
**Introduction
to
VDSL System**

OF Networks Co., Ltd.

1. Out-line of VDSL System



Very-high-speed Digital Subscriber Line

OFN released industry fastest VDSL System

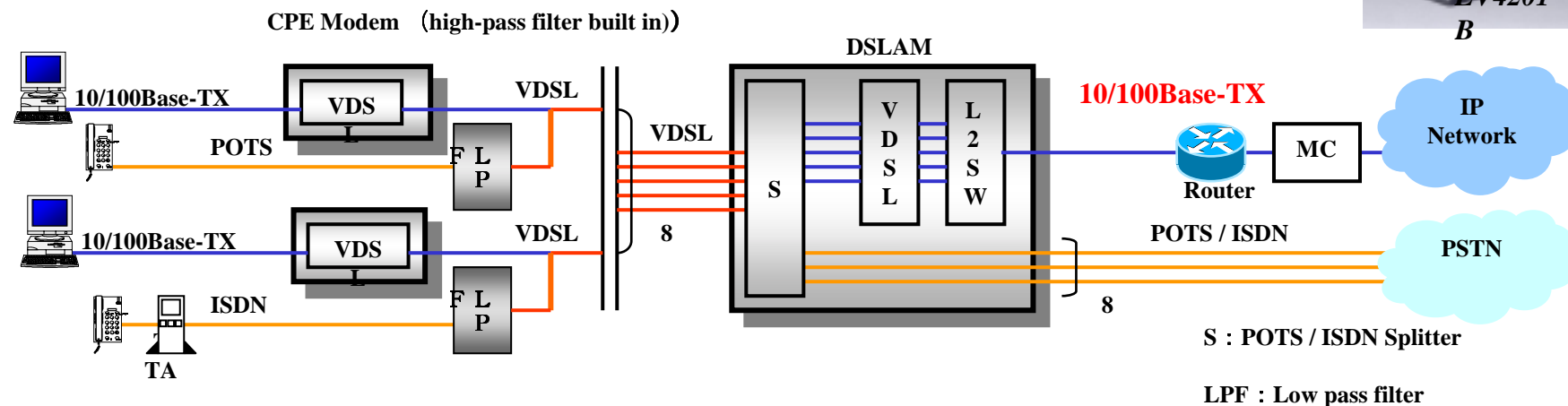
- ◆ High Speed Data Transmission at 57Mbps
- ◆ Concurrent Transmission of both Voice and VDSL Signals
- ◆ Concurrent Transmission of both ISDN and VDSL Signals
- ◆ Stacking Connection Possible
- ◆ 8-ports and 16-ports System Selectable according to System size required



EV4208S



EV4201
B



2. Features of VDSL System



◆ VDSL System allows fastest data transmission among x DSL technologies

57Mbps (4band-VDSL) > 15Mbps (2band-VDSL) > 12 Mbps (ADSL) > 8Mbps (Home PNA)

Note : VDSL system is not used for long distance transmission (over 1Km) as ADSL System

◆ VDSL System features the following as the system can use existing PSTN Networks:

➤ Low-cost construction of networks within a short time of period

LAN Network can be easily established in a short time of period at existing multi-tenant office buildings, apartment complex, hotels, where additional building works are not so easy after building construction

