Casa Systems **C2100 Digital Cable Termination System**

The Casa Systems C2100 Downstream Digital Cable Termination System (DCTS) is a new class of cable edge device that combines video-over-DOCSIS capability and video-over-MPEG capability in a single platform. It has a high QAM density (64 channels) in a compact 1RU form factor. In addition to MPEG-based video services, the revolutionary downstream IP bandwidth capacity and low cost per IP stream provide an unprecedented opportunity for cable operators to cost-effectively provision video services over IP.

Compact and Modular Architecture

The C2100 DCTS comes in a compact 1RU form factor. It is based on a modular architecture that gives cable operators flexibility in tailoring their networks according to the requirements of their services. The C2100 consists of a base system with four slots for downstream (QAM) modules. Each downstream module has four RF ports (connectors) and each port contains up to four QAM channels. The C2100 is available with 16, 32, 48 or 64 downstream QAM channels.

Multilayer Switching and Routing

The C2100 supports Ethernet switching for Layer 2 networks and IP switching and routing for Layer 3 networks, thus minimizing the need for external switching equipment.

The C2100 DCTS can be deployed as Edge-QAM for MPEG-based unicast and switched digital broadcast applications for new deployment or to add additional capacity without the need to remove legacy equipment. DCTS is completely compatible with existing MPEG Edge-QAM deployed in the field today. When the operator is ready to move to video-over-IP, DCTS can be field-upgraded to provide IP functionality without any change of hardware. Deploying DCTS as an MPEG Edge-QAM provides investment protection and a migration path to an all-IP network.

Feature Highlights

High density – Offers the highest channel density per 1RU space in the industry: up to 4 GbE ports and 64 channels of QAM

MPEG switching and processing – Provides integrated video grooming, PID filtering, and PCR reconditioning

Conditional access scrambling– Integrated 3DES encryption and DVB common scrambling

Quality of Service – Guaranteed bandwidth and jitter for multimedia traffic

Multilayer switching and routing - Layer 2/3 switching can eliminate the need for external switching equipment

Integrated upconverters – Fully tunable RF upconverters are integrated to tune in the frequency range of 52~860MHz

Standards compliant – Compliant with ITU-T J.83, Annex A, B, and C

DOCSIS compatible – Future compatible with DOCSIS1.0, DOCSIS1.1, DOCSIS2.0, EuroDOCSIS1.0, EuroDOCSIS1.1, and EuroDOCSIS2.0

DOCSIS DSG – Future compatible with DOCSIS Set-top Gateway standard

Specifications

System

24 Gbps switching capacity
Ethernet switching and IP routing
MPEG switching from any port to any port
CLI and SNMP management
Four RF interface slots per system
1~4 Downstream modules per system

Standard Compliance

DOCSIS 1.0, 1.1, 2.0 future compatible
EuroDOCSIS 1.0, 1.1, 2.0 future compatible
PacketCable 1.0-compatible
RIPv1, RIPv2, OSPF, IGMPv2
VLAN Trunking
Spanning Tree
SNMPv1, SNMPv3
DHCP Relay
Proxy ARP

MPEG Stream Processing

MPEG de-multiplexing and re-multiplexing
Unicast to Multicast conversion
PAT and PMT extraction and regeneration
PID filtering and remapping
Program insertion and splicing
PCR jitter removal and re-stamping

Management

RS232 Serial port (DB9)
10/100BaseT management port
Command Line Interface (CLI)
Web
Telnet
SNMP
Standard DOCSIS and IETF MIBs
Casa Systems Enterprise MIBs
Event logging through Syslog
Performance monitoring

GbE Interfaces

10/100/1000 Mbps
4-port Copper or fiber SFP
CWDM
Full line-rate support

Regulatory Compliance

IEC/CENELEC 60950
Telcordia GR-1089-CORE
UL-1950, FCC and CISPR Class A Requirements
UL, CSA, TUV, and CE

Downstream Module

Number of ports	4
Number of channels	16
QAM constellations	64 & 256 QAM
Connector	F-type, 75 Ω
Frequency range	50 to 860 MHz (tunable)
Frequency step size	12.5 kHz
Channel width	6~8 MHz
Output power per QAM channel	49 to 58 dBmV
Output step size	0.1 dB
Output stability	± 0.3 dB
Return Loss	> 15 dB
Data Rates(DOCSIS)	64 QAM: 27 Mb/s 256 QAM: 38 Mb/s
Data Rates (EuroDOCSIS)	64 QAM: 36 Mb/s 256 QAM: 56 Mb/s

Mechanical

Form Factor	1RU
Height	1.75 in. /44.45 mm
Width	19 in. /482.6 mm
Depth	23.5 in. / 597 mm
Weight	30 lbs / 13.62 kg
Mounting	19 inch, 1 rack unit high
Front Panel LED	Power, alarm and I/O status

Operating temperature	0° to 50° C
Storage temperature	-20° to 70° C
Operating humidity	5% to 95%, noncondensing
Power supply (nominal)	115 to 230 V AC ± 10%
Power consumption (nominal)	< 400 W