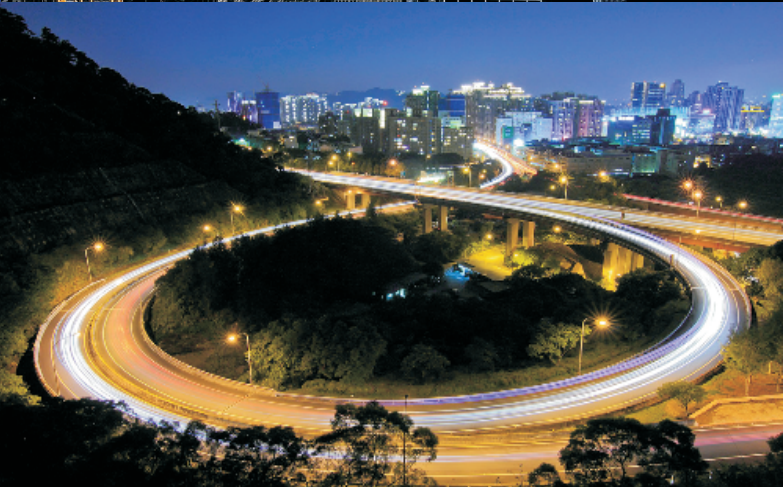


2020 PRODUCT GUIDE



- *Industrial Ethernet* • *Broadband Communication* • *LAN Extenders*
- *G.fast Dual band* • *Media Converters*

Extend beyond the 100m Ethernet distance limit

Commercial Grade Product



*Simple application for your business network:
Plug & play + CO & CPE Modem*

*High speed broadband communication:
VDSL2 & G.fast*



*Extend your network to various distance:
100m~3000m via copper pair*



NV-450 M/S

G.fast Master modem + G.fast /VDSL2/V35b Slave Modem

NV-450M/S is a managed G.fast point to point solution with four Gigabit LAN ports. It is compliant to ITU-T G.9700/9701 Standards and supports G.fast 106/212 dual wave profile, bandwidth is up to 1Gbps of symmetric data transmission and it is perfectly suitable for FTTPd/FTTN applications.

NV-450M/S is a cost effective solution that delivers high-speed Internet access to end-users over existing copper wire infrastructure, not only NV-450M/S support future-proof super Vectoring (G.fast) compatibility, NV-450S itself also support Vectoring(VDSL2) and super Vectoring(VDSL35b), and this solution is designed to meet the ISPs requirements to cover end users in different range of loop / areas .

Features

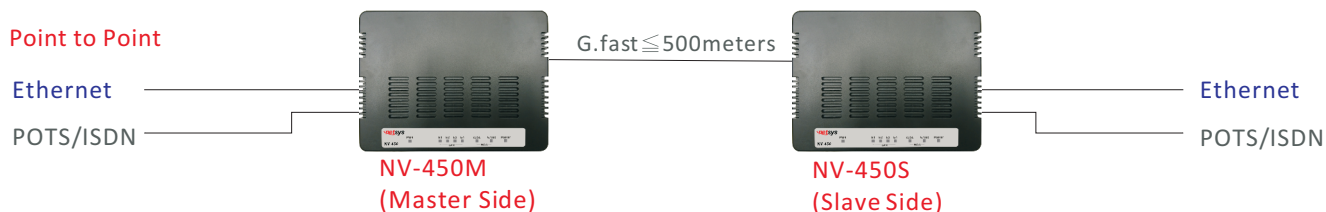
- Compliant with ITU-T G.9700/9701 G.fast Standards
- Support super Vectoring(NV-450S only)
- Support 17a/35b/106ab/212ab band profile(NV-450S)
- Support dual way profile 106a & 212a(NV-450M)
- Support High Bandwidth up to 1Gbps symmetric
- Support Router / bridge mode selection(NV-450S only)
- Support Jumbo frame(MTU) up to 1600 bytes
- Support SSH/SSL Security
- Master / Slave Mode selection by firmware upgrading
- Splitter on board
- RJ-11/Terminal block combo for line port
- Line port built-in surge protector
- Support Dual Firmware Image Backup
- Main Chipset : Intel

Specifications

Ethernet Interface	IEEE 802.3 10Base-T, 802.3u 100Base-TX, and 802.3ab 1000Base-TX 4x RJ-45 10/100/1000Mbps
Line Interface	1x RJ-11 for POTS/ISDN 1xRJ-11 /Terminal block RJ11/Terminal block combo for line port
Button	Reset Button (Factory Reset)
Indicators LED	Power LAN: Act/Link Line: Act/Link/xDSL/Master mode

USB Interface	2xUSB 3.0 Connectors
Routing (NV-450S only)	IP Multicast, IGMP Proxy, Snooping Static Routing IPv4, IPv6 forwarding DHCP Server/Relay/Client IPv4/IPv6 DNS Proxy and Relay, NTP Client
Input Power	DC 12V / 2A
Temperature	0~50° C (Operating), -20 ~70° C (Storage)
Humidity	10 - 90% non-condensing
Certification	CE, FCC, RoHS Compliant

Application



Ordering Information

Model Name	Description
NV-450M	G.fast Single Master Modem
NV-450S	G.fast /VDSL2/V35b Slave Modem Router

*Netsys reserves the right to change specifications without prior notice





NV-202

VDSL2 LAN extender

The NV-202 is low cost LAN extension solution using the G.993.2 VDSL2 standard technology and providing up to 100Mbps symmetric using only a single copper wire pair. Designed specifically for a LAN to LAN extension and supporting both symmetrical and asymmetrical transmission at up to 100/100Mbps within 300 meters and 5/1Mbps at 3000 meters, this is a perfect solution to extend LAN to buildings, hotels, hospitals or any location outside of the 100 meters reach of Ethernet UTP.

Features

- Cost effective bridge function to connect two Ethernet LANs
- 100/100Mbps @ 300m (984ft)
- 5/1 Mbps @ 3km (9842ft)
- Compact size and DIN rail support
- Selectable CO and CPE mode via DIP switch
- Selectable fast and interleaved mode
- Selectable target band plan
- Selectable target SNR margin 9dB or 6dB

Specifications

LAN Interface	Complies with IEEE 802.3 10Base-T and 802.3u 100Base-TX Connector: 2 x RJ-45 10/100Mbps MTU: 1536 bytes
VDSL2 Interface	Complies with ITU-T G993.2 Connector: RJ-11/Terminal block DMT Encoding/PTM Transmission On-board surge protection
4-position DIP Switch	Selectable CO or CPE mode Selectable Band plan Selectable target SNR Margin Selectable INP and interleave mode
MTBF	50,000 hrs

Indicators	LAN:Act/Link, Power VDSL2:Act/Link, Line Mode: CO/CPE
Power	DC 12V via AC switching adapter
Power Consumption	5W
Dimensions	95 x 110 x 27 mm (3.74" x 4.33" x 1.06")
Weight	About 0.34Kg
Temperature	0~50°C (Operating), -20~70°C (Storage)
Humidity	10 - 90% non-condensing
Certification	CE, FCC, RoHS Compliant

Application

Ethernet



NV-202

3Km



NV-202

Ethernet

Proper Installation

Train & Metro Stations 、 Boat and Submarine 、 Parking system 、 Weather station 、 Amusement park Farm 、 Jail & Oil Refinery 、 Telecom





NV-202P

VDSL2 Ethernet Extender with PoE

The NV-202P is low cost LAN extension solution using the G.993.2 VDSL2 standard technology and providing up to 100Mbps symmetric using only a single copper wire pair. Designed specifically for a LAN to LAN extension and supporting both symmetrical and asymmetrical transmission at up to 100/100Mbps within 300 meters and 5/1Mbps at 3000 meters, this is a perfect solution to extend LAN with PoE for IP Surveillance or PoE powered devices at any location outside of the 100 meters reach.

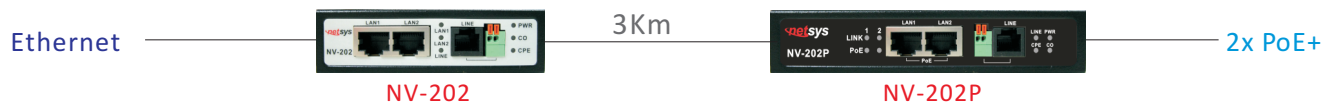
Features

- Cost effective bridge function to connect two PoE LANs
- Auto-detect IEEE 802.3af/at equipment
- Supports mid-span PoE mode
- Compact size and DIN rail support
- Selectable CO and CPE mode via DIP switch
- Selectable target band plan
- Selectable fast and interleaved mode
- Selectable target SNR margin 9dB or 6dB

Specifications

LAN Interface	Complies with IEEE 802.3 10Base-T 802.3u 100Base-TX, IEEE802.3af/at Connector: 2 x RJ-45 with PoE MTU: 1536 bytes	Indicators	LAN:Act/Link, PoE VDSL2: Act/Link, Line Mode: CO/CPE
VDSL2 Interface	Complies with ITU-T G993.2 Connector: RJ-11/Terminal block DMT Encoding/PTM Transmission On-board surge protection	Power	DC 48V via ACswitching adapter
4-position DIP Switch	Selectable CO or CPE mode Selectable target band plan Selectable target SNR Margin Selectable INP and interleave mode	Power Output	30W Maximum (power injector)
MTBF	50,000 hrs	Dimensions	137 x 100 x 27 mm (5.39" x 3.94" x 1.06")
		Weight	About 423g
		Temperature	0~50°C (Operating), -20 ~70°C (Storage)
		Humidity	10 - 90% non-condensing
		Certification	CE, FCC, RoHS Compliant

Application



Proper Installation

IP surveillance 、 Call center 、 Telecom

Sales@netsys.com.tw

*Netsys reserves the right to change specifications without prior notice



NV-202P

www.netsys.com.tw



NV-202M/S

Power over LAN extender

NV-202M/S solution works in pairs for point to point connectivity. Its features of NV-202M can transmit data and power over a single pair of copper wire up to 2000m(6,562feet). Without the need for local power supply, NV-202S can provide power budget up to 15 Watts to PoE ports. Operators are able to deploy PoE devices in any locations, installing security IP surveillance, wireless access point security / VOIP, or access control systems at any place where you have basic wire connectivity.

Features

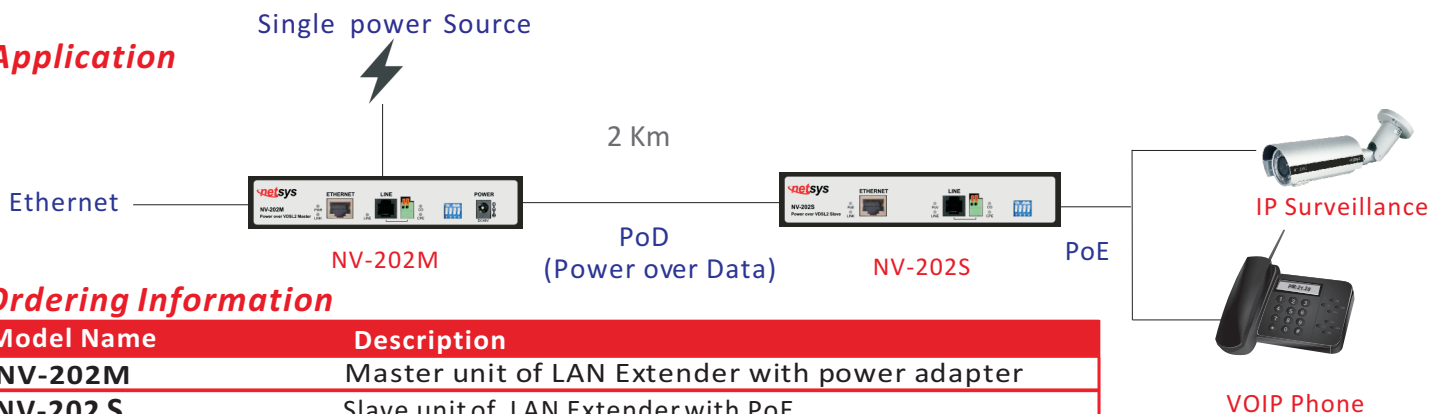
- Complies with IEEE802.3at PoE
- Supports terminal block
- Metal case and DIN rail (optional)
- Wall-Mounting
- Built-in surge arrester for line port
- Fanless design
- Combine data and power over single pair of twisted phone wire
- Selectable CO and CPE mode via DIP switch
- Selectable INP/SNRM
- Selectable interleaved delay time
- OAP/OVP/OTP/power short circuit protection
And revise polarity auto adjustment

Specifications

Interface	1 x RJ-11 for single pair VDSL line port 1 x Terminal block for VDSL line port 1 x RJ-45 PoE / Ethernet or LAN port
VDSL2 Interface	Complies with ITU-T G993.2 DMT Encoding/PTM Transmission On-board surge protection
4-position DIP Switch	Selectable CO or CPE mode Selectable target band plan Selectable target SNR Margin Selectable INP and interleave mode
Certification	CE, FCC, RoHS Compliant

Indicators	Power/Remote power for system Link/Active for Ethernet port PoV: Link for Line port
Power	DC 48V via AC switching adapter
Dimensions	NV-202M: 169 x 122 x 35mm (6.65" x 4.8" x 1.38") NV-202S: 169 x 115 x 35mm (6.65" x 4.53" x 1.38")
Gross Weight	Kit about 2.35 Kg (include packing)
Temperature	-40~55°C (Operating), -20~70°C (Storage)
Humidity	10 - 90% non-condensing

Application



Ordering Information

Model Name	Description
NV-202M	Master unit of LAN Extender with power adapter
NV-202S	Slave unit of LAN Extender with PoE

Proper Installation

IP surveillance 、 Call center 、 Outdoor camps

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*Netsys reserves the right to change specifications without prior notice



NV-202M/S

www.netsys.com.tw



NV-700L

Managed Single Master/Slave LAN Extender

NV-700L is a Managed single Master /Slave LAN Extender, compliant to ITU-T G.993.2 standards. It supports CO/CPE side bridge mode and long distance transmission up to 2.5km.

The proper applications are military training systems、train station、MRT、weather station、farm、ship、auto control systems、IP Surveillance、amusement park、parking system.

Features

- Adopts ARM Cortex A9 dual-core processor
- Supports http/https web management
- Supports Master/Slave Mode selectable by Web config
- Supports 8 bands selectable
- Supports USB 2.0 for Dongle device
- Supports G.998.4 G.INP
- On board surge protection for Line port
- Supports SNMP V1/V2
- Supports Jumbo frame up to 2k
- Supports 8 queue MFC/ DSCP both type
- Supports SSL/ SSH Security
- Supports IPV4/ IPV6 address
- Supports configuration backup and restore
- Supports Dual Firmware Image Backup
- Supports TR-069
- VLAN Tag pass through
- Mac Address based filtering
- Supports IGMP snooping V2/V3

Specifications

Physical Interface	IEEE 802.3 10Base-T and 802.3u 100Base-TX 4 x RJ-45 10/100Mbps 1 x RJ-11 Line port 1 x RJ-11 POTS/ISDN phone port 1 x USB 2.0
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VDSL2 Interface	Complies with ITU-T G993.2 Connector: RJ-11 On board POTS/ISDN splitter On board surge protection
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Indicators	LAN: Act/Link, Power; VDSL2: Link Mode: Master/Slave LED
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Certification	CE, FCC, RoHS Compliant
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IP address QOS	IPV4 / IPV6 8 queue MFC / DSCP 802.1P VLAN priority
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Security	SSL/SSH/TR069
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Power	DC 12V
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Dimensions	184 x 146 x 40 mm (7.2" x 5.74" x 1.57")
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Weight	About 0.4kg
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Temperature	0~50°C(Operating), -20~70°C(Storage)
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Humidity	10 - 90% non-condensing
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Application

Point to Point



sales@netsys.com.tw

*Netsys reserves the right to change specifications without prior notice



NV-700L

www.netsys.com.tw



NV-600A

ADSL2+/ VDSL2 Modem Router

NV-600A is a managed VDSL2 CPE router equipped with four Gigabit LAN ports. It is compliant to ITU-T G.993.2 and G.993.5 standards and supports VDSL2 30a profile that features 100Mbps of symmetric data and it is perfectly suitable for triple-play applications. NV-600A is a cost effective solution that delivers high-speed Internet access to end-users over existing copper wire infrastructure and is designed to meet the ISPs requirements with future proof Vectoring and ADSL2+ compatibility to cover end users in different loop range areas.

Features

- Supports G.993.5 Vectoring and ADSL2+
- Interoperable with major VDSL2 chipsets
- Supports up to VDSL2 profile 30a
- Supports up to 100 Mbps symmetric
- Supports Dying Gasp
- Supports SNMP v1/ v2c /v3
- Supports 802.1q VLAN tagging
- Configuration backup and restoration
- Security protection with firewall
- Supports Router and Bridge mode
- Supports Dual Firmware Image Backup

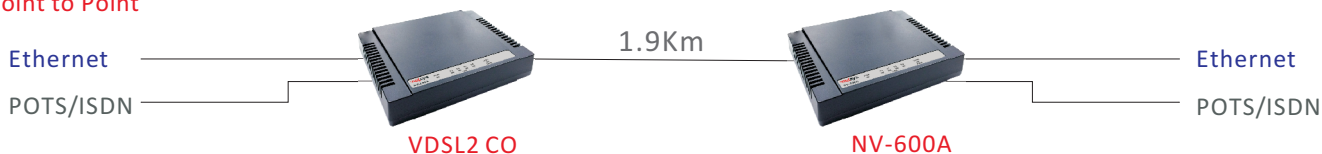
Specifications

Physical Interface	IEEE 802.3 10Base-T, 802.3u 100Base-TX, and 802.3ab 1000Base-TX 4x RJ-45 10/100/1000Mbps MTU: 1680 bytes (Jumbo frame) 1x RJ-11 for POTS/ISDN Reset Button (Factory Reset)
VDSL2 Interface	Complies with ITU-T G993.2, G993.5 Connector: RJ-11/Terminal block PTM/ATM Transmission On-board surge protection
Indicators	LAN: Act/Link, Power; VDSL2: Act/Link
QoS	8 queues MFC/DSCP 802.1p VLAN priority

Routing	IP Multicast, IGMP Proxy, Snooping Static Routing IPv4, IPv6 forwarding DHCP Server/Relay/Client IPv4/IPv6 DNS Proxy and Relay, NTP Client
Firewall	IPv6 Firewall Packet, URL filtering Parental Control, DMZ Host
Power	DC 12V
Dimensions	184 x 146 x 40 mm (7.2" x 5.74" x 1.57")
Temperature	0~50°C (Operating), -20~70°C (Storage)
Humidity	10 - 90% non-condensing
Certification	CE, FCC, RoHS Compliant

Application

Point to Point





NV-720

ADSL2+/VDSL2 Wi-Fi Modem Router

NV-720 is a VDSL2 802.11b/g/n/ac Wi-Fi router. It is compliant to ITU-T G.993.2 standards and Auto-following CO side Band plan & Band profile. With built-in 802.11ac technology, it can deliver Wi-Fi speeds up to 867Mbps and is perfectly suitable for triple-play applications. NV-720 is designed to meet the ISPs requirements with future proof Vectoring and ADSL2+ compatibility to cover end users in different loop range areas.

Features

- Adopts ARM Cortex A9 dual-core processor
- Supports G.993.5 Vectoring
- Supports 802.11 b/g/n/ac wireless
- Supports Wi-Fi Protected Setup (WPS)
- Supports Dying Gasp
- Support SSL/SSH Security
- Supports TR-069
- Supports G.998.4 G.INP
- Support Router and Bridge mode
- Support dual band 2T2R MIMO (NV-720D)
- Supports 802.1q VLAN tagging

Specifications

Physical Interface	IEEE 802.3 10Base-T, 802.3u 100Base-TX 4 x RJ-45 10/100 Mbps 1x RJ-11 Line port Antennas: 2 x 2dBi Hidden Antennas: 2 x 2dBi (NV-720D only) WPS Push button Reset Button (Factory Reset) 1 x USB2.0
VDSL2 Interface	Complies with ITU-T G993.2 Connector: RJ-11 PTM/ATM Transmission On-board surge protection
Indicators	LAN: Act/Link, Power VDSL2: Link/WAN, WLAN, WPS

Routing	IP Multicast, IGMP Proxy, Snooping Static Routing IPv4, IPv6 forwarding DHCP Server/Relay/Client IPv4/IPv6 DNS Proxy and Relay, NTP Client
Firewall	IPv6 Firewall Packet, URL filtering Parental Control, DMZ Host
QoS	CBR, rt-VBR, nrt-VBR, UBR 802.1p VLAN priority
Power	DC 12V
Dimensions	184 x 146 x 40 mm (7.2"x5.74"x1.57")
Temperature	0~50°C (operating), -20~70°C (storage)
Humidity	10 - 90% non-condensing
Certification	CE, FCC, RoHS Compliant

Application



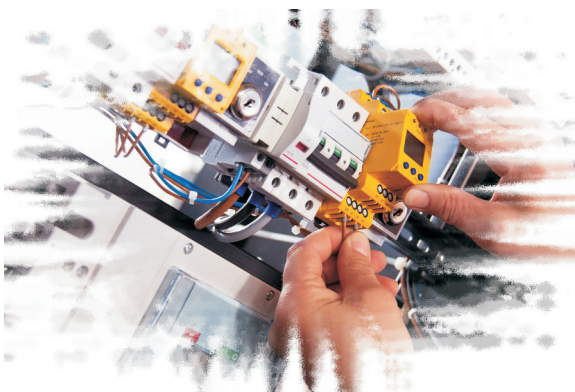
Ordering Information

Model Name	Description
NV-720R	ADSL2+/VDSL2 Modem Router
NV-720D	ADSL2+/VDSL2 Wi-Fi 11ac Modem Router
NV-720S	ADSL2+/VDSL2 Wi-Fi 11n Modem Router
NV-720I	ADSL2+/VDSL2 Wi-Fi with VoIP IAD



Industrial Grade Product

Broadband communication for harsh environment : IP 30 metal case & -20°C ~ -70°C operation temperature



**Good electrical reliability:
Surge protection & Redundant DC power input**

**Easily application for all industry:
Din-rail wall mount & Web/DIP switch config**





NV-600AI

Industrial ADSL2+/VDSL2 Router

NV-600AI is an Industrial VDSL2 router equipped with four Gigabit LAN ports. It is compliant to ITU-T G.993.2 and G.993.5 standards and supports VDSL2 profile 30a that features 100Mbps of symmetric data. NV-600AI is perfectly suitable for triple-play applications. Housed in metal DIN rail enclosures, these routers are designed for harsh environments, such as industrial networking and utility market applications.

