

# THOMSON

## TCM420

### Digital Cable Modem



Euro-DOCSIS 2.0



Thomson's latest Euro-DOCSIS cable modem, the TCM420 provides a more competitive offer to cable operators while keeping a consistent set of functionality and look and feel with the previous generation, the TCM410, for a smooth transition and easier management.

This new generation benefits from the field experience built on the TCM390 and TCM410. Enhanced with the now Thomson standard Dual-Mode feature, the TCM420 is a versatile product which can cope with both DOCSIS and Euro-DOCSIS standards. The Dual mode feature is ideal for operators intending to move eventually to Euