed when designing a solution for infotainment and security with Deva Audio / Deva HD is the primary aspect to achieve the best result from the entire system.

The following chart describe the compatible and suggested options based on specific the specific solutions.

Solutions	Model	Mains Options			Connectivity Options			Features Available			
		PoE Injector	Power Supply	Solar Panel	Network Cable	WiFi	Mobile SIM	Full HD Camera	LEDs Light	Motion Sensor	VoIP - SIP
High Schools and Education *(Background Music)*	DEVA Audio	✓	✓	⚠	✓	✓					
Zoos and privately owned public parks *(Scheduled Messages Playback)*	DEVA Audio	✓	✓	⚠	✓	✓					
Smart City Plans *(SOS Emergency)*	DEVA HD	✓	✓		✓		⚠	✓	✓	✓	🔑
College-University dorm areas *(Video Analysis)*	DEVA HD	✓	✓		✓			✓	✓	✓	🔑

Table 1 – Deva Solutions Requirements Chart.

✓	Suggested for best performances
⚠	In addition to the suggested option
🔑	Additional License required

Video Analysis – DEVA HD

Deva HD model is equipped with a Full HD camera that provides ONFIV compliant video streams. Those streams are available on the entire local network through any rstp media player, so DEVA HD can easily be integrated with third-party video-analysis software to manage different scenario improving the security:

- Video surveillance
- Abandoned object detection
- Queue evaluation *(People counter)*
- Parking Control
- Gate transit *(People counter)*
- Restricted area intrusion detection
- Social distancing *(Crowding monitoring)*

Scenario listed above can be set using the provided video-analysis software V-Track for Win10 OS or Reko for Ubuntu OS and require a compatible graphic card with memory resources based on the quantity of video flows that needs to be processed.
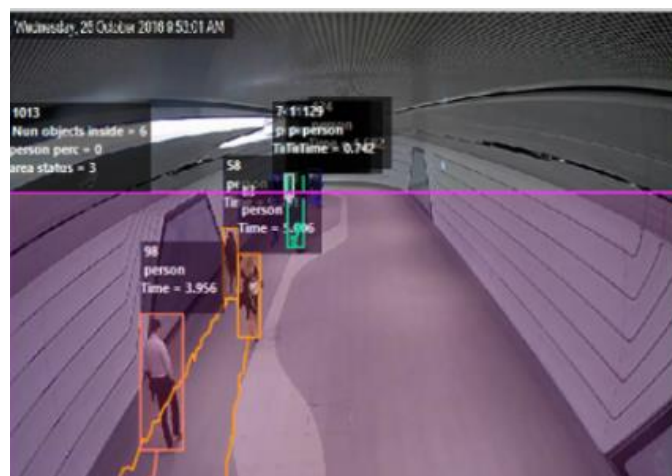

Figure 1 – Example of Queue evaluation.

Notes:
V-Track and Reco are external software that require additional licenses per video flow.

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