technicolor
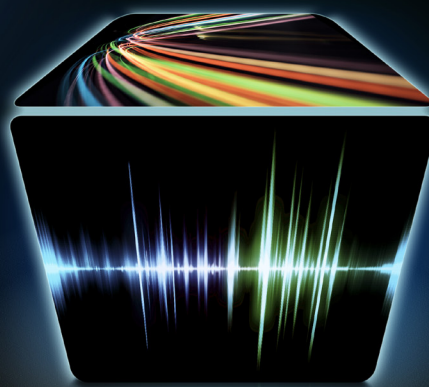
THG541
VoIP Cable Modem

On January 27th 2010, Thomson changed its company name to Technicolor. All product data sheets, including those for products which still carry the Thomson name, now reflect our new Technicolor brand.

Following the technology evolution, Technicolor is pleased to introduce the THG541 EMTA modem, the successor of the successfull THG540. This Voice Cable Modem is an indoor EMTA (Embedded Multimedia Terminal Adapter) solution based on EuroDOCSIS™ 2.0 and EuroPacketCable standards.

This product can be upgraded to EuroPacketCable 2.0 and is IPv6 ready.

CABLE
DATA
VOICE

Easy to Use, Easy to Install

As all Technicolor gateways, the THG541 with Ethernet port is an easy to use, easy to install gateway.

For convenience of the end user, the easy-to-access LEDs provide a clear indication of start-up sequence and connectivity status.

Multiple integrated Web pages allow direct access to the status and settings, including privacy and security information.

Advanced Voice Performance

All standard codecs are supported, including the new iLBC and BV16. 300 MHz Dual Instruction MIPS32 CPU and DSP Instruction Extensions for VoIP in order to guarantee superior performance. Gateway and Voice operations support data throughput and complex voice codec calls simultaneously.

Advanced Diagnostics

- Web pages to facilitate installation and troubleshooting
- Easy configuration and set-up
- Remote access via Telnet, SNMP, Web Page
- Post-installation easily managed with SNMP

Features at a Glance

- EuroDOCSIS 2.0 certified
- Dual-Mode cable modem: DOCSIS and Euro-DOCSIS
- Euro-PacketCable 1.0, 1.1, 1.5 certified; 2.0 upgradeable (optional configuration: SIP)
- Propane™ technology, enabling the connection of more Internet users without additional network bandwidth
- Ethernet port for wired connectivity and easy installation
- Reliable high-performance platform
- IPv6 ready

EXCENTIS   Cable Europe Labs

Technical Specifications

Standards / Certifications

■ Data	EuroDOCSIS 2.0 certified
■ Voice	EuroPacketCable 1.5 certified, upgradeable to EuroPacketCable 2.0 (basic package)
■ CMTS Interoperability	Any qualified Euro-DOCSIS and DOCSIS CMTS (*)

Receiver

■ Downstream Modulation	QAM 64/256
■ Downstream Frequency Range	108-862 MHz
■ Maximum Downstream Data Range	41,71/55,61 Mbps (QAM 64 / QAM 256)
■ Input Signal Level Range	+43 to +73 dBµV (QAM 64)
	+47 to +77 dBµV (QAM 256)
■ BER	$<1 \times 10^{-8}$ @ C/N=25,5dB, QAM 64 with FEC,
	$<1 \times 10^{-8}$ @ C/N=34,5dB, QAM 256 with FEC,
	received power = +47 to +54 dBµV $<1 \times 10^{-8}$ @ C/N=31,5dB, QAM 256 with FEC,
	received power = +54 to +77 dBµV
■ Input Impedance	75 Ohm

Transmitter

■ Upstream Modulation	QPSK and 16 QAM
■ Additional Upstream Modulation Types	QAM 8/32/64 for A-TDMA and QAM 128 for S-CDMA channels
■ Upstream Frequency Range	5-65 MHz
■ Maximum Upstream Data Range	Max 5.12/10.24 Mbps {QPSK/QAM 16},
	Max 30.720 Mb/s (QAM 64)
■ Output Signal Level Range	A-TDMA:
	+68 to +118 dBµV @ QPSK
	+68 to +115 dBµV @ QAM 8/16
	+68 to +114 dBµV @ QAM 32/64
	S-CDMA:
	+68 to +113 dBµV /All
■ Output Impedance	75 Ohm
■ Channel Bandwidth	Programmable (200*N KHz) N=1, 2, 4, 8, 16, 32
■ Automatic Level Adjust	yes
■ Gain Control Range	50dB
■ Frequency Stability	± 5 kHz

Telephony Features

■ Audio Codecs	PCM A-law, PCM µ-law, G.729, G.729a, G.729e, G.728, iLBC and BV16
■ Multi-line Phone Support	Yes, Two phone lines, three-party conference calls, can support two complex voice codecs simultaneously
■ Fax Relay	T.38
■ DTMF Tone relay	RFC2833
■ Caller ID	Type I and Type II
■ CLASS features	BASIC and Extended CLASS features
■ VAD (Voice Activity Detection)	yes
■ CNG (Comfort Noise Generation)	yes
■ Echo cancellation	G.165/G.168 up to 16ms
■ Packet Tone	DTMF generation/ Call Progress Generation/ Custom Tone Generation
■ Call discrimination	Fax and Modem Detection
■ Telephony interface capabilities	Loop-back and on demand diagnostic
■ Modems	Up to V.90 (38.5kbps)
■ RFC2833 DTMF Tone relay	Enabled/disabled via SNMP and Telnet
■ REN	5 REN
■ Pulse dialing	DTMF tones to pulse tones conversion and pulse to DTMF tones conversion

VoIP Call Control

■ RTP layer	RFC1889/RFC1890
■ RTCP statistics collection	yes
■ PacketCable Protocols	PacketCable NCS Network-Based Call Signaling Protocol (PKT-SP-EC-MGCP)
■ SIP Based Protocols	yes

PC Compatible

■ Operating Systems	Windows 2000, Me, XP and Vista
■ Ethernet Port	10/100 Base-T
■ Drive	CD-ROM

THG541
VoIP Cable Modem

Technical Specifications

Software Features

■ Software Downloadable	yes
■ Multiple Client Support	254
■ Class of Services (CoS)	16 SIDs
■ Protocol Filtering	Ethernet & IP
■ SNMP Management	V2, V3
■ Security	BPI+
■ Privacy	Through encryption between gateway and PC
■ HTTP Server (CM status)	yes

Interfaces / Physical

■ Ethernet	1 x RJ45 - 10/100 Base-T auto detect
■ Telephone line	2x RJ11
■ RF Connector	1 x F-Type
■ Buttons	Reset
■ LEDs	Tel1, Tel2, Message, Cable Activity, Cable Link, PC Link, Internet
■ Power Supply	External, 230VAC 50Hz
■ Operating Temperature	0°C to 40°C
■ Operating Humidity	20% to 90% non-condensing
■ Storage Temperature	-20°C to 70°C
■ Safety	CE

Packaging Information

■ Cabinet Dimensions	mm: 180 (L) x 140 (D) x 50 (H)
■ Packaging Dimensions	mm: 310 (L) x 180 (D) x 95 (H)
■ Shipping Weight	Approx. 1,2 kg
■ Master-pack Dimensions	mm: 385 (L) x 398 (D) x 395 (H)
■ Master-pack Shipping Weight	Approx. 15kg
■ Master-pack Quantity	12 units

Content of the Box

- VoIP Cable Modem
- Power supply
- Ethernet Cable
- CD-ROM
- Quick Installation Guide

Technicolor Professional Services are available to address your demands for qualified technical support & warranty, product maintenance, access to training courses and tailor-made solutions to specific product evolution. For more information, please ask your usual contact person.

technicolor