

DAG Product Introduce



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Course Objective

Through this course
you will be able to



Understand and know what is DAG



Be familiar with Dinstar DAG product
main function and key features



Know Dinstar DAG application

Contents

- 1 About DAG(FXO&FXS)
- 2 DAG Introduce
- 3 DAG Application Scenario

Chapter One About DAG

01



1.1 What is DAG



1.2 Why need DAG

What is DAG

- DAG: **Dinstar Analog Gateways**, Could also name as IAD.
- The Dinstar DAG series Analog VoIP gateway are cost-effective, reliable VoIP gateways that seamlessly connect your analog phones, fax machines and legacy PBX with IP PBX systems and IP Phone networks, leveraging investment of your existing telephony infrastructure and simplifying your VoIP migration.



Why Need DAG

- **Easy Management:**

All can be done via Web GUI/NMS, lower down your management cost

- **Reduce Communication Cost Largely:**

Free internal calls and lower cost external calls via SIP trunks, flexible least call routing.

Advanced Features



- **Call Out & Call In:**

After the gateway receives a call number sent from softswitch or IPPBX, if the number matches one of the dialing rules set on Advanced Digit Map interface, the call will directly choose a FXO port to call out based on port selection rule.

- **Send or receive Fax:(Fax mode supported)**

T.38 (IP-based)

Pass-Through (VBD)

Adaptive Fax Mode (automatically match with the peer fax mode)

Advantage Of Using DAG

- Small Investment: No big investment in the beginning by capitalizing on existing system.
- User Habit: Keep your user habits by retain your existing system.
- Survivability: PSTN fail-over when power or internet service is down.

Contents

- 1 About DAG(FXS*FXO)
- 2 DAG Introduce
- 3 DAG Application Scenario

DAG Introduce

02



2.1 Dinstar DAG Overview

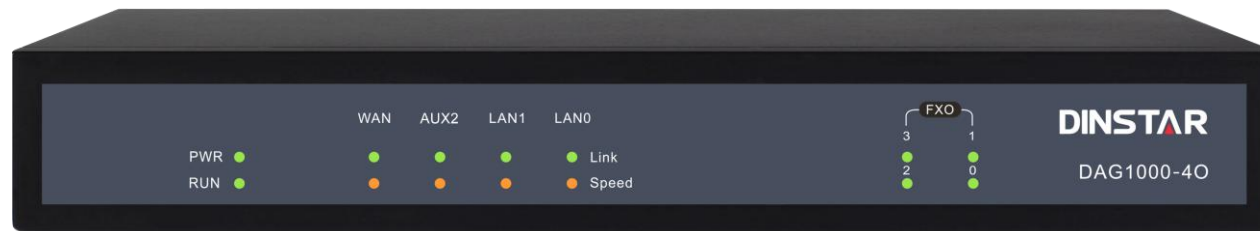


2.2 Dinstar Serial Introduce

Overview

- Dinstar DAG has divided into three types of equipment.
- S-port Gateway,
- O-port Gateway,
- S&O-port Hybrid Gateway

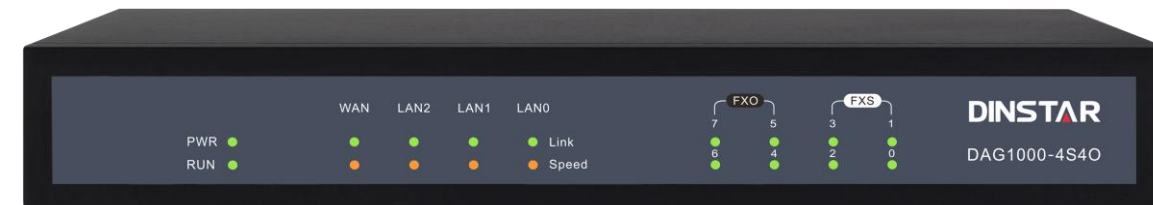
O-Port Gateway



S-Port Gateway



Hybrid Gateway



DAG key Feature:

FXS VOIP Gateway

- Support 1 -312 FXS ports
- Support fax over T.38 and pass-through
- Automatic firmware upgrade and configuration via HTTP/HTTPS
- System logs and CDR
- Support IPv6 and IPv4
- Support SIP/IMS
- Access of analog phone, fax machine and POS machine

FXO VOIP Gateway

- Support 4-32 FXO ports
- Support fax over T.38 and pass-through
- Caller ID, Polarity Reserve
- Support automatic firmware upgrade and configuration via HTTP/HTTPS
- Support system logs and CDR
- Support IPv6 and IPv4
- Support SIP/IMS

Hybrid Gateway

- Support 4 FXS 4 FXO , 8 FXS 8 FXO
- Support Fax over T.38 and Pass-through
- Support Automatic firmware upgrade and configuration via HTTP/HTTPS
- System logs and CDR
- Support IPv6 and IPv4
- Support SIP/IMS
- Power failure bypass

Dinstar DAG Overview



- Key Feature



HD Voice

Narrowband Codec:
G.711,G.723,G.729,G.726,iLBC,A
MR
Digital signal processor(DSP)
Echo Cancellation/Dynamic Jitter
Voice Activity Detection (VAD)
Comfort Noise Generation (CNG)
Hook Flash



Compatibilty

SIP Over
UDP,TCP,TLS,RFC3261
supports many third-
party IPPBXs such as
3CX,
Asterisk, Yeastar,
Xorcom, Avaya, CISCO
and so on



Advance features(maintenance)

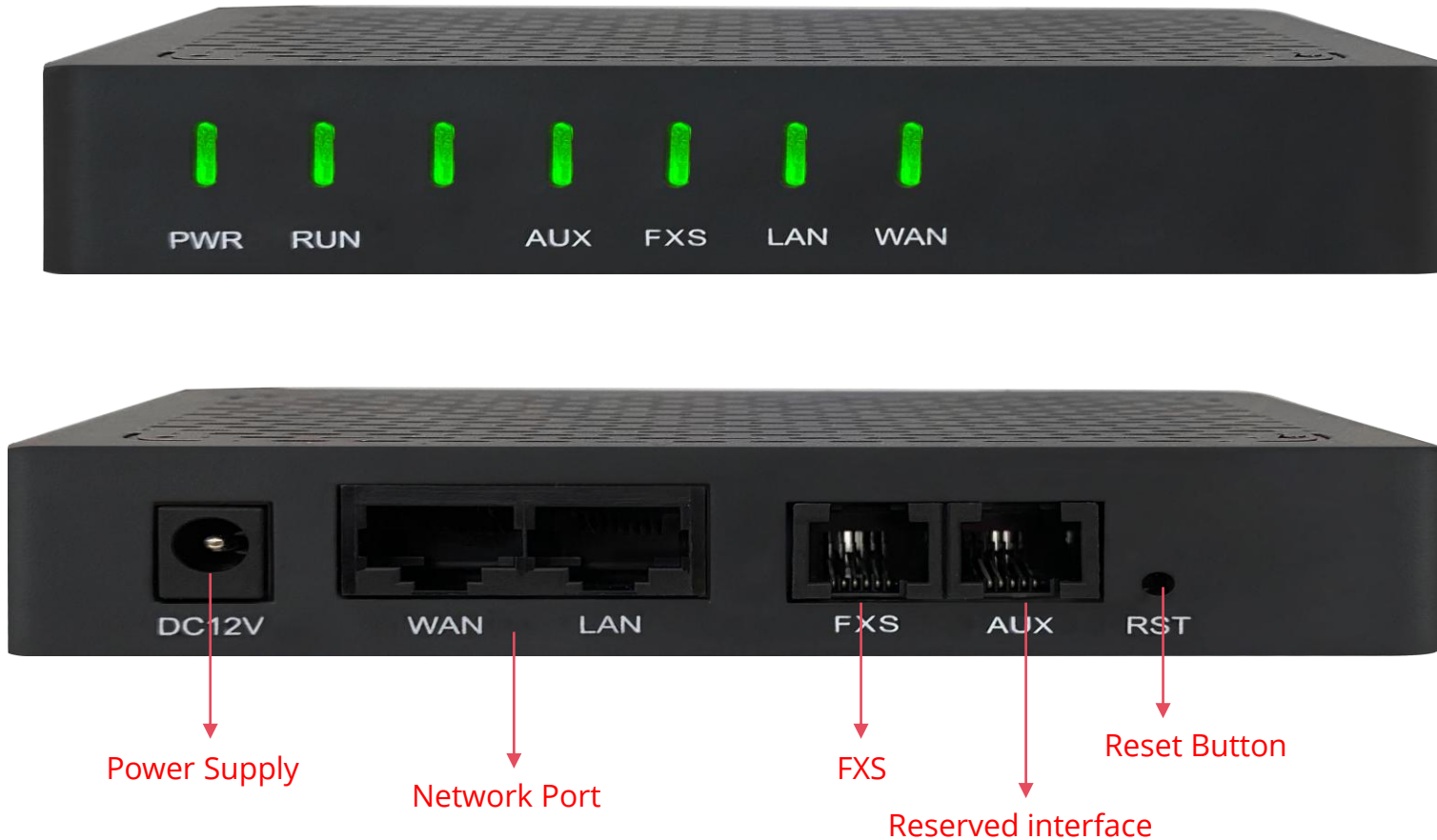
SNMP v1/v2/v3
TR069, DMCloud ,Radius
Web/Telnet
Configuration Backup/Restore
Firmware Upgrade via Web
CDR
Tracert Test
NTP/Daylight Saving Time
IVR local Maintenance
NMS Management



DAG1000-1/2S

DINSTAR

- Appearance



DAG1000-1/2S(Continues)

DINSTAR

- Key feature



3-Way Conference



T.38/T.30



1/2 FXS



TLS/SRTP



NGN/IMS



VLAN

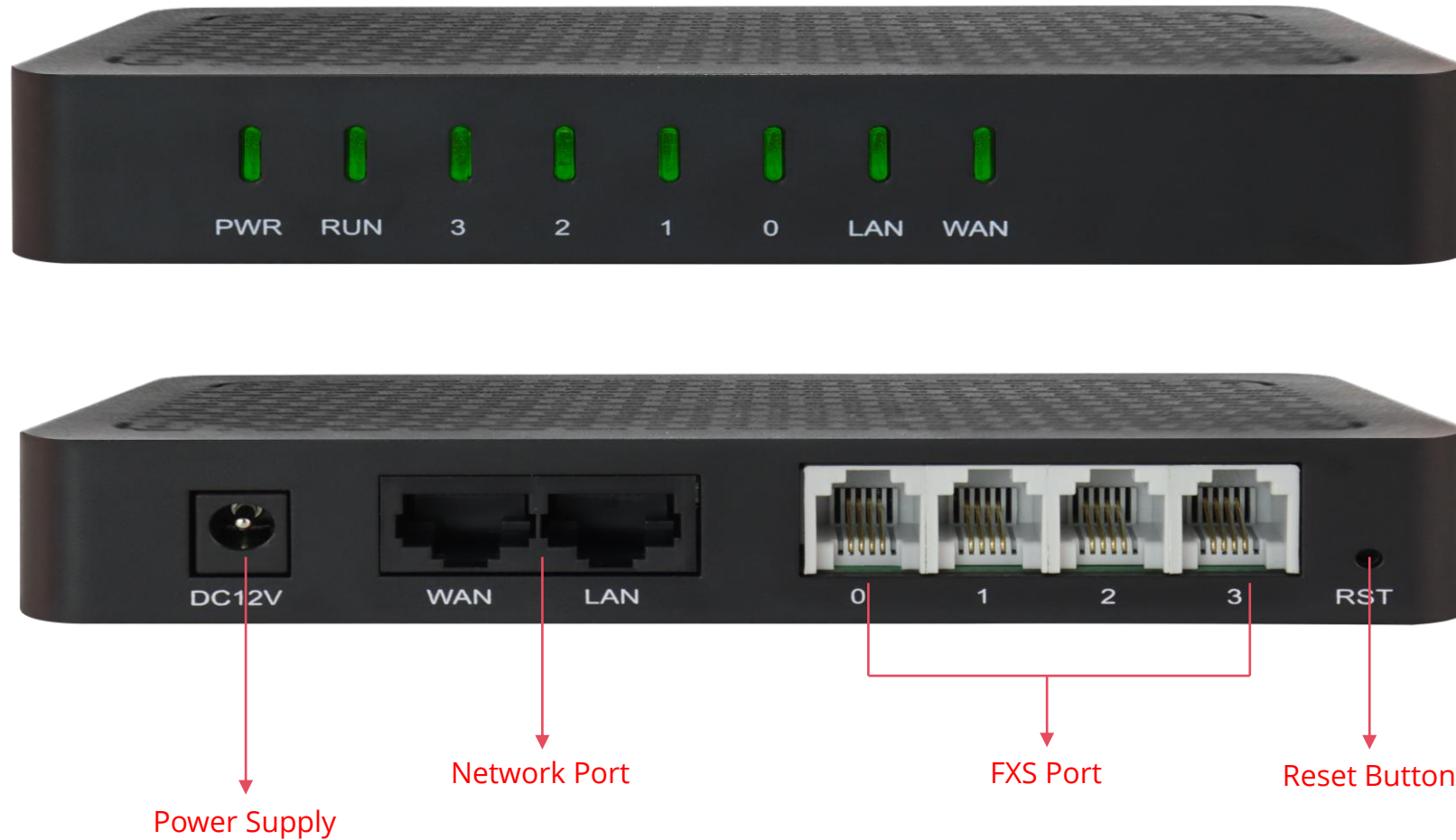
- 1/2 FXS ports, 1 WAN, 1 LAN
- Support SIP, IMS
- T.38 Fax
- Flexible routing & Dial plan
- Interoperable with leading softswitches, IP PBXs and SIP servers



DAG1000-4S

DINSTAR

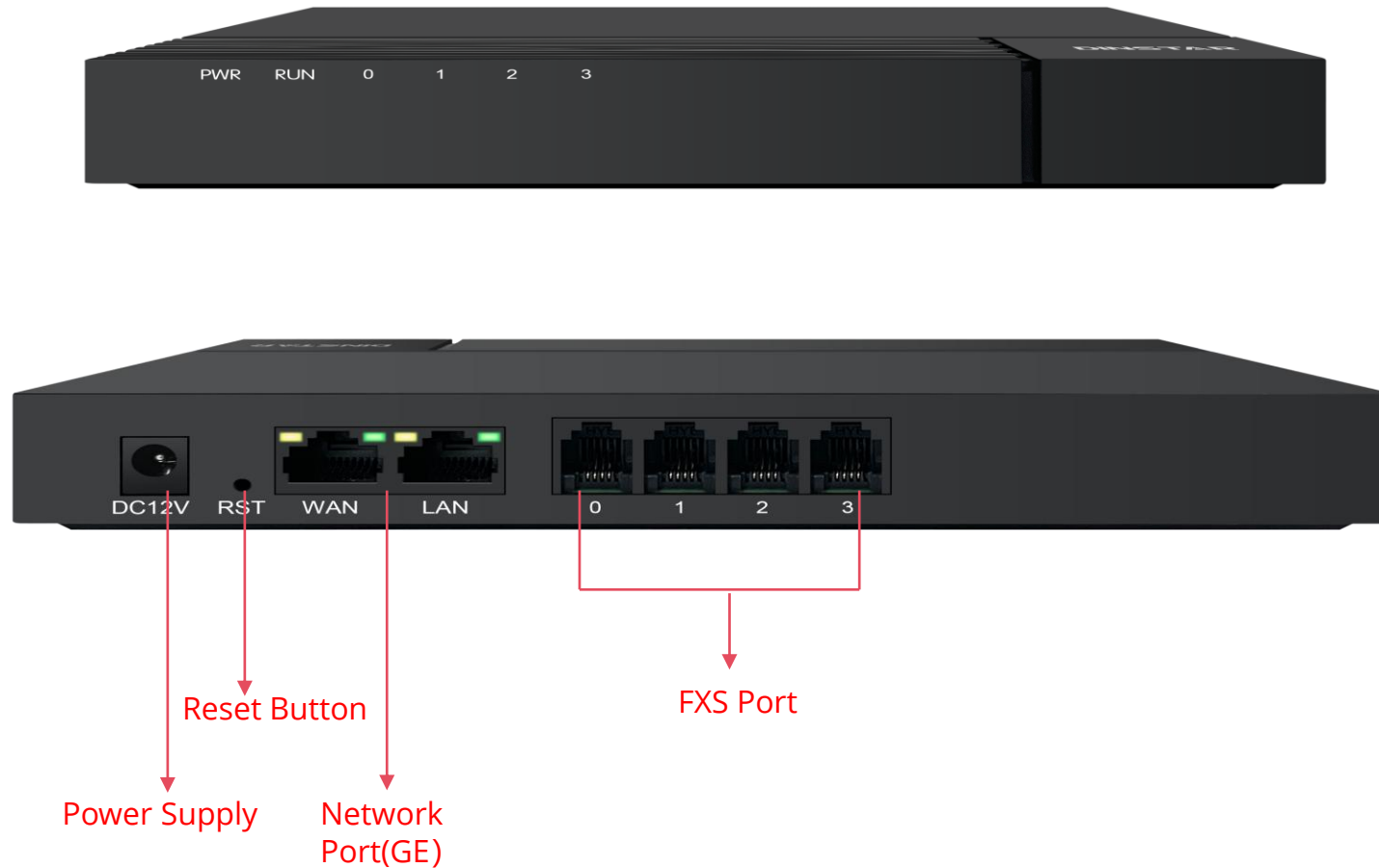
- Appearance



DAG1000-4S (NEW)

DINSTAR

- Appearance



DAG1000-4S(Continues)

- Key feature



3-Way Conference



T.38/T.30



4 FXS



TLS/SRTP



NGN/IMS

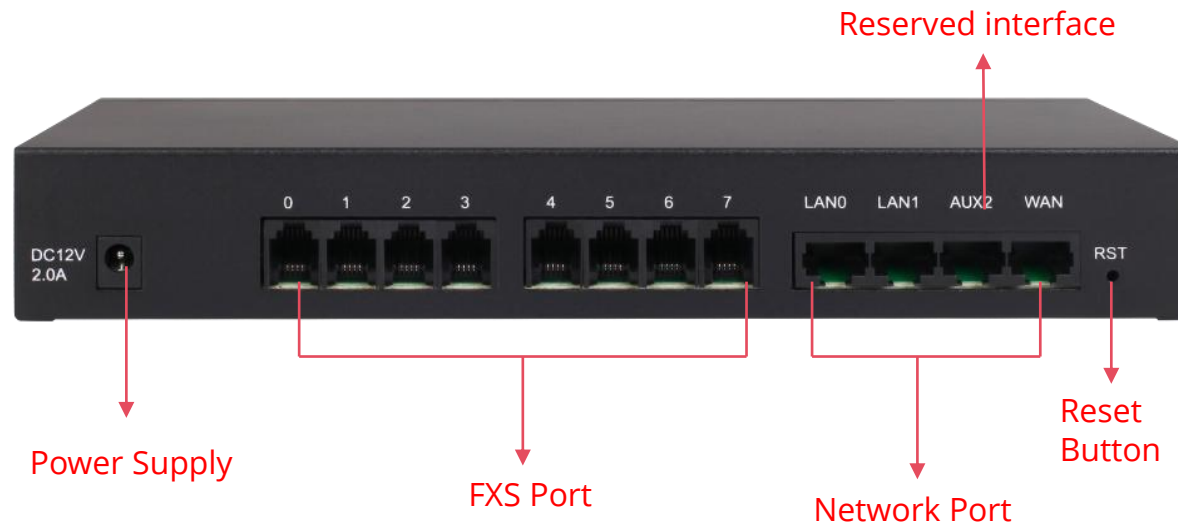
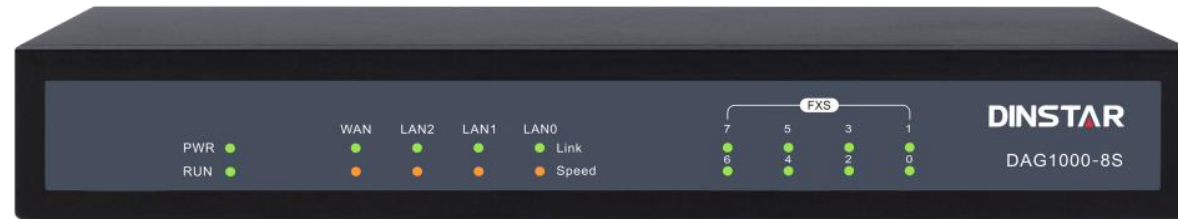


VLAN

- 4 FXS ports, 1 WAN, 1 LAN
- Support SIP, IMS
- T.38 Fax
- Flexible routing & Dial plan
- Interoperable with leading softswitches, IP PBXs and SIP servers

DAG1000-8S

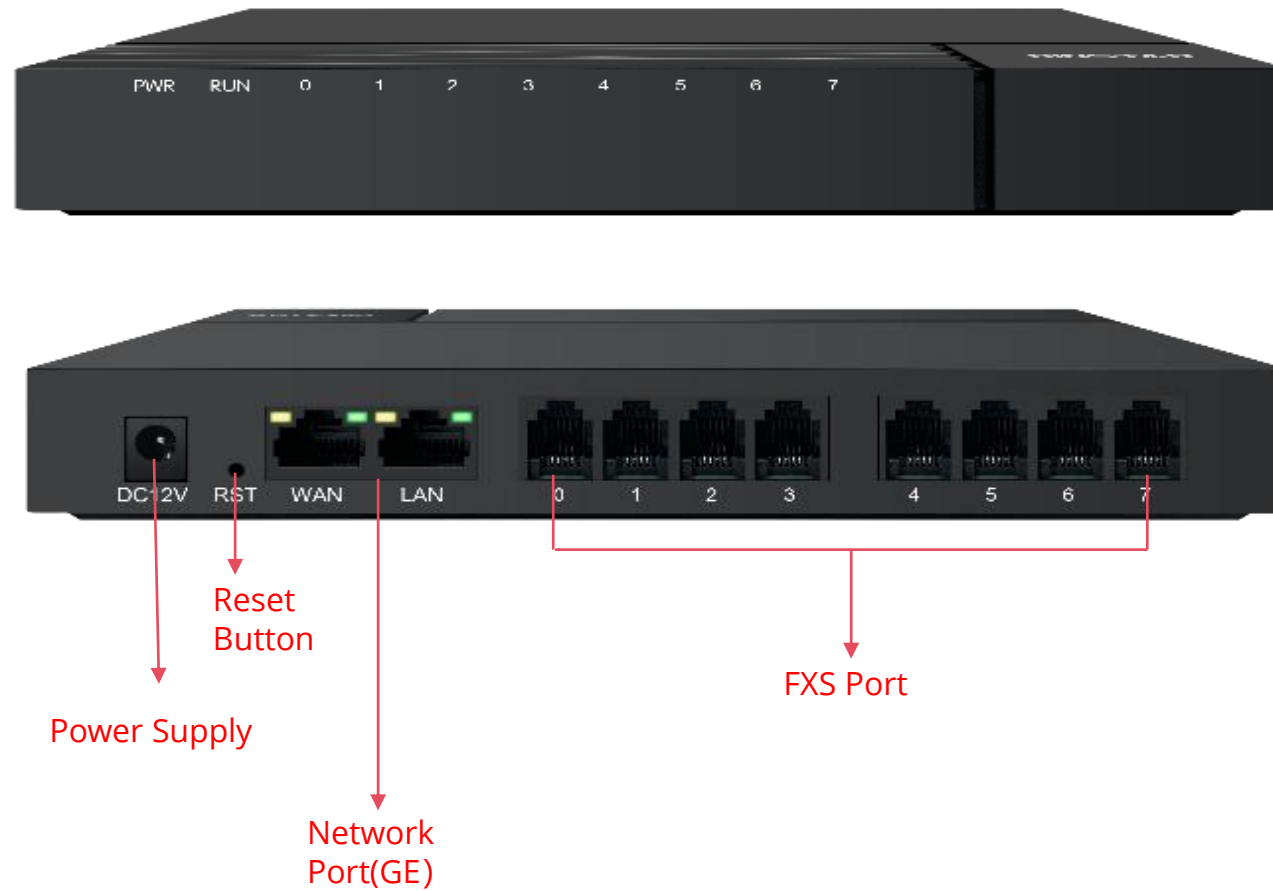
- Appearance



DAG1000-8S (NEW)

DINSTAR

- Appearance



DAG1000-8S(Continues)

- Key feature



3-Way Conference



T.38/T.30



8 FXS



TLS/SRTP



NGN/IMS



VLAN

- 8 FXS ports, 1 WAN, 2 LAN
- Support SIP, IMS
- T.38 Fax
- Flexible routing & Dial plan
- Interoperable with leading softswitches, IP PBXs and SIP servers
- **NOTE:**8 FXS ports (NEW),1WAN,1LAN

DAG1000-1S&2S&4S&8S



- Description of Indicators

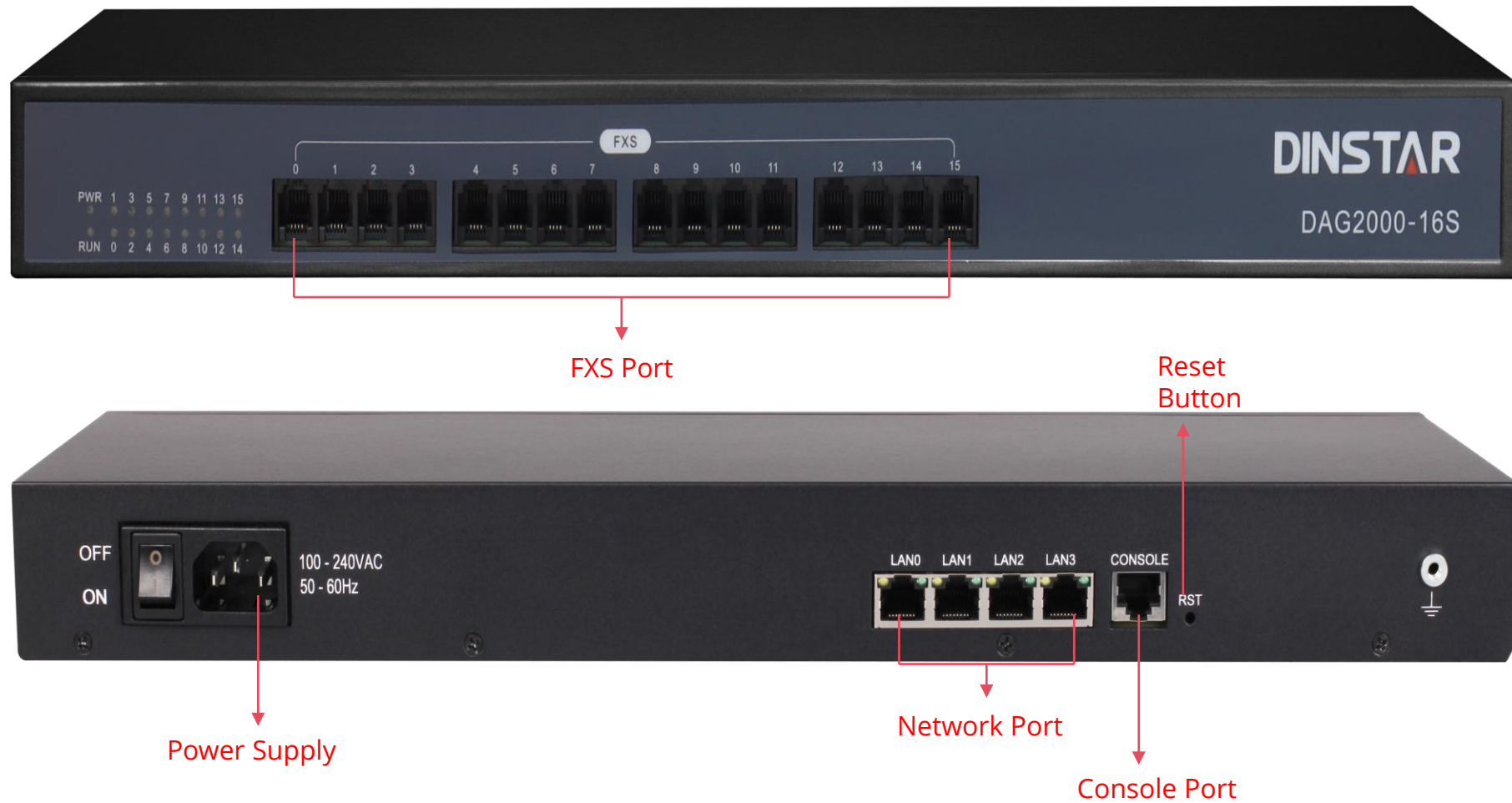


Indicator	Definition	Status	Description
PWR	Power Indicator	On	The device is powered on.
		Off	There is no power supply or powersupply is abnormal.
RUN	Running Indicator	Slow Flashing	The device is running normally
		Fast Flashing	SIP account is registered successfully
		Off	The device is running improperly
FXS	FXS In-use Indicator	On	FXS port is currently occupied by a call
		Off	FXS port is idle or faulty
WAN/LAN	Network LinkIndicator	Green Flashing	The device is properly connected tonetwork
		Off	The device is not connected to networkor network connection is improper

DAG2000-16S

DINSTAR

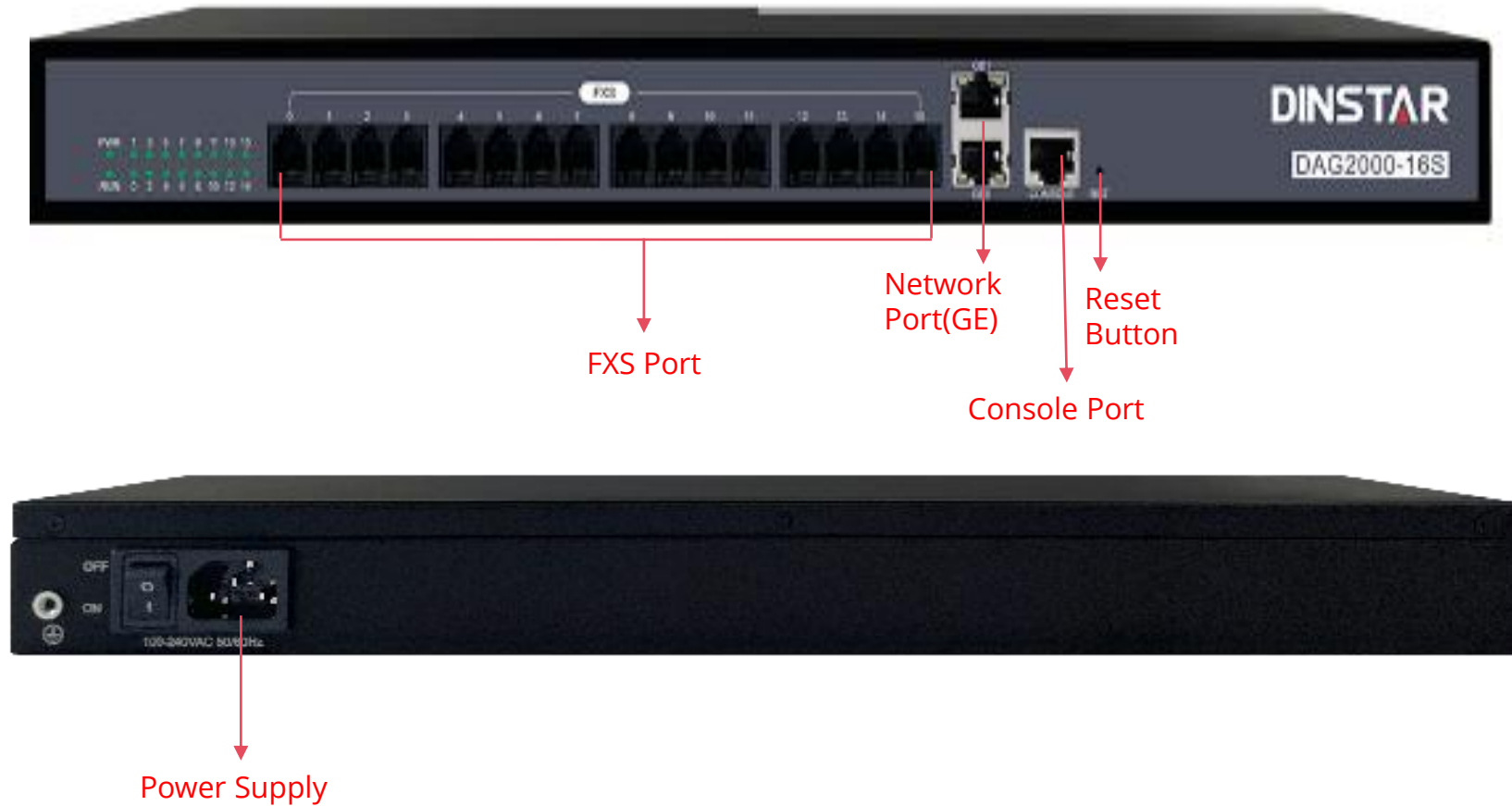
- Appearance



DAG2000-16S(NEW)