Features

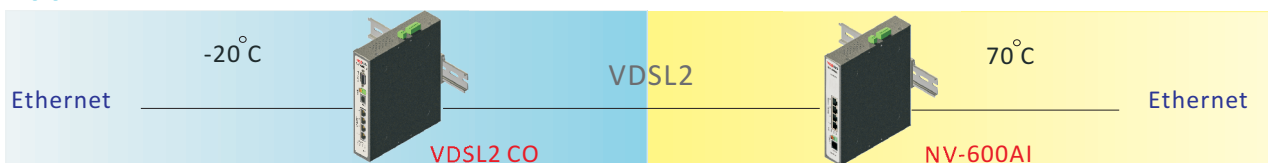
- Supports G.993.5 Vectoring and ADSL2+
- Interoperable with major VDSL2 chipsets
- Supports up to VDSL2 profile 30a
- Supports up to 100 Mbps symmetric
- Supports Dying Gasp
- Supports SNMP v1/ v2c /v3
- Redundant dual DC input power 12~48VDC
- Wide operating temperature -20~70°C
- Supports power failure alarm by relay
- IP 30 metal housing and DIN rail support
- Supports Dual Firmware Image Backup
- Supports 802.1q VLAN tagging

Specifications

Physical Interface	IEEE 802.3 10Base-T, 802.3u 100Base-TX, and 802.3ab 1000Base-TX 4x RJ-45 10/100/1000Mbps MTU: 1680 bytes (Jumbo frame) Reset Button (Factory Reset)
VDSL2 Interface	Complies with ITU-T G993.2, G993.5 Connector: RJ-11/Terminal block PTM / ATM Transmission On-board surge protection
Indicators	LAN: Act/Link, Power VDSL2: Link
QoS	8 queues MFC/DSCP 802.1p VLAN priority

Routing	IP Multicast, IGMP Proxy, Snooping Static Routing IPv4, IPv6 forwarding DHCP Server/Relay/Client IPv4/IPv6 DNS Proxy and Relay, NTP Client
Firewall	IPv6 Firewall Packet, URL filtering Parental Control, DMZ Host
Power Supply	Redundant dual DC input power 12~48V (Removable Terminal Block)
Dimensions	182 x 142 x 35.5 mm (7.16" x 5.59" x 1.39")
Weight	About 0.79Kg
Temperature	-20 ~70°C (Operating), -40 ~70°C (Storage)
Humidity	5 - 95 % non-condensing
Certification	CE, FCC, RoHS Compliant

Application



Proper Installation

Train & Metro Stations 、 Boat and Submarine 、 Military use 、 Military Training System 、 Parking system
Weather Station 、 Amusement park 、 Farm 、 Jail & Oil Refinery 、 Telecom





NV-500

Industrial VDSL2 LAN extender

The NV-500 is industrial LAN extension solution using the G.993.2 VDSL2 standard technology and providing up to 100Mbps symmetric put using only a single copper wire pair that provides stable and reliable Ethernet transmission. Housed in metal DIN rail enclosures, these extenders are designed for harsh environments, such as industrial networking, intelligent transportation systems (ITS) and are also suitable for many military and utility market applications where environmental conditions exceed commercial product specifications. Wide operating temperature range models (-20 to 70°C) fulfill the special needs of industrial automation applications.

Features

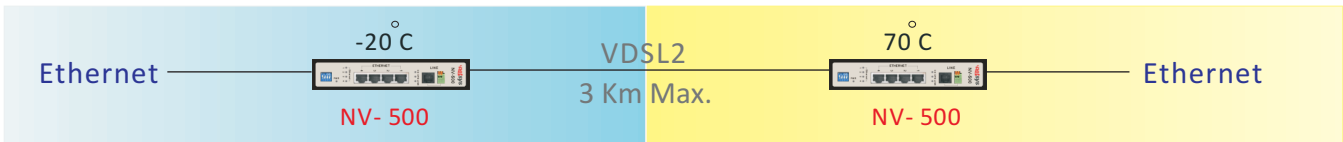
- Redundant dual DC input power 12~48VDC
- Wide operating temperature -20~70°C
- Supports power failure alarm by relay
- IP30 metal housing and DIN rail support
- Selectable CO and CPE mode via DIP switch
- Selectable fast and interleaved mode
- Selectable target band plan
- Selectable target SNR margin 9dB or 6dB