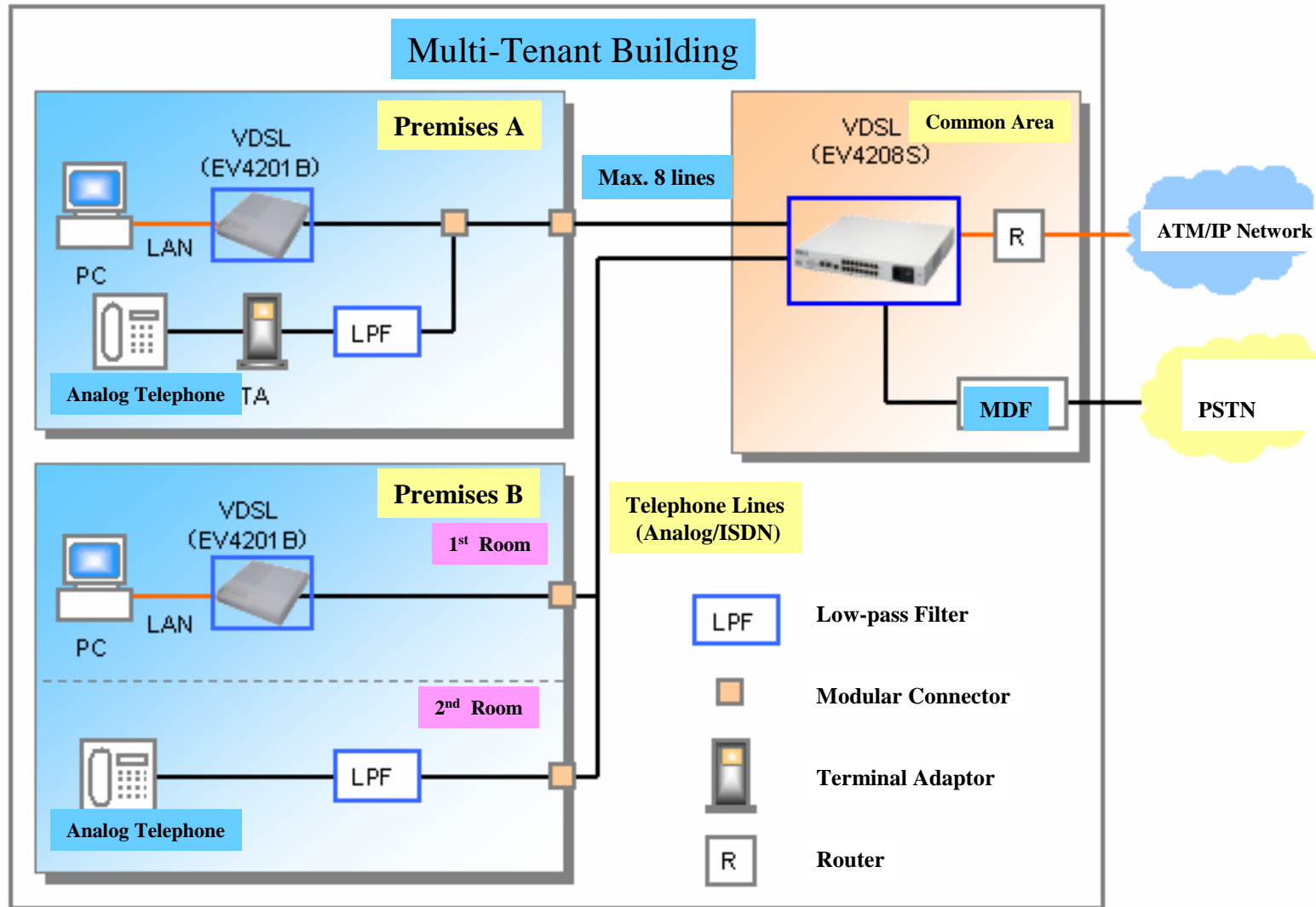
➤ Overlaying Voice Signals (POTS)

As VDSL System uses higher frequency (over 640Khz) than that for voice signal (4Khz), both voice and VDSL signals can be concurrently run on the telephone. Therefore, telephony and internet access services can be used at the same time.

➤ Overlaying ISDN Signals ISDN

As both ADSL and ISDN services use the same frequency band, both signals cannot be run at the same time. However, VDSL system uses higher frequency band than that for ISDN services. And therefore, both VDSL and ISDN signals can be run at the same time and no service changes are needed from ISDN services to analogue telephony services

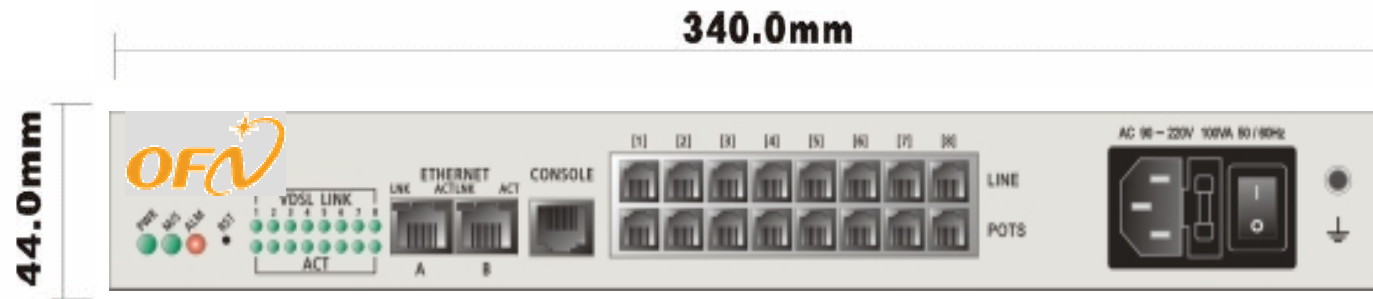
3. Application Example of VDSL



4. External View of VDSL DSLAM System



- Front Panel : External view below
- Access Method: Front Access
- Height : 1U



EV4208S VDSL DSLAM (8port type)