DINSTAR

- Appearance



DAG2000-16S(Continues)

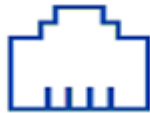
- Key feature



3-Way Conference



T.38/T.30



16 FXS



TLS/SRTP



NGN/IMS



VLAN

- 16 FXS ports, 3 LAN
- Support SIP, IMS
- T.38 Fax
- Flexible routing & Dial plan
- Interoperable with leading softswitches, IP PBXs and SIP servers
- **NOTE:**16FXS ports (NEW),2*GE

DAG2000-24S&32S

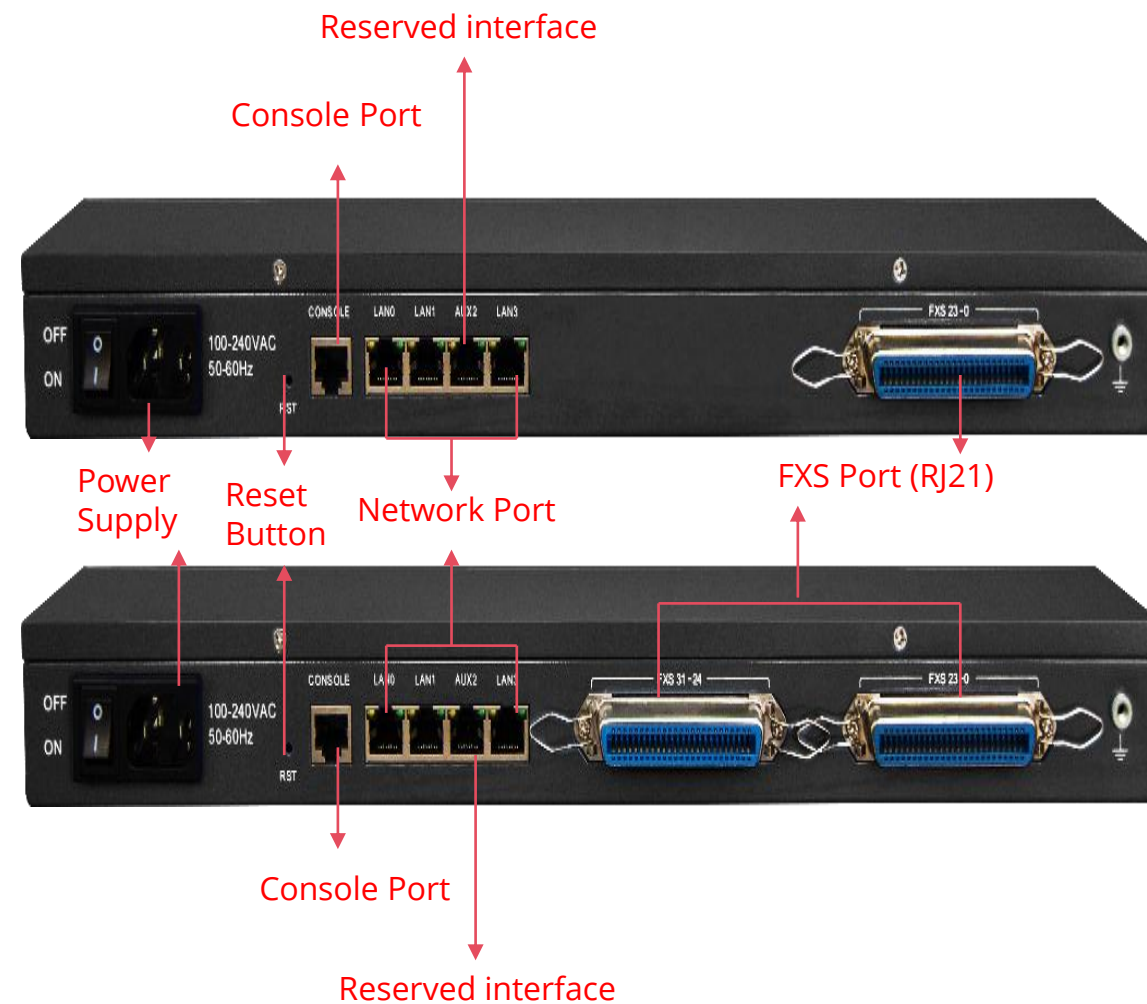
- Appearance



FXS Port(RJ11)



FXS Port(RJ11)



DAG2000-24S&32S(NEW)

DINSTAR

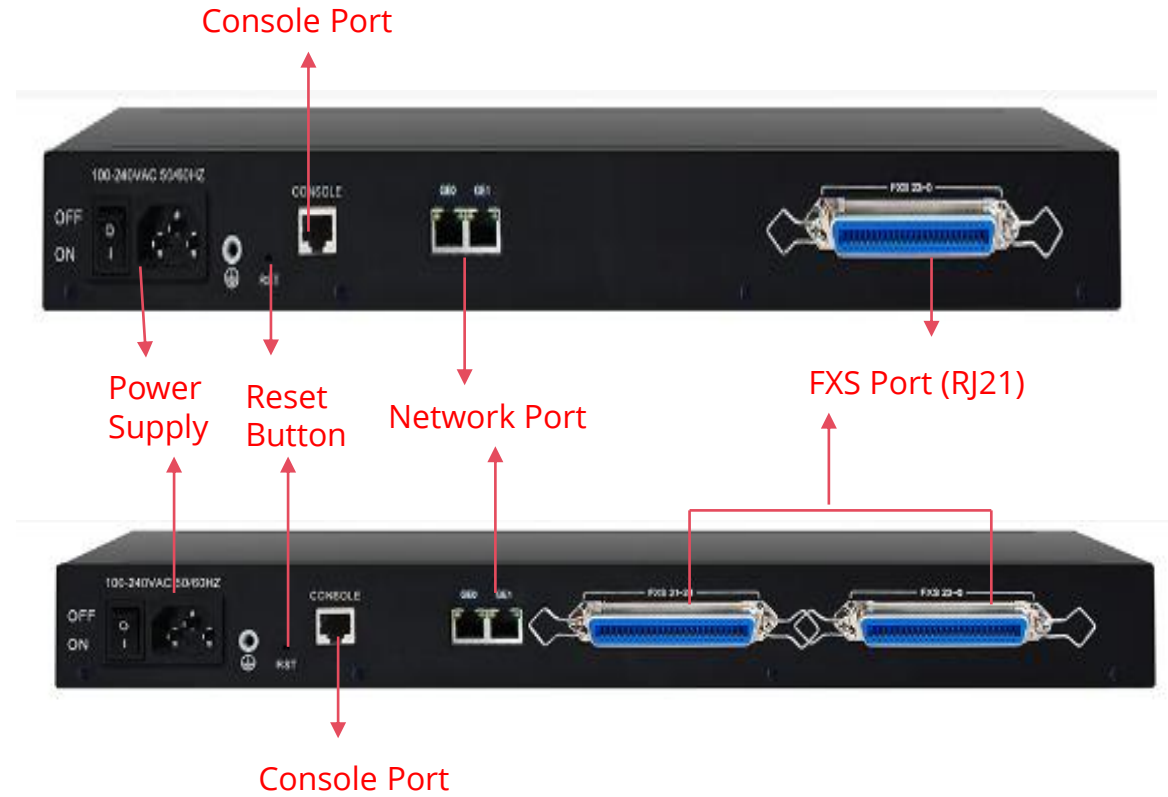
- Appearance



FXS Port(RJ11)



FXS Port(RJ11)



DAG2000-24S&32S(Continues)

DINSTAR

- Key feature



3-Way Conference



T.38/T.30



32 FXS



TLS/SRTP



NGN/IMS



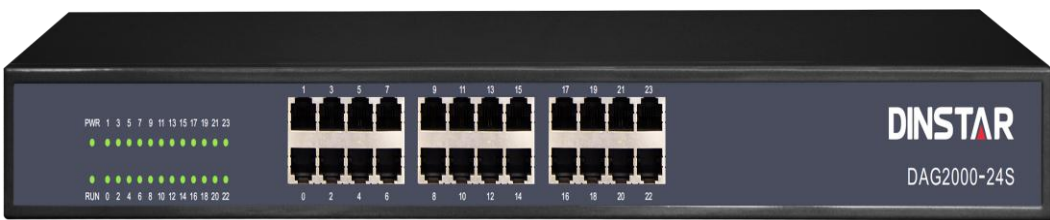
VLAN

- 32 FXS ports, 3 LAN
- Support SIP, IMS
- T.38 Fax
- Flexible routing & Dial plan
- Interoperable with leading softswitches, IP PBXs and SIP servers
- **NOTE:**24&32 FXS ports (NEW),2*GE

DAG2000-16S&24S&32S



- Description of Indicators



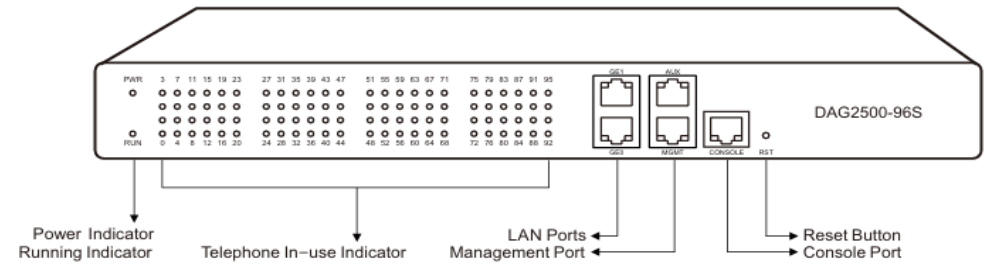
Indicator	Definition	Status	Description
PWR	Power Indicator	On	The gateway is powered on
		Off	The gateway has no power input or power supply is abnormal
RUN	Running Indicator	Slow Flashing	The gateway is running properly (Slow Flashing means the running indicator flashing for 2 seconds)
		Fast Flashing	SIP account is registered successfully (Fast Flashing means the running indicator flashing for 0.5 seconds)
		Off	The gateway is running improperly
FXS	Telephone In-use Indicator	On	FXS port is currently occupied by a call
		Off	FXS port is idle or faulty
LAN	Link (Green)	Flashing	The gateway is properly connected to network
		Off	The gateway is not connected to network or network connection is improper

