

## 1.0 Manufacturer

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## 2.0 Description

Manufacturer shall warrant the NAV1108B, NAV Recorder, to be free from defects in material and workmanship for three years from the installation date.

Central Management Software Recorder (NAV Recorder) is a total solution for managing network video products including IP cameras, NVR, and DVRs. NAV Software HD contains (1) network video recording software, (2) eMap Manager, (3) Database Manager, (4) Web Server, and (5) Remote DVR playback and file download.

Major features including up to 108 channels at 1080P/3M/4M/5M/8M H.264/MJPEG IP cameras and NVR/DVR's cameras recording, remote NVR/DVR video playback and file download, and camera groupings with user authentication are integrated within one system application.

One important feature of eMap is the central management system for live monitoring, alarm snapshot management, and map management. IP devices installed at different locations can be represented and managed by using maps.

Circular recording, schedule recording, NAS recording, individual HDD recording configurable, and individual camera recording configurable provide the flexibilities in managing recording storages. NAV Software is designated for hybrid solution for IP camera, video server, IP Fast Dome, NVRs, and DVRs. It provides total solutions for digital surveillance. Major features are:

## 3.0 General Specifications

NAV shall provide H.264/MJPEG decoding from IP camera.

NAV shall support upload: up to 500Mbps/ download: up to 500Mbps for network throughput.

NAV shall supports (Video Input)/Network video support/IP video supports ONVIF Profile S, LILIN IP camera, LILIN IP PTZ dome, LILIN DVR/NVR, NAV Server.

NAV shall support 24 x Hot-swap 3.5" SATA HDD.

NAV shall provide 7 days x 24 hrs. time table, recording mode configurable for recording schedule.

NAV shall provide alarm, motion, schedule, and manual recording mode.

NAV shall provide max 8MP@30fps, 5MP@12 fps, 4MP@20fps, 3MP@15 fps, 1080p@120 fps, and ROI recording supported

NAV shall support recording resolution of 3840 × 2160, 2592 × 1944, 2048 × 1536, 1920 × 1080, 1280 × 1024, 1280 × 768, (720 × 480/720 × 576), 320 × 240.

NAV shall support audio recording.

NAV shall support circular recording and size customizable.

NAV shall support limited recording and days customizable.

NAV shall support video archiving.

NAV shall support low bitrate recording mode.

NAV shall support Remote Network RAID.

NAV shall support NAS.

NAV shall support playback search for name, time, event, POS smartsearch, motion smartsearch, plate search (optional), record tagging

NAV shall support playback resolution for 3840 × 2160, 2592 × 1944, 2048 × 1536, 1920 × 1080, 1280 × 1024, 1280 × 768, (720 × 480/ 720 × 576), 320 × 240.

NAV shall support playback speed for FR: 1/8, 1/4, 1/2, 1X, 2X, 4X, 8X, 16X 32X FF: 1/8, 1/4, 1/2, 1X, 2X, 4X, 8X,

16X, 32X.

NAV shall support back up for max. 36 channels, AVI file format supported.

NAV shall support remote video playback for NAV Server/Navigator client/DVR/NVR/IP camera SD card supported, max. 36 channels.

NAV shall support video input for max. 108 channels.

NAV shall support camera name for 20 characters.

NAV shall provide run-time cameras' arrangement by using a mouse drag-n-drop.

NAV shall provide digital zoom feature for live monitoring and video playback.

NAV shall support user grouping authentication assignable for eMap, and Navigator 2.0

NAV shall support remote monitoring.

NAV shall support HDMI output of 2 × HDMI Port, (4096 × 2160@60Hz).

NAV shall support video output of 2 x DisplayPort, (4096 × 2304@60Hz).

NAV shall support DVI / VGA output 2 x DVI-D Port, (1920 × 1080@60Hz).

NAV shall support dual stream technology of Multi-channel displays D1 and full screen displays 1080P/3M/4M/5M/8M resolution

NAV shall support four screen, max. 36 channels.

NAV shall support TV wall of 4 monitors support up to 36 channels Video display. (480P 15FPS).

NAV shall support split screen of 4, 9, 16, 25, 36.

NAV shall support video archiving & sync. Of Individual camera configurable, scheduling and instant archiving, sync recording data with NAV server/NVR/DVR/IP camera SD card.

NAV shall support alarm recording of Face detection, audio detection, tamper, motion, IVS, DI alarm detection, and ANPR (optional).

NAV shall support alarm management of Alarm popup for full screen, pc sound, redirect IP camera's digital output, email snapshots, redirect a PTZ preset recall.

NAV shall support alarm recording (alarm / event) of Pre-alarm:1 – 10 seconds and post-alarm: 1 sec – 59 minutes.

NAV shall support various alarm log including video loss, stop recording, schedule, logon, operation log.

NAV shall support digital output and controllable via IP cameras.