Specifications

LAN Interface	Complies with IEEE 802.3 10Base-T and 802.3u 100Base-TX Connector: 4 x RJ-45 10/100 Mbps MTU: 1536 bytes
VDSL2 Interface	Complies with ITU-T G993.2 Connector: RJ-11/Terminal block DMT Encoding/PTM Transmission On-board surge protection
4-position DIP Switch	Selectable CO or CPE mode Selectable Band plan Selectable target SNR Margin Selectable INP and interleave mode
MTBF	50,000 hrs

Indicators	LAN: Act/Link, Power VDSL2:Act/Link, Line Mode: CO/CPE
Power Supply	Redundant dual DC input power 12~48V (Removable Terminal Block)
Consumption	6W
Dimensions	170 x 121 x 35 mm (6.7" x 4.76" x 1.37")
Weight	About 0.63Kg
Temperature	-20~70°C (Operating), -40~70°C (Storage)
Humidity	5 - 95% non-condensing
Certification	CE, FCC, RoHS Compliant

Application



Proper Installation

Train&Metro Stations 、 Boat and Submarine 、 Military use 、 Military Training System 、 Parking system
Weather Station 、 Amusement park 、 Farm 、 Jail & Oil Refinery 、 Telecom





NV-7001

Managed Industrial VDSL2 CO/CPE Modem

The NV-7001 is a managed industrial Ethernet extension solution using the G.993.2 VDSL2 standard technology and providing up to 100Mbps symmetric using only a single copper wire pair that provides stable and reliable Ethernet transmission. Housed in metal DIN rail enclosures, these extenders are designed for harsh environments, such as industrial networking, intelligent transportation systems (ITS) and are also suitable for many military and utility market applications where environmental conditions exceed commercial product specifications. Wide operating temperature range models (-20 to 70°C) fulfill the special needs of industrial automation applications.

Features

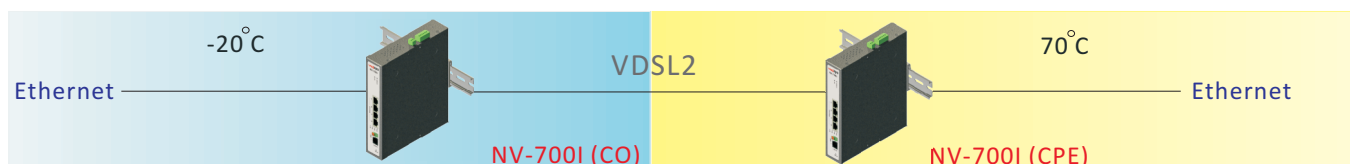
- Dual DC input power Redundant 12~48VDC
- Wide operating temperature -20~70°C
- Adopts ARM Cortex A9 dual-core processor
- IP30 metal housing and DIN rail support
- Supports SNMP V1/V2
- Supports RJ11 & Terminal Block combo port
- Supports Master/Slave Mode selectable by Web config
- Supports Jumbo frame up to 2k
- Supports up to VDSL2 profile 30a
- Supports G.998.4 G.INP
- Supports IPV4/ IPV6 address
- Supports Dual Firmware Image Backup
- Supports on board surge protection
- Supports IGMP snooping V2/ V3
- Support SSL/ SSH/ TR-069

Specifications

Standards	IEEE802.3 10Base-T IEEE 802.3u 100Base-TX Complies with ITU-T G993.2
Physical Interface	4x RJ-45 10/100Mbps 1x RJ-11 Line port 1x Terminal Block
Indicators	LAN: Power, Act/ Link VDSL2: Link Mode: Master / Slave LED
Certification	CE, FCC, RoHS Compliant
Humidity	5 - 95% non-condensing

IP address QOS	IPV4 / IPV 6 8 queue MFC / DSCP 802.1P VLAN priority
Security	SSL / SSH / TR069
Power supply	Dual DC input power Redundant 12~48V (Removable Terminal Block)
Dimensions	182x142x35.5 mm (7.16"x5.59"x1.39")
Weight	About 0.8kg
Temperature	-20~70°C(Operating), -40~70°C(Storage)

Application





National Enhance Technology Corp. - NETSYS

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