DAG2500-48S&72S&96S

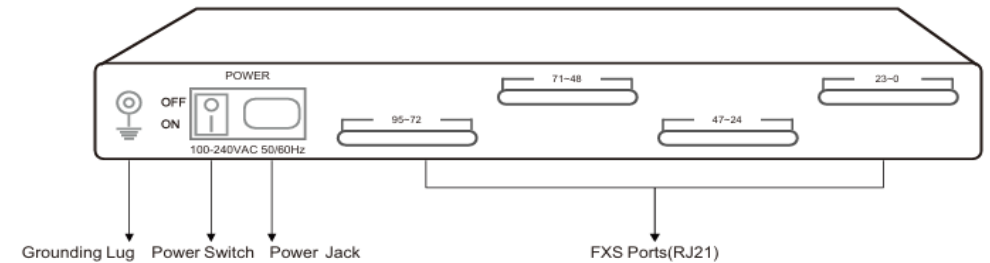


- Appearance

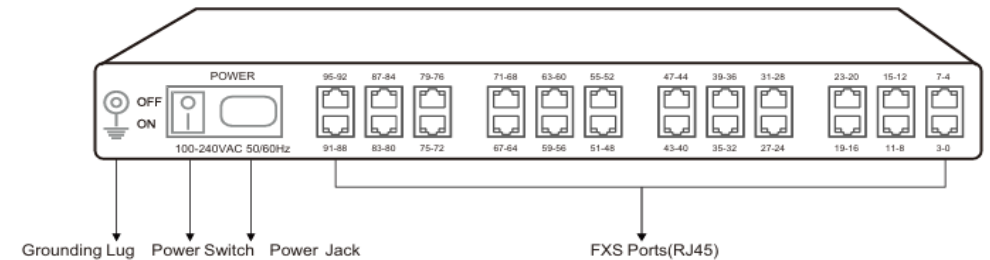
Front View



Back View-Type 1



Back View-Type 2



DAG2500-48S&72S&96S(Continues)

DINSTAR

- Key feature



48/72/92 FXS



NGN/IMS



3-Way Conference



T.38/T.30



TLS/SRTP



VLAN

- SIP v2, compatible with mainstream IP PBXs, Softswitches and SIP servers
- Voice, Fax (T.38 & T.30 bypass) and modem support
- IPv4/IPv6, VLAN, VPN, QoS
- Flexible routing and dial plan
- HD voice quality and various voice codecs



DAG2500-48S&72S&96S



- Description of Indicators

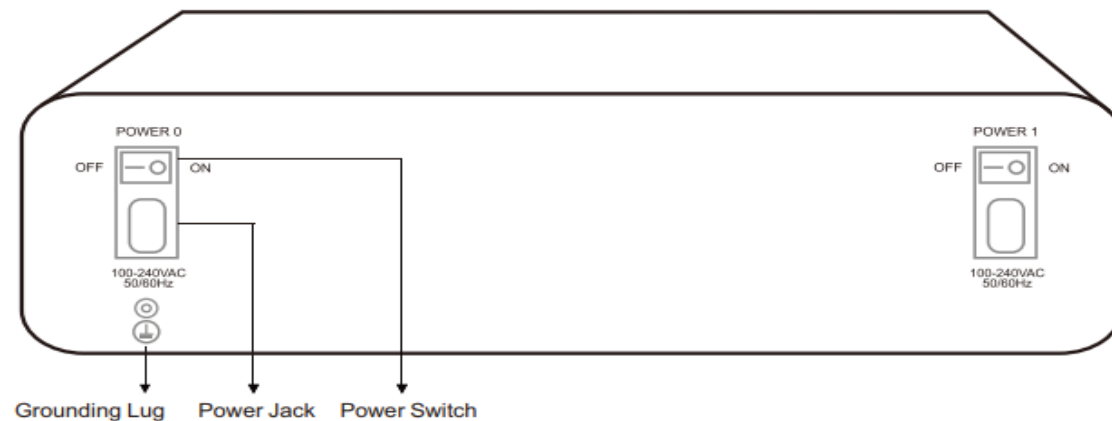
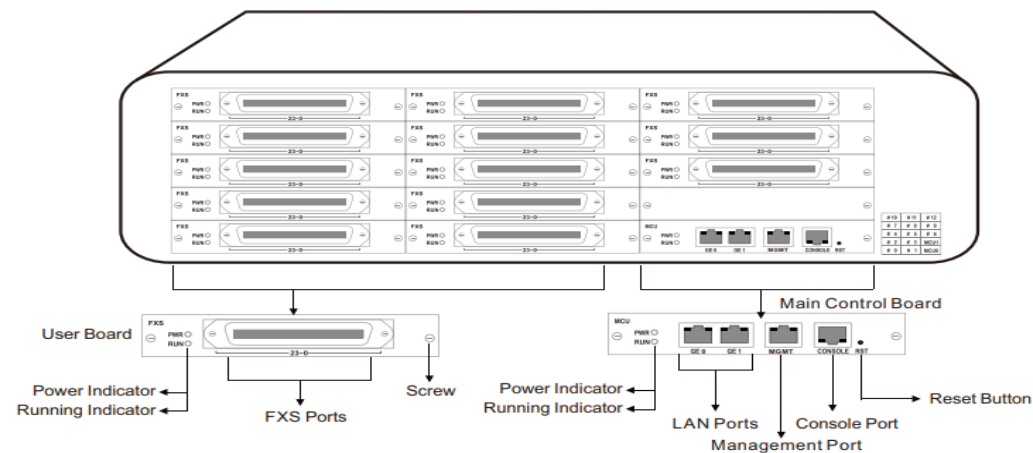
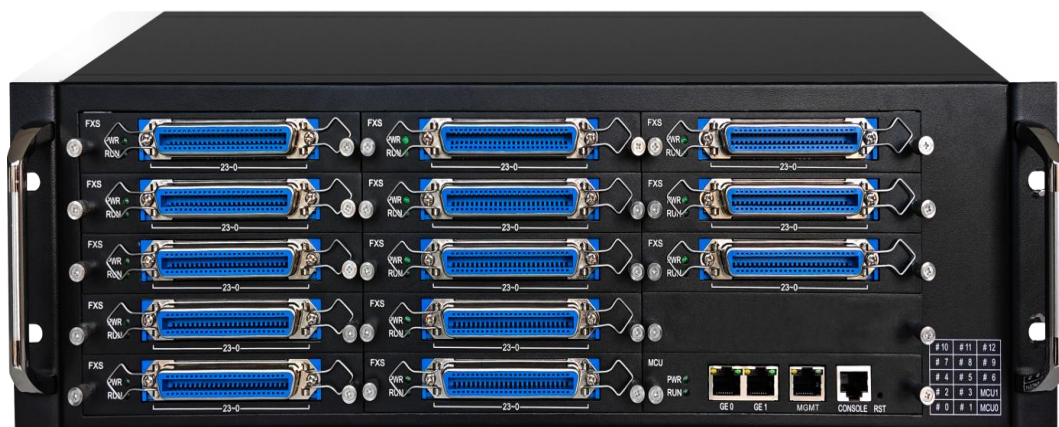


Indicator	Definition	Status	Description
PWR	Power Indicator	On	The gateway is powered on
		Off	The gateway is powered off or there is no power supply
RUN	Running Indicator	Slow Flashing	The gateway is running properly (Slow Flashing means the running indicator flashing for 2 seconds)
		Fast Flashing	SIP account is registered successfully (Fast Flashing means the running indicator flashing for 0.5 seconds)
		Off	The gateway is running improperly
FXS	Telephone In-use Indicator	On	FXS port is currently occupied by a call
		Off	FXS port is idle or faulty
MGMT	Network Link Indicator	Green Flashing	The gateway is properly connected to network
		Off	The gateway is not connected to network or network connection is improper way.
	Network Speed Indicator	On	Work at 100Mbps
		Off	Work at 10Mbps
GE0/GE1	Network Link Indicator	Green Flashing	The gateway is properly connected to network
		Off	The gateway is not connected to network or network connection is improper way.
	Network Speed Indicator	On	Work at 1000Mbps
		Off	Work at 10Mbps

DAG3000-312S



- Appearance



DAG3000-312S (Continues)

DINSTAR

- Key feature



312 FXS



NGN/IMS



3-Way Conference



T.38/T.30



TLS/SRTP



VLAN

- SIP v2, compatible with mainstream IP PBXs, Softswitches
- Voice, Fax (T.38 & T.30 bypass) and modem support
- IPv4/IPv6, VLAN, VPN, QoS
- Flexible routing and dial plan
- HD voice quality and various voice codecs



- Radius authentication
- TACACS authentication
- HTTPS
- TLS & SRTP
- Access control list

DAG3000-312S



- Description of Indicators



Indicator	Definition	Status	Description
PWR	Power Indicator	On	The gateway is powered on
		Off	The gateway is powered off or there is no power supply
RUN	Running Indicator	Slow Flashing	The gateway is running properly (Slow Flashing means the running indicator flashing for 2 seconds)
		Fast Flashing	SIP account is registered successfully (Fast Flashing means the running indicator flashing for 0.5 seconds)
		Off	The gateway is running improperly
MGMT	Network Link Indicator	Green Flashing	The gateway is properly connected to the network
		Off	The gateway is not connected to the network or the network connection is an improper way.
	Network Speed Indicator	On	Work at 100Mbps
		Off	Work at 10Mbps
GE0/GE1	Network Link Indicator	Green Flashing	The gateway is properly connected to the network
		Off	The gateway is not connected to the network or the network connection is an improper way.
	Network Speed Indicator	On	Work at 1000Mbps
		Off	Work at 10Mbps

DAG1000-20

DINSTAR

- Appearance



Power Supply

Network Port

Reserved interface

FXO port

Reset
Button

DAG1000-2O(Continues)

- Key feature



3-Way Conference



T.38/T.30



2 FXO



TLS/SRTP



NGN/IMS



VLAN

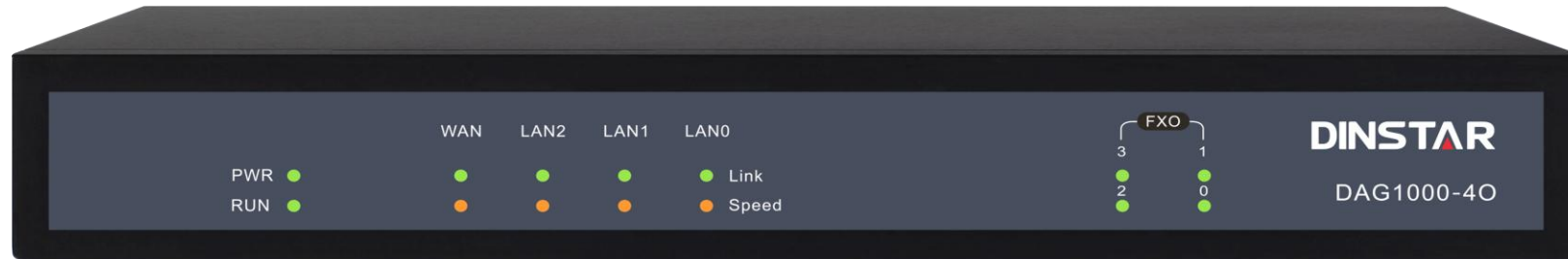
- 2 FXO ports, 1 WAN, 1 LAN
- Support SIP, IMS
- T.38 Fax
- Flexible routing & Dial plan
- Interoperable with leading softswitches, IP-PBXs and SIP servers