NAV shall support PIH-931D keyboard controllable via rs-485 for PTZ, ePTZ, and ROI features.

NAV shall support audio function of PCM, two-way audio, audio recording.

NAV shall support POS and barcode scanner function via TCP-IP / USB interface.

NAV shall support protocols of ARP / TCP/ IP / HTTP / SMTP / DNS / PPPoE / ONVIF.

NAV shall support LILIN viewer, iPhone and Android.

NAV shall provide VMS of support NAV client VMS software.

NAV shall provide eMap of supported.

NAV shall support IP scan, easy-to-setup for IP address.

NAV shall provide CPU of Intel® Xeon® E5-2620 v4 Series.

NAV shall provide chipset of Intel® C612.

NAV shall provide display card of 1 × PH-GTX1650 4GB.

NAV shall provide RAM of 2 × DDR4 8GB.

NAV shall provide 5 x Audio jack(s), 1 x S/PDIF.

NAV shall provide USB port of rear panel of 6 x USB 3.0.

NAV shall provide 1 x 60mm rear exhaust fans.

NAV shall provide Raid control of LSI SAS 9361-8I RAID.

NAV shall support hardware RAID for RAID 0, 1, 5, 6, 10, 50. It should support HDD failure detection and warning for a HDD hot-swapping replacement.

NAV shall support hot spare.

NAV shall provide SSD HDD of 1 × SATA 256GB SSD (OS System) Note: Do not use WD Purple HDDs for NAV HDD installation. Please use 7200RPM WD Red Pro for non-RAID installation, WD Gold Enterprise HDDs for RAID installation, or other Enterprise HDDs.

NAV shall provide CE Certification.

NAV shall provide FCC Class A Certification.

NAV is capable of supporting failover for monitoring other cameras' connectivity and performing failover recording for the cameras if necessary.

NAV shall provide daylight saving time by Windows OS.

NAV shall support English, Traditional Chinese, Spanish, German, French, Russian, Japanese, Portuguese, Italian, Simplified Chinese, Czech, Slovenian, Hungarian, Turkish, Arabic, Persian, Bengali, Vietnamese.

NAV shall provide Windows 10 enterprise SAC.

NAV shall have power consumption of redundant 1200W power supply.

NAV shall provide power supply of 110V~240V.

NAV shall work within operating temperature of 5°C - 35°C (41°F - 95°F).

NAV shall provide storage temperature of -0°C - 50°C (32°F - 122°F).

NAV shall provide operating humidity of 5% - 95%, (non-condensing).

NAV shall not exceed dimensions of 177 (H) × 430 (W) × 680 (D) mm.

NAV shall not exceed weight of 81.6 lbs. (37kg).

## **4.0 NAV Control Center**

OS shall support by 64bits.

Tier architecture administrative system shall support up to 128 multi-tier tree architecture system, which supports up to 64 recorders.

NAV recorder management shall able to simultaneously control up to 4,096 NAV recorders.

IP device management shall able to simultaneously control up to 65,000 LILIN IP cameras, IP speed domes, DVR, NVR and NAV live servers.

User management shall support up to 512 user groups, each of which supports 1000 users that possess access privileges according to functions and device settings.

Device management shall support IP scan to detect LILIN IP products; user definable device groups to view.

Video support shall be for LILIN IP camera, speed dome, DVR, NVR, NAV recorder.

E-map shall support up to 64 channels per map.

E-map online / offline maps shall support up to 128 online maps and 128 offline maps.

Camera marks shall support up to 5,000 camera marks per online map and up to 500 camera marks per offline map.

E-map online maps shall support both Google maps and Baidu maps. Geographic information in China also supported: GCJ-02(aka Mars Coordinates) · BD-09(Baidu coordinates) · WGS-84(World Geodetic System).

E-map live monitoring shall support up to 64 live videos per map. pop up live video on alarm in the map.

Offline map file shall support JPEG.

GPS route tracking shall support to LILIN GPS devices supported to track the routes.

NAV operation status shall support CPU, connection & recording status, HDD status.

Database shall support import and exports, CVS table input & output and compression maintenance.

Alarm output shall support 3rd party TCP/IP output.

RAID failure notification shall be supported.

Shall support event search filter.

Access log shall support complete report of database administration operations.

Digital zoom shall support live and recorded videos (PTZ/ePTZ).

OSD shall support people counting, object counting, tripwire detection, license plate and POS string.

## **5.0 Installation**

All equipments shall be tested and configured based on the manufacturer guide line prior to installation.

All the products shall be updated for the latest firmware.

All the products shall be changed for the default username and password prior to installation.

## **6.0 Environmental Green Policy**

The specified camera shall be manufactured in accordance with ISO 14001.

The specified camera shall be compliant with the EU directives RoHS and WEEE.

The specified camera shall be compliant with the EU regulation REACH.

END OF SECTION