

# DNA4016 A&Es NAS/SAN External IP Storage Appliance



## Architectural & Engineering Specifications

### 1.0 Description

The External Storage Appliance shall be Dante Security's DNA4016 series. This Network Storage Appliance shall include a PC Server with a high speed dual core CPU Processor and Embedded LINUX Operating System for the highest reliability. The Series DNA4016 External Storage Appliance shall be compatible with Dante Security Series IP NVR Appliances Series DNA4000 and DNA5000 for reduced storage cost.

### 2.0 General Requirements and Main Features

1. The NAS/SAN External Storage Appliance shall be integrated into a 19" Rackmount PC appliance and be of same brand as IP Cameras and NVR Appliance specified in the project
2. The NAS/SAN External Storage Appliance shall feature a high speed dual core CPU, Embedded Linux OS
3. The NAS/SAN External Storage Appliance shall feature powerful performance in Access, Recording, Transmission over Network and Playback
4. Unit shall be compatible with DNA4000 IP Network Video Recording Server PC Appliance
5. Unit shall support multiple HDD RAID modes including Raid 0, Raid 1 and Raid 5
6. Unit shall support 16 Hot Swappable SATA II HDDs and up to 32TB in total storage
7. Unit shall support 3GBps Mini SAS Storage Expansion
8. Unit shall support video accessibility and simultaneous recording with NVR Appliance as follows:  
Up to 128 camera channels @1080p resolution, 256ch @720p
9. The NAS/SAN External Storage Appliance shall support recorded video Transmission over Network as follows:  
16ch @ 1080p resolution or 64ch @ D1
10. Unit shall support recorded video Playback as follows:  
8ch @ 1080p or 32ch @ D1
11. Unit shall support Central Management Platform and Distributed deployment over LAN
12. Unit shall feature dual 10/100/1000Mbps (GIGABIT) RJ-45 Ethernet Ports either as dual network ports loading balance binding or dual independent 1000Mbps network ports
13. Unit shall support ISCSI, NFS, FTP Storage protocols
14. Unit shall have Network accessibility via Web browser and Client Software
15. It shall be powered by 100-240VAC, 50-60Hz switching power supply with consumption of 280W to 490W (including HDDs)
16. Operating Temperature shall be 5C to 40C, humidity 10% to 80% non-condensing
17. 19" Rackmount Case shall be made of galvanized sheet steel and Aluminum side panels
18. Unit shall feature redundant ball bearing fans with MTBF >100,000 hours
19. Unit shall be compliant with CE, FCC and ROHS and manufactured to ISO9001

### 3.0 Detailed Functions and Features

1. The NAS/SAN External Storage Appliance shall feature DVR GUI like interface, supports Administrator rights with ID and password; Multiple User groups and level rights with password
2. Unit shall feature User Management for Network setup and Interface consisting of:  
System, Network, Disk, ISCSI, Share and Status
3. Unit shall feature Login & Preview after system booted up, system can automatically check the HDD installed in the Storage Appliance is formatted or not
4. Unit shall support Web Configuration to include the following:  
Web Login, System Management, Network Management, Disk Management, ISCSI Management, Share Management and Status Management
5. System Management shall feature Display System Information, Parameter Configuration, User Management, Guide, Upgrade and Shut Down
6. Display System information shall feature sub menus as Host Name, System Time, Start Time, Device Type, Software Version, Hardware Version, Power Status, CPU Temperature, Fan Speed, NFS, FTP, ISCSI and CMS Status





7. Parameter Configuration shall feature sub menus as Host Name, Date, Time and Time Synchronize
8. User Configuration shall include Admin and Operators or Guest with Password for each type including FTP type
9. Guide Menu shall assist Users with correct settings including HDD setup modes
10. Unit shall feature Upgrade of Firmware over the LAN by Admin User
11. Unit shall support Shut down of system as shut down or reboot system
12. Unit shall support Network Management for setting up device network card and router in LAN including Card Name, IP Address, Subnet Mask, Default Gateway, MAC address, Binding Status and Member Card
13. Unit Disk Management shall feature, Serial Number, Channel Number, Disk Name, Available Space, Status, Group Name, User Status and Type
14. Unit Raid Configurations shall feature Raid Name, Type as Raid5, Raid1, Raid0, status as synchronization and speed, Member Disk and Total Space
15. Unit RAID1 and RAID5 shall support removal or replacement - HOT SWAP of HDDs while in Live operation
16. Unit shall support Storage Pool Operation and feature Storage Pool Name, Member Device, Total Space, Used Space, Edit and Delete functions
17. Unit shall support iSCSI Management and feature Disk configuration including sharing
18. Unit shall support Status Management to view System Log, System Status and System Upgrade
19. Unit shall support 2 +1 hot-swappable redundant power supplies
20. Two Additional DNA4016 External Storage Devices may be added as expansion capability

#### 4.0 Connections and Status

1. Unit shall feature a USB port for connection to external devices
2. Unit shall feature a CRT port to connect to a Monitor
3. Unit shall feature an RS-232 Port for interfacing to an external controller/keyboard
4. Unit shall feature a Mouse/Keyboard port
5. Unit shall feature a power port for 110/220VAC
6. Unit shall feature two (2) 10/100/1000MBps RJ-45 Ethernet Ports
7. Unit shall feature two (2) extension connection ports to add Storage Devices
8. There shall be Status LEDs and Alarm for Power, Fan operation, over Temperature, Network a and Network b port  
Proper operation, HDD operation and HDD reading
9. Unit shall feature a RESET button

#### 5.0 Warranty

1. The External Storage Appliance Series DNA4016 warranty shall be for (1) year to be free from defects from date of purchase - extended warranty available.