NASBox

Nexus ANPR Smart Box

NASBox is a complete integration solution for Hikvision TCM and Series 7 ANPR cameras. It provides regulated power via PoE+ and an ethernet communications hub for up to 2 cameras (NASBox2). Since each camera can cover up to 3 lanes of traffic a single NASBox can provide support for large multi-lane installations.

NASBox automatically retrieves ANPR data and images in real time for every vehicle from each camera connected to it. This data can then be augmented (for example by the incorporation of GPS coordinates and the application of meta-data to images) before being transmitted to a wide range of back office systems using industry standard protocols such as UTMC and BOF2.

NASBox provides a broad range of options for both wired and wireless communications to back office systems, including 3G, 4G, dual-band Wi-Fi and gigabit Ethernet. A GPS receiver is included as standard, which provides accurate location information for transmission with ANPR data and can optionally be used to provide accurate time sync. High performance antennas are internal to the box.

Smart Features

- Simultaneous transmission of ANPR results to multiple back office systems via different communications channels and using different protocols
- Automatic cropping of the camera image to provide overview images containing only the vehicle of interest, the area of the overview and the compression being configurable to achieve a range of image file sizes
- User configurable meta data can be applied to overview images including, for example, camera ID, timestamp, lat./long co-ordinates, vehicle registration
- Buffering of up to 100,000 vehicle records in the event of communications outages and automatic forwarding when communications are restored
- Image retrieval on demand (where supported by the back office) - images can be requested selectively for vehicles of interest, reducing comms data charges and back office storage requirements
- Streaming in real time or batching of data at configurable intervals
- Provides time synchronisation for all connected cameras, GPS and SNTP options
- De-duplication of camera plate reads to ensure only one plate read per vehicle is output
- Optional encrypted transmission of data and images (back office must support)
- NEWA (Nexus Engineers Workstation Application) user-friendly software tool included for NASBox configuration and setup via local or remote connections

Options:

- Automated NASP Testing logging tool for NASP test scoring
- Power monitoring feature with SMS/Management Server alerting, remote power reset and Hardware Watchdog

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Options:

NASP Testing - QRO have developed an onboard NASP testing feature that allows the users to extract an excel spreadsheet pre-populated with ANPR reads, plate patches and overview images. This also includes any vehicles that have been detected travelling through the field of view but no read occurred, allowing for missed vehicles to be checked. The spreadsheet has a built in scoring mechanism to allow the user to quickly compare and confirm good reads, misreads and non captures and provides a percentage scoring at the end of the test.

Power Monitor - This is installed in an existing or newly purchased NASBox and provides remote messaging via SMS or via UTMC/BOF2 web services protocol in the event power is removed from the NASBox. The unit also supports a remote power reset to reboot the system and a hardware watchdog timer to automatically reboot the system in the event it has become unresponsive, ensuring operational capabilities are not compromised for any length of time.

Nexus ANPR Smart Box	Specifications (NASBox2)
Number of cameras supported**	1 camera: NASBox2-1
	2 cameras: NASBox2-2
Cellular communications (modem)	4G (LTE), 3G (HSPA+)
Wireless LAN (Wifi)	802.11 a/b/g/n Dual Band
GPS	GPS/GLONASS/BD
Ethernet	IEEE802.3ab 1000BASE-T
Wired serial communications	USB (Console only - internal)
Non-volatile storage	16GB
Enclosure	Moulded polycarbonate
Ingress protection rating	IP66
Operating temperature range	-30° to +60° C (ambient)
Power supply	48V d.c. (16W typ with 1 camera, 27W typ with 2 cameras)
Dimensions	200 x 120 x 75mm
Weight	0.9kg
Camera Connections (PoE power and data)	2x M20 Pass-thru glands
Ethernet Connection (WAN - data output)	Waterproof RJ45 panel socket
Ethernet Connection (engineer's terminal)	Waterproof RJ45 panel socket
Input power connection	M20 3-pole waterproof connector***

** The output communications channel(s) configured must have sufficient bandwidth to transmit data and images for the volume of traffic seen by all connected cameras

*** Mating cable mounting plug with screw terminals is included