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RC1108-SHDSL -2Wx8

With the symmetrical data transmission up to 15Mbps over the 2-wire line, G.SHDSL.bis satisfies the needs of multiple user, who needs both bandwidth and permanent data connection. RC1108 is a module which can be inserted in MSAP system OPCOM3500E. It uses TC-PAM128 (Trellis Code – Pulse Amplitude Modulation) technology to aggregate and transmit the remote services including E1 and fast Ethernet to STM1/4 or Metro Ethernet through copper cable. The advantage is to enlarge double bandwidth for each pair compared to earlier bis technology on the existing copper lines. The module has 2 units, one of which has 4E1 + 1 Ethernet. The Ethernet traffic could be switched and aggregated to Gigabit Ethernet backplane or output can be done through the front panel with the GE interface. TDM traffic could be mapped to backplane and aggregated to STM1/4 interface. By using Raisecom's NNM network management system, both local and remote management can be implemented. All user configurable parameters can be set and monitored through NNM system.

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Highlights

G.SHDSL Specification	TC-PAM 128 (per pair – 15Mbps) support,8/16 wires up to 60/120Mbps
Service Assurance	Support IEEE802.1q, 802.1ad (QinQ), 802.1p and SLA
Advanced Network	Support IEEE 802.3ah, 802.1ag, and ITU-T Y.1731 OAM
Service transmission	Support both TDM and Ethernet simultaneously ;one pair allow 1 Ethernet+1 E1
Easy Management	Management via Telnet, CLI, Web management, SNMP

Typical Application

Figure.1 Aggregation Application

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Features

Main features	Compact in high performance standalone unit
	Support G.SHDSL.bis Technology
G.SHDSL specification	TC-PAM 16 & TC-PAM 32 - ITU-T G.991.2.(2004)
	TC-PAM 128 (per pair - 15Mbps) support
	ITU G.991.2 Annex A , Annex B , AnnexF and AnnexG
	EFM bonding
	8/16 wires up to 120Mbps
G.SHDSL interface	8x2 wires flexible configuration with aggregation function
	Support P- to-MP aggregation of 4 units of MSG2110-SHDSL-4W
	Support P-to-P inverse multiplexing with RC1108-SHDSL-2Wx8 modem
Ethernet throughput	15Mbps at 2-wire(1 pair);30Mbps at 4-wire(2 pair);60Mbps at 8-wire(4 pair);120Mbps at 16-wire(8 pair)
Transmission distance	Up to 2.7km(1.825miles)for 5.7Mbps over each pair on 26 AWG
Working mode	STU-C(Master,by default),STU-R(Slave)
E1 interface mode	Support E1 unframed; framed:PCM30,PCM3oC,PCM31,PCM31C
Eth switching function	
MTU	1632 Bytes
Flow control	IEEE 802.3x in full duplex mode
	Back pressure in half duplex mode
Rate limit	Max rate limit:100,000Kbps
	Ingress rate limit per port with increment 64Kbps(64K-1M),1Mbps(1-100M)
	Egress traffic shaping per port
Storm control	Broadcast/Multicast/Unicast DLF storm control
	Control mode:Global/bps
	Default value:64Kbps
QOS	Traffic priority
	IEEE 802.1P
	COS/DSCP/port-based
	Global queue scheduling
	SP,WRR
	WRR weight range:1-125
VLAN	4K active VLANs
	Port PVID overwrite
L2TP	BPDU,DOT 1x,LACP

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Loopback detection	Individual port will be shut down if loopback is detected
Cable diagnostic	support
SLA	Layer-2/Layer-3 SLA
MAC address table	8K MAC address
	Add/remove/search MAC address table entries
	View MAC address statistics
	MAC address aging time configurable:15-3,825s
	MAC address learning threshold per port
	Optional MAC address table limit per port:1-255

Management function

CFM	IEEE802.1ag & Y.1731
	128 MEP & 128 MA supported

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OAM	IEEE802.3ah OAM (discovery, link performance monitor , remote loopback testing, remote failure indication)
	Extended OAM
DHCP	IDHCP Snooping
	DHCP Client
	DHCP Option82
Ways of management	CLI-based management through CONSOLE port or Telnet/SSH access
	Inband web-based management
	Inbuilt SNMP agent
	GUI-based concentrative management on Rais
Software update	Xmodem/FTP upgrade in BOOTROM
	FTP/TFTP (system & configuration files)
Other features	
Error tolerance	System error report
	Fast recovery during serious error
	Hardware voltage & temperature monitoring
Security	User classification & password protection
	RADIUS
	TACAS+
	Binding of MAC address & port
	Port Isolation
	PPPoE Agent
Maintenance	Debug information output
	Port statistics
	Port dynamic statistics
Password recovery	support

Compliances

Standards & protocols	IEEE802.3-2002
	IEEE802.3ah-2004
	IEEE802.3 10BaseT
	IEEE802.3u 100BaseTX
	IEEE802.3 1000BaseT
	IEEE802.1d
	IEEE802.3ad
	IEEE802.1ad
	IEEE802.3z
	IEEE802.3ab
	IEEE802.3x full duplex on
	IEEE802.1q-2003
	IEEE802.1p
	IEEE802.1w
	ITU G.991.2
	RFC2416
	RFC2011 SNMPv2
	RFC2012 SNMPv2
	RFC2013 SNMPv2

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Specifications

G.SHDSL interface	8/16 wires SHDSL
	2*RJ45 connector
	TC-PAM 128 support
	AnnexA,B,F,G support
	Indicators:LNK,STU-C
Ethernet interface	1*1000M RJ45 connector
	Full/half duplex mode
	Auto MDI/MDI-X
	100m distance
	Indicators:1000M, LNK, ACT;
Serial port configuration	9600bps/8bit/none parity/1 stop bit/none flow control
Dimension	(WxHxD)240mm x 25mm x225 mm
Weight	< 600g
Power supply	AC & DC Power supply option via OPCOM3500E chassis
Power consumption	≤ 10W (at max load)
Working environment	Temp: 0 ~ 45 Celsius
	RH:10 ~ 90% non-condensing
Storage environment	Temp: - 25 ~ 60 Celsius
	RH: 5 ~ 95% non-condensing

Ordering Information

RC1108-SHDSL-2W x8	supports G.SHDSL.bis technology, standalone G.SHDSL card, provides 2*RJ45 8 wires G.SHDSL ports, 1*1000Base-T LAN port.