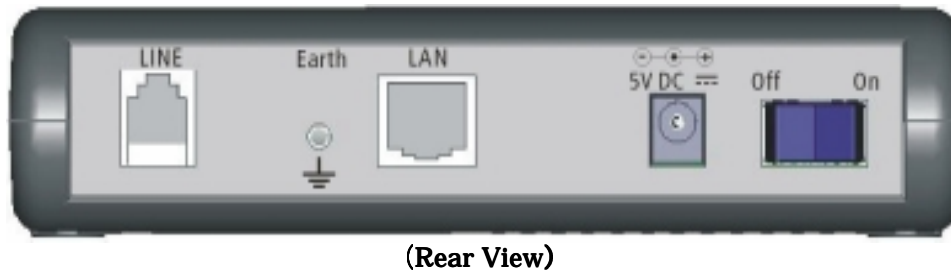
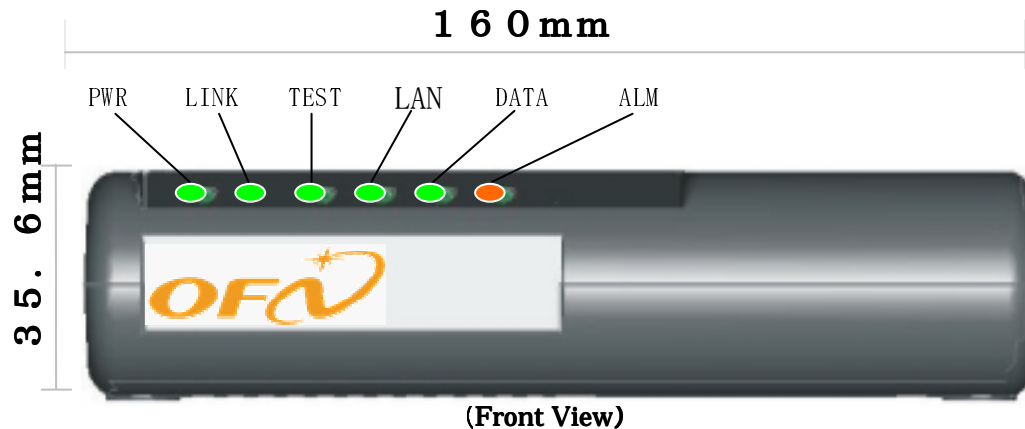
■ DSLAM LEDs

- VDSL_LINK : shows link status of VDSL System
- VDSL_ACT : shows data transmission status of VDSL System
- Ethernet_LINK : shows LINK status of LAN
- Ethernet_ACT : shows data transmission status of LAN
- M/S : shows Master/Slave stack status
- PWR : shows power supply on/off
- ALM : shows system alarm conditions