DAG1000-40

DINSTAR

- Appearance



DAG1000-4O(Continues)

- Key feature



3-Way Conference



T.38/T.30



4 FXO



TLS/SRTP



NGN/IMS

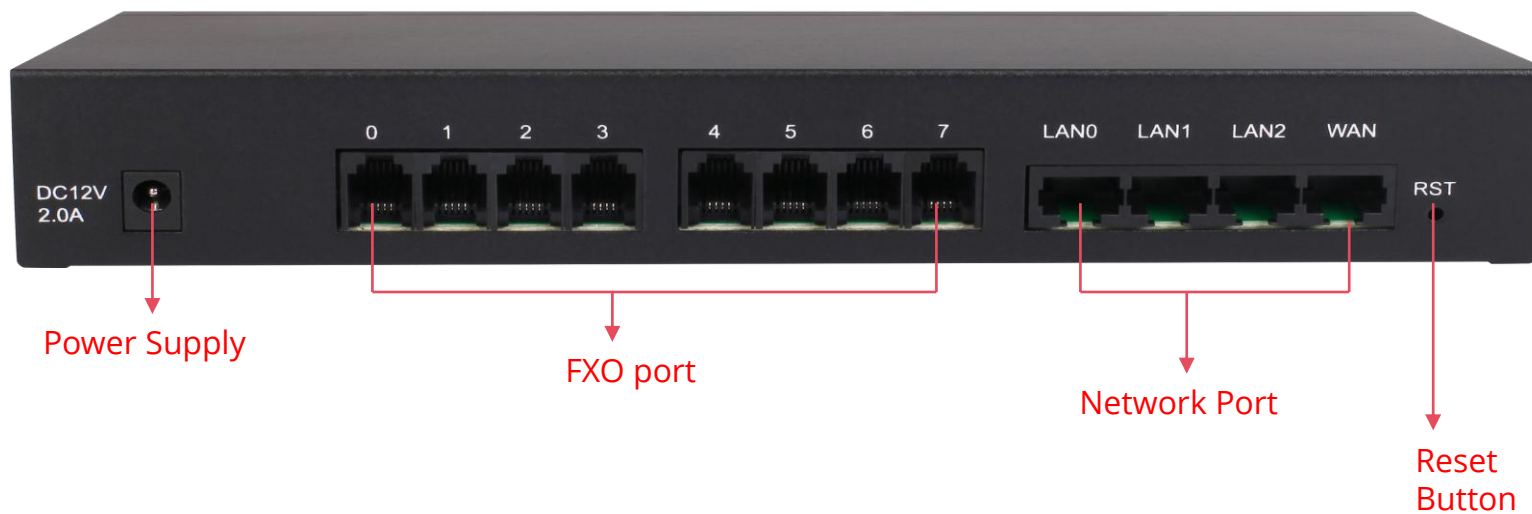
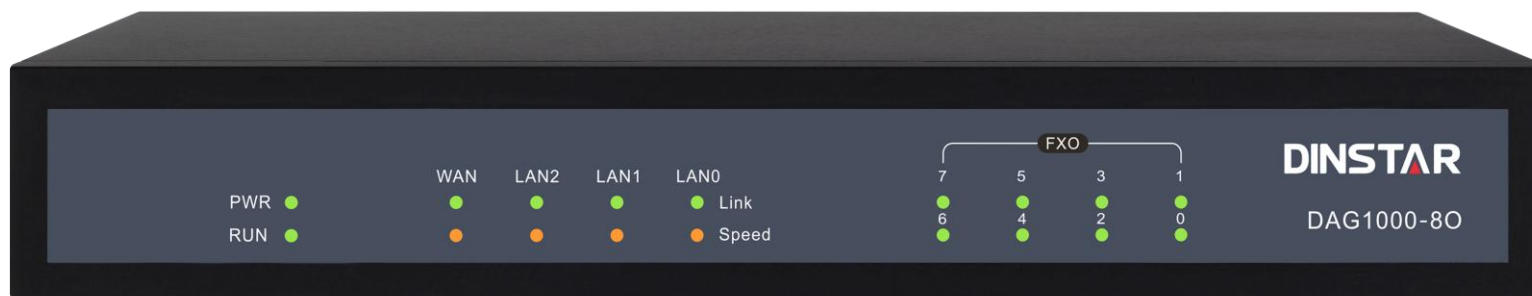


VLAN

- 4 FXO ports, 1 WAN, 2 LAN
- Support SIP, IMS
- T.38 Fax
- Flexible routing & Dial plan
- Interoperable with leading softswitches, IP-PBXs and SIP servers

DAG1000-80

- Appearance



DAG1000-80(Continues)

- Key feature



3-Way Conference



T.38/T.30



8 FXO



TLS/SRTP



NGN/IMS



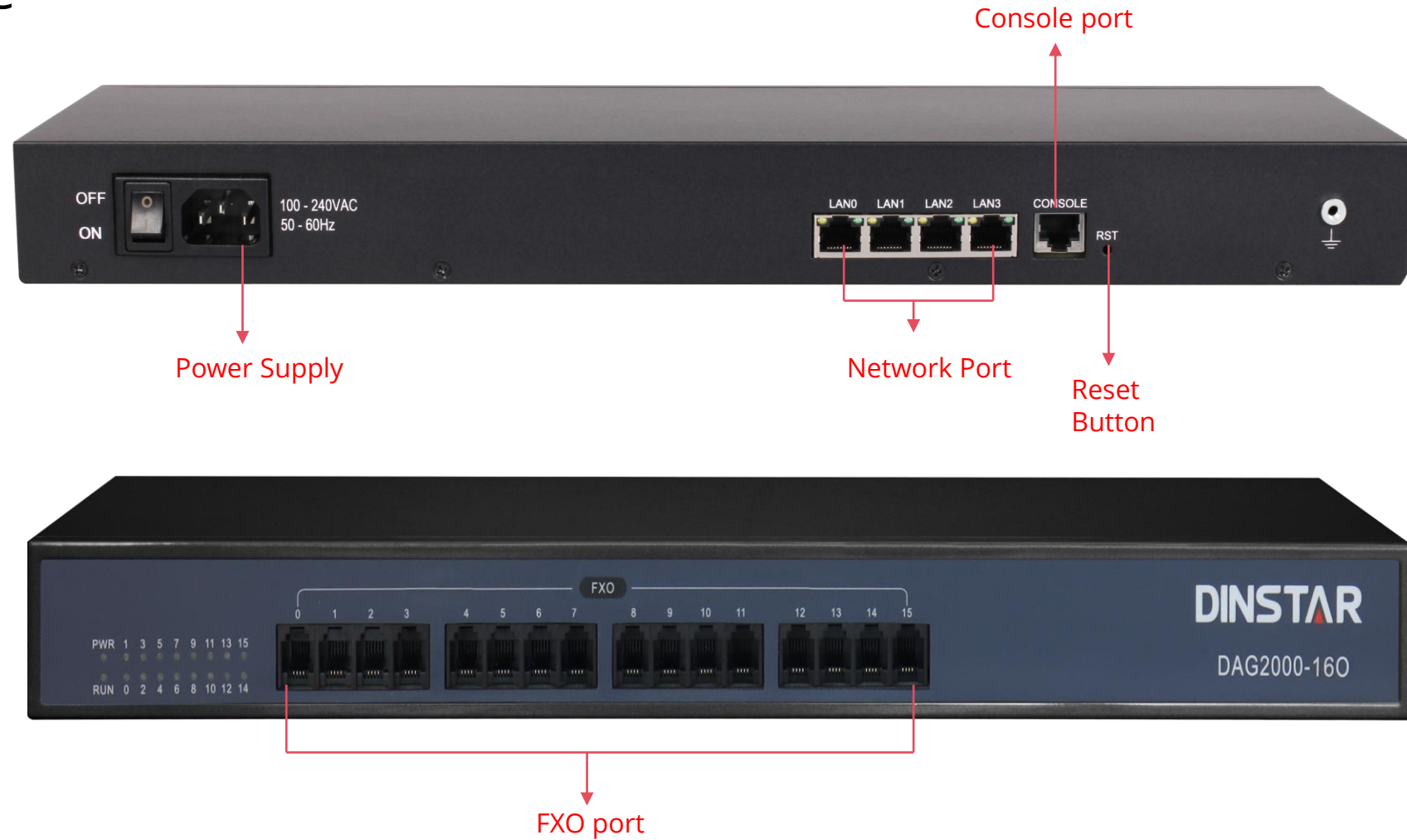
VLAN

- 8 FXO ports, 1 WAN, 2 LAN
- Support SIP, IMS
- T.38 Fax
- Flexible routing & Dial plan
- Interoperable with leading softswitches, IP PBXs and SIP servers

DAG1000-160

DINSTAR

- Appearance



DAG1000-16O(Continues)

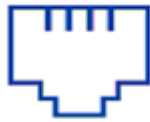
- Key feature



3-Way Conference



T.38/T.30



16 FXO



TLS/SRTP



NGN/IMS



VLAN

- 16 FXO ports, 3 LAN
- Support SIP, IMS
- T.38 Fax
- Flexible routing & Dial plan
- Interoperable with leading softswitches, IP-PBXs and SIP servers

DAG1000-20&40&80&160

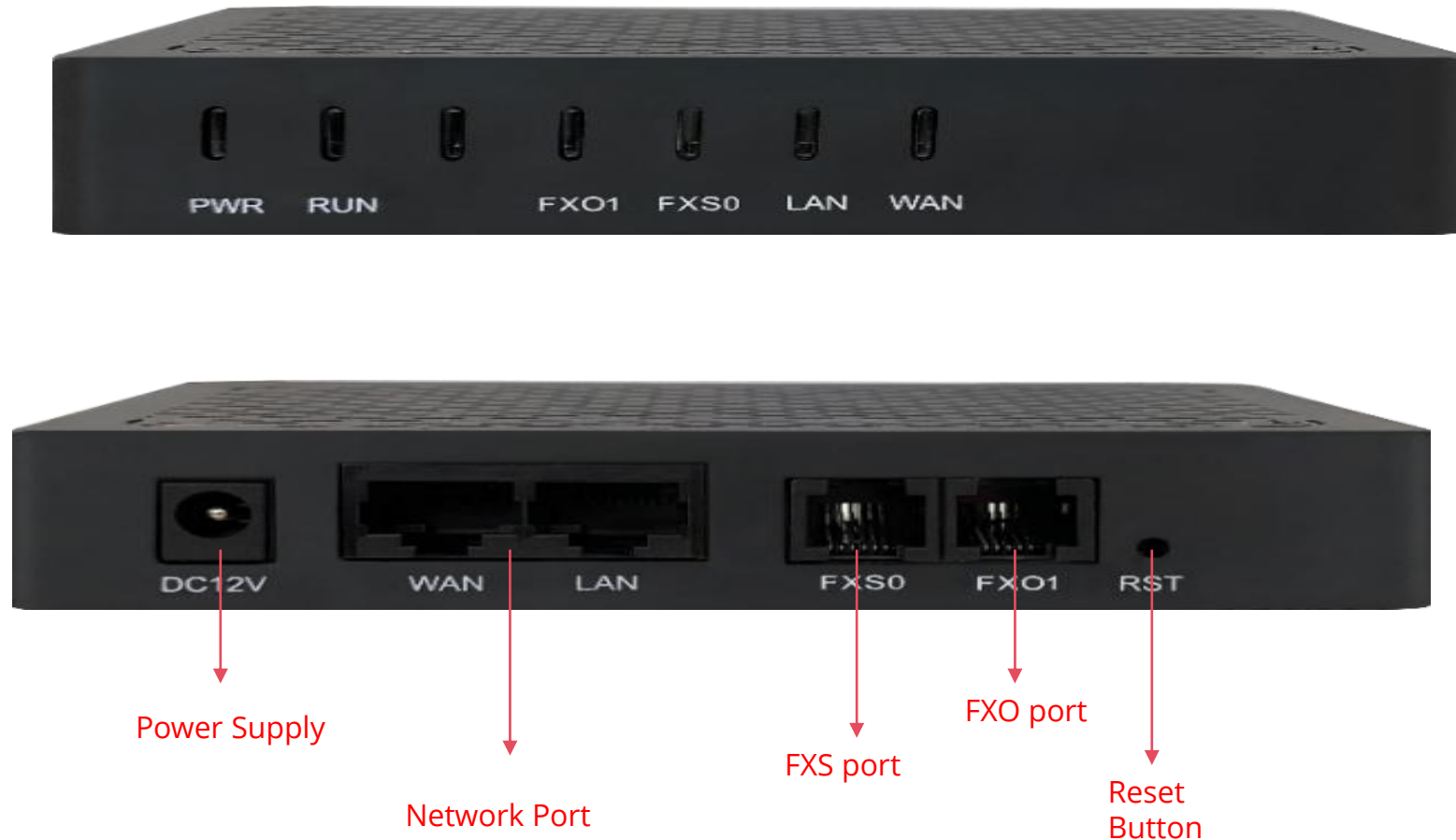
- The description of indicators

Indicator	Definition	Status	Description
PWR	Power Indicator	On	The gateway is powered on
		Off	The gateway is powered off or there is no power supply
RUN	Running Indicator	Slow Flashing	The gateway is running properly (Slow Flashing means the running indicator flashing for 2 seconds)
		Fast Flashing	SIP account is registered successfully (Fast Flashing means the running indicator flashing for 0.5 seconds)
		Off	The gateway is running improperly
FXO	FXO In-use Indicator	On	FXO port is currently occupied.
		Off	FXO Port is idle or faulty.
WAN/LAN	Network Link Indicator	Green Flashing	The gateway is properly connected to network.
		Off	The gateway is not connected to network or network connection is improper way.
	Network Speed Indicator	On	Work at 100Mbps.
		Off	Work at 10Mbps

DAG1000-1S10

DINSTAR

- Appearance



DAG1000-1S1O(Continues)

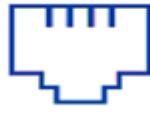
- Key feature



3-Way Conference



T.38/T.30



1 FXO&1 FXS



TLS/SRTP



NGN/IMS



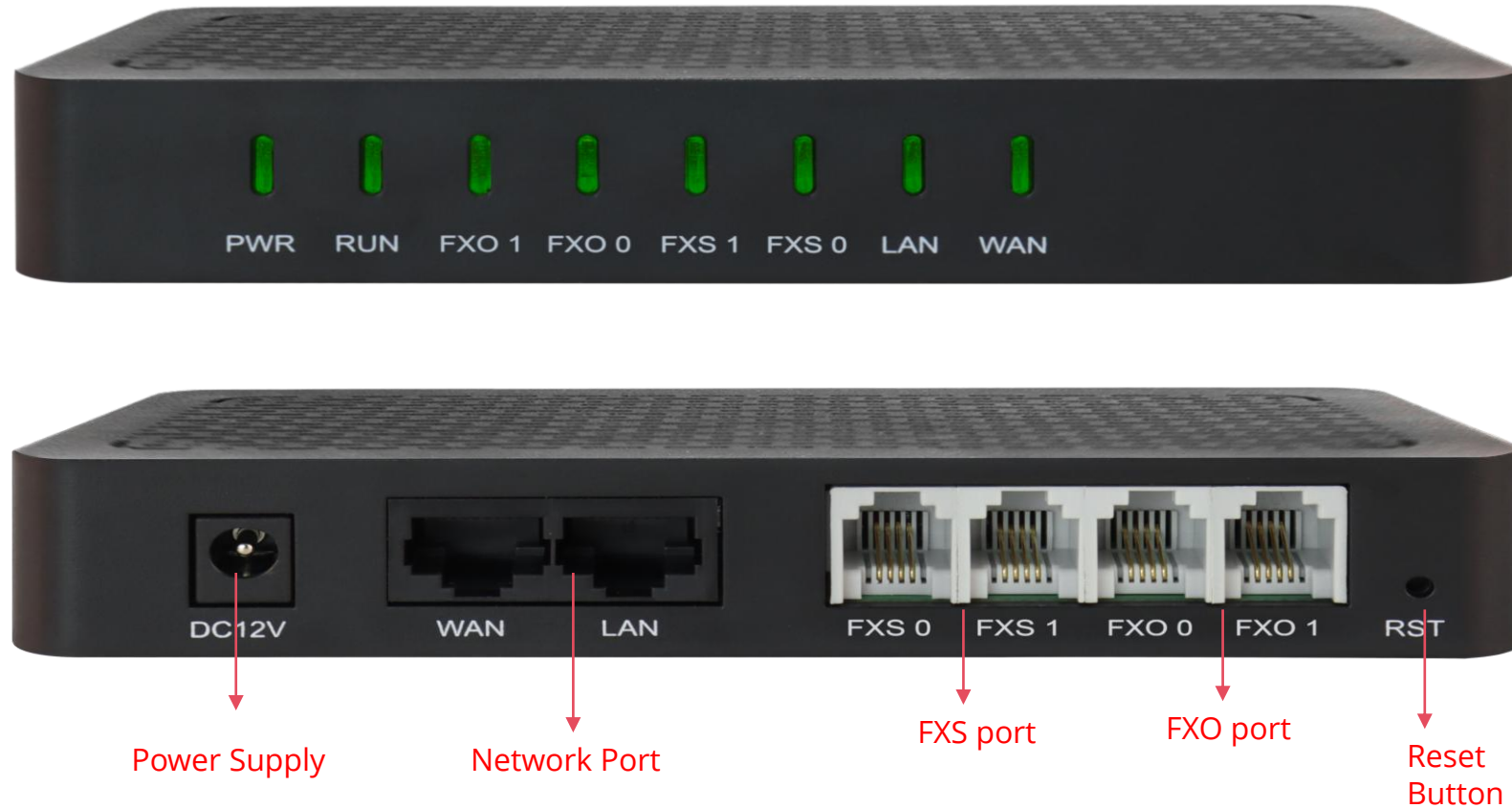
VLAN

- 1 FXS 1 FXO ports, 1 WAN, 1 LAN
- Power Failover
- IP/SIP Failover
- Support SIP, IMS
- T.38 Fax
- Flexible routing & Dial plan
- Interoperable with leading softswitches, IP-PBXs and SIP servers

DAG1000-2S20

DINSTAR

- Appearance



DAG1000-2S20(Continues)

DINSTAR

- Key feature



3-Way Conference



T.38/T.30



2 FXO&2 FXS



TLS/SRTP



NGN/IMS

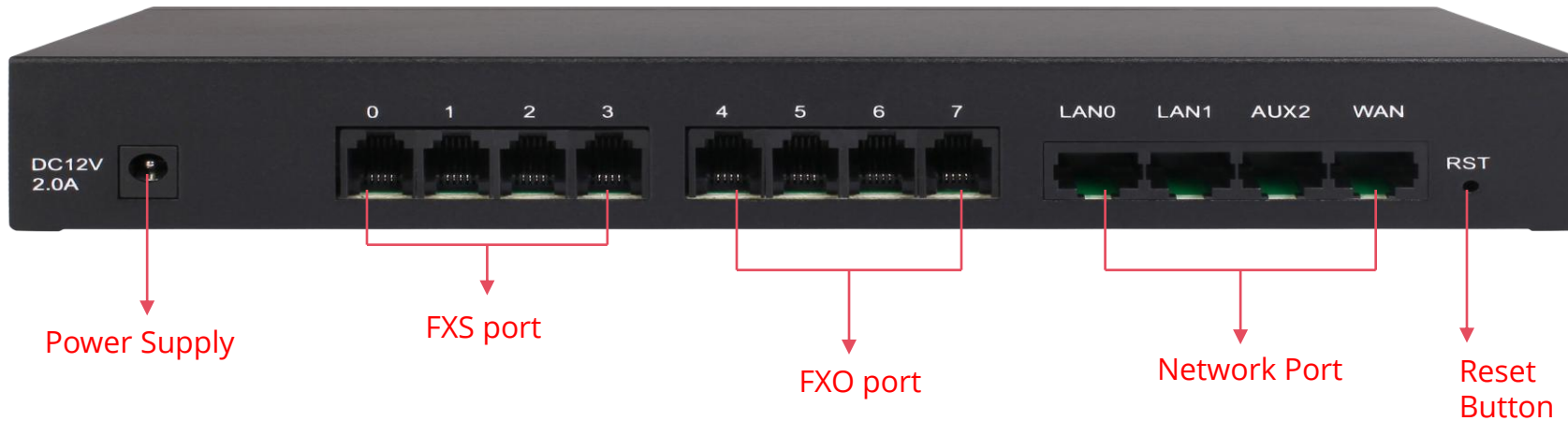
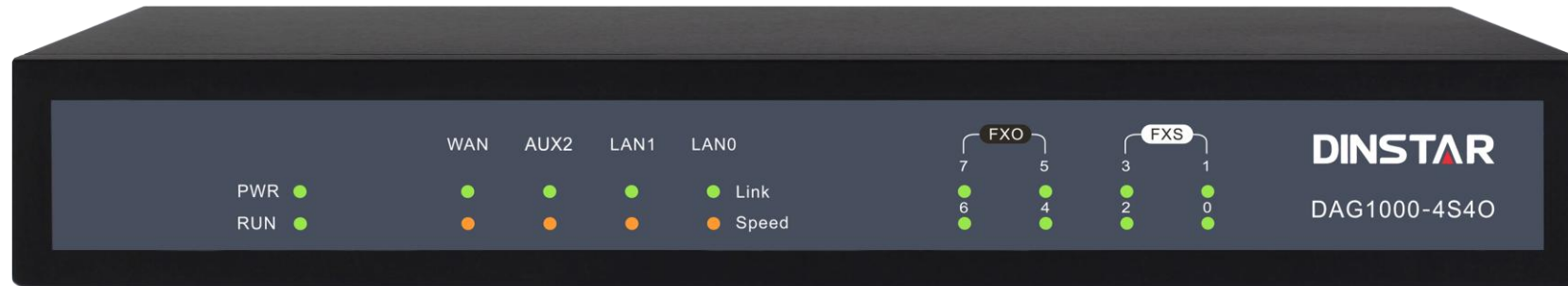


VLAN

- 2 FXS 2 FXO ports, 1 WAN, 1 LAN
- Power Failover
- IP/SIP Failover
- Support SIP, IMS
- T.38 Fax
- Flexible routing & Dial plan
- Interoperable with leading softswitches, IP-PBXs and SIP servers

DAG1000-4S40

- Appearance



DAG1000-4S4O(Continues)

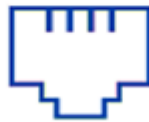
- Key feature



3-Way Conference



T.38/T.30



4 FXO/FXS



TLS/SRTP



NGN/IMS

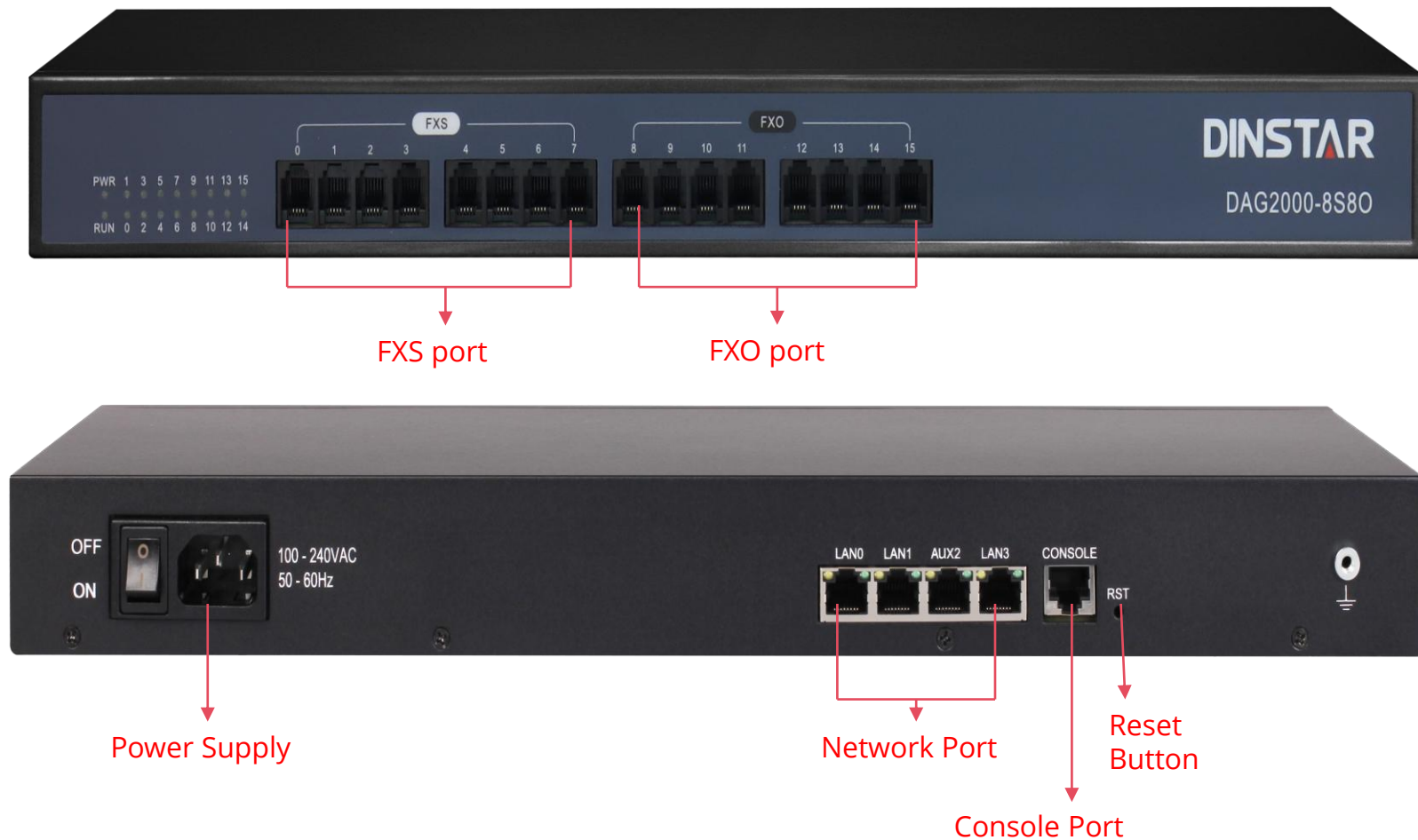


VLAN

- 4 FXS 4 FXO ports, 1 WAN, 2 LAN
- Power Failover
- IP/SIP Failover
- Support SIP, IMS
- T.38 Fax
- Flexible routing & Dial plan
- Interoperable with leading softswitches, IP-PBXs and SIP servers

DAG1000-8S80

- Appearance



DAG1000-8S8O(Continues)

- Key feature



3-Way Conference



T.38/T.30



8 FXO/FXS



TLS/SRTP



NGN/IMS



VLAN

- 8 FXS 8 FXO ports, 3 LAN
- Power Failover
- IP/SIP Failover
- Support SIP, IMS
- T.38 Fax
- Flexible routing & Dial plan
- Interoperable with leading softswitches, IP-PBXs and SIP servers

DAG1000-1S10&2S20&4S40&8S80



- The description of indicators



Indicator	Definition	Status	Description
PWR	Power Indicator	On	The gateway is powered on
		Off	The gateway is powered off or there is no power supply
RUN	Running Indicator	Slow Flashing	The gateway is running properly (Slow Flashing means the running indicator flashing for 2 seconds)
		Fast Flashing	SIP account is registered successfully (Fast Flashing means the running indicator flashing for 0.5 seconds)
		Off	The gateway is running improperly
FXS	Telephone In-use Indicator	On	FXS port is currently occupied by a call
		Off	FXS port is idle or faulty
FXO	FXO In-use Indicator	On	FXO port is currently occupied.
		Off	FXO Port is idle or faulty.
WAN/LAN	Network Link Indicator	Green Flashing	The gateway is properly connected to network.
		Off	The gateway is not connected to network or network connection is improper way.
	Network Speed Indicator	On	Work at 100Mbps.
		Off	Work at 10Mbps

Contents

- 1 About DAG(FXS*FXO)
- 2 DAG Introduce
- 3 DAG Application Scenario

DAG Network And Application

03



3.1 DAG Application Scenario



3.2 DAG Typical Networking

Application Scenarios

DINSTAR

- DAG applicable industry



Hospital



Hotel



Finance



Energy and Electric
Power



Education



Police

Typical Networking

- **Value**

Networking simple

Fast deployment, fast delivery

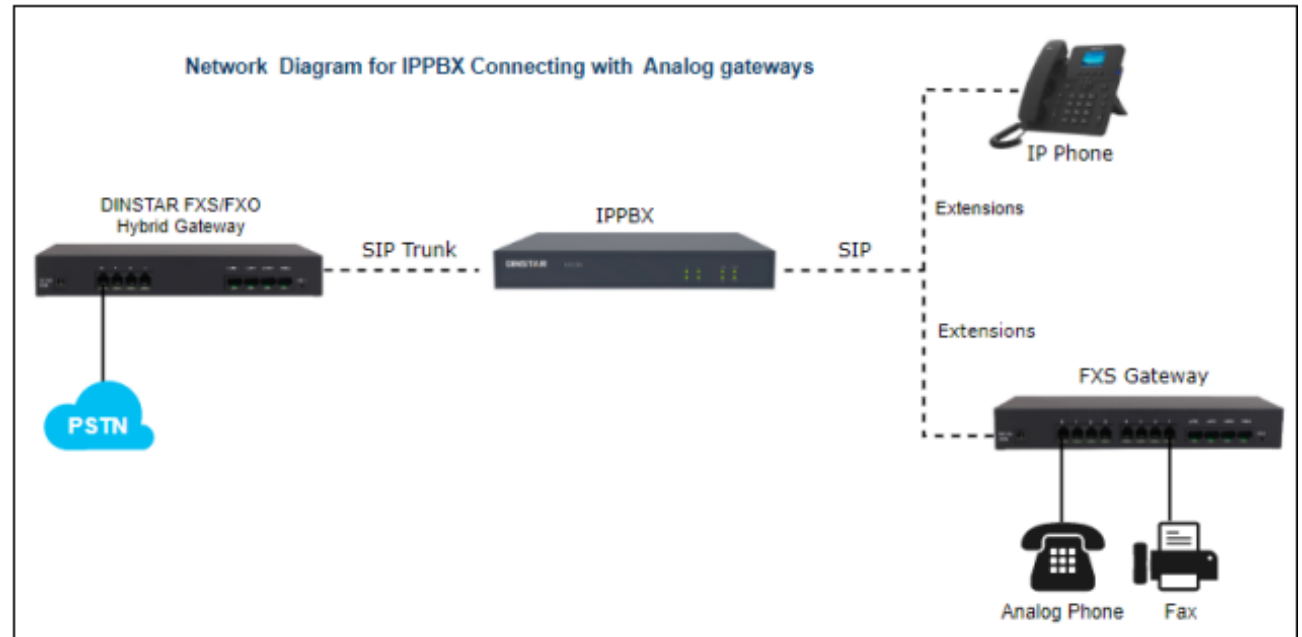
Easy maintenance and expansion

- **Scenario**

Decide by how many DAG port

- **Product**

IPPBX & DAG(FXS&FXO)



Summary

- This course we already learn:
 - What is DAG and why need DAG Phone
 - DAG main function and key feature
 - DAG product knowledge
 - DAG application scenario

Abbreviation

- DAG: Dinstar Analoge Gateway
- UDP: User Datagram Protocol
- SIP: Session Initiation Protocol
- TLS: Transport Layer Security
- VOIP: Voice over Internet Protocol



THANKS



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www.dinstar.com



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