5. External View of VDSL Modem



External View



EV4201B VDSL MODEM

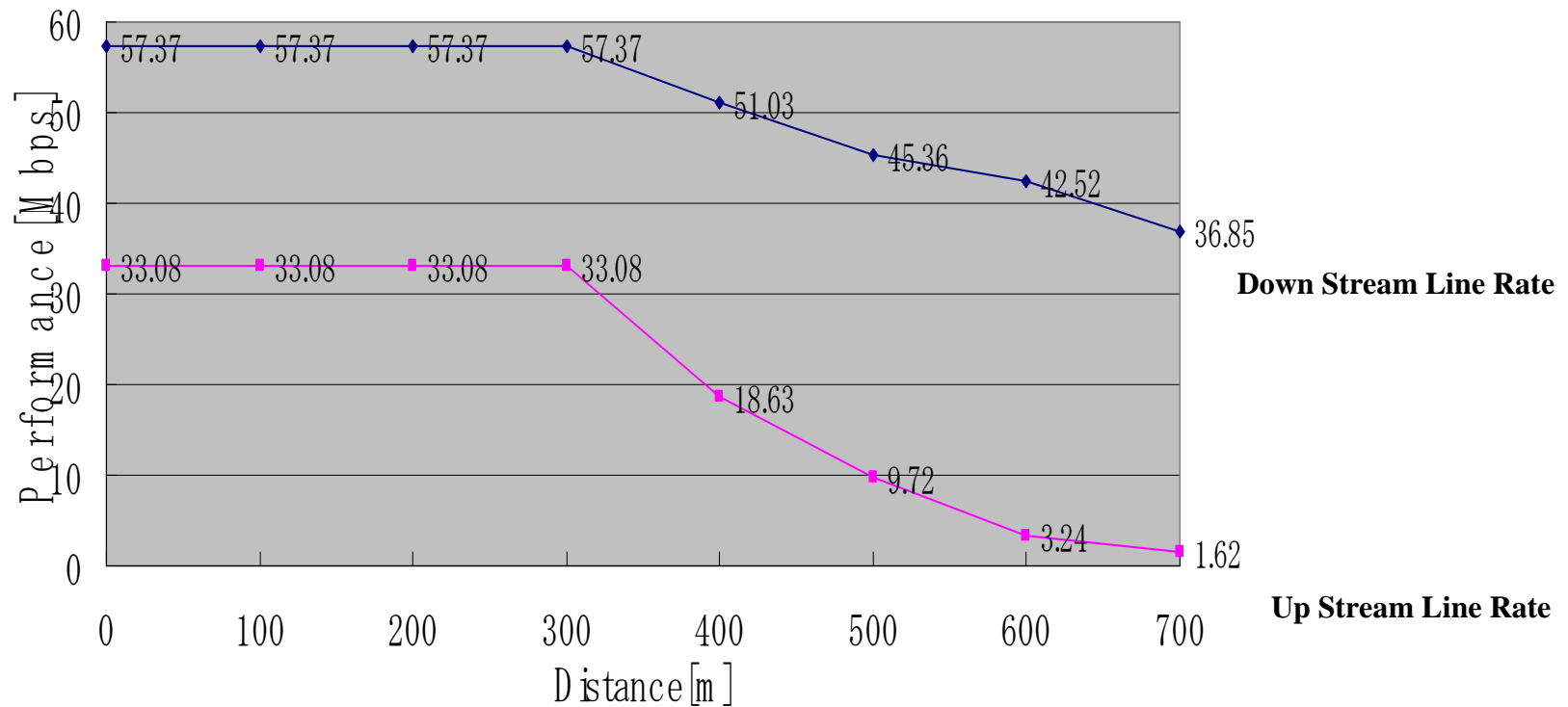
Modem LED

- LINK : shows link status of VDSL
- TEST : shows test status of VDSL line
- LAN LAN : shows link status of LAN
- DATA : shows data transmission status of LAN
- PWR : shows power supply status
- ALM : shows alarm conditions of Modem

6. Speed – Distance Relationship



SDNFriendly Adaptive Rate



Above measurement data is subject to change
Depending upon line conditions

7. Specifications of DSLAM - 8 ports



Item		4Bnad-VDSL DSLAM(8port)
Modulation/Transmission Method		QAM , FDD
Interface	LAN F	RJ45 x 2 10/100Base-TX MDI / MDI-X :Auto-adaptation
	VDSL F	RJ11 x8
	POTS / ISDN F	RJ11 x8
	Console F	RJ45 x1
	Stacking F	RJ45 x1
Splitter		Built-in meets POTS/TCM-ISDN requirements
Stacking		Max. 4 stacks, when VLAN is used
VDSL Pay load speed (down stream / up stream [Mbps]) < d		Asymmetric 50Mbps / 30Mbps <300m>
MAC	Filtering	MAC address filtering function provided
	No. of Addresses	4K
VLAN	Tag VLAN	Tagged VLAN function available
	Port base VLAN	Available
	Asymmetric VLAN	Available
	No. of Ids	32 (any of 1~4094)
Supervisory/Management		CLI/WeB based, SNMP Control provided
Cooling Method		Forced Air Cooling by fan
Dimensions		340mm(W) x 260mm(D)x44mm(H)
Power Supply		AC100V, 50/60Hz
Operating Environment		0~50°C
Applicable Standards	VDSL Technology	per ITU-T G993.1 Standards
	Band Plan	Bandplan A (plan998)
	LAN	as per IEEE802.3 Standards
	EMI	Class A of FCC

8. Specifications of VDSL Modem



Modulation/Transmission Technique		QAM , FDD
Physical Interface	LAN IF	RJ45 x1 10/100Base-TX MDI-X fixed
	VDSL IF	RJ11 x1
Splitter		Buil-in HPF LPF :In-line filter (external) Compliant with POTS/TCM-ISDN requirements
VDSL Pay load speed (down stream/up stream [Mbps] <distance>		Asymmetric 50Mbps / 30Mbps <300m>
Dimensions		160mm(W) x 160mm(D)x35.6mm(H)
Power Supply		AC100V, 50/60Hz (external adaptor)
Operating Environments		0~50°C
Applicable Standards	VDSL Method	As per ITU-T G993.1 Standards
	Band Plan	Bandplan A (plan998)
	LAN	As per IEEE802.3 Standards
	EMI	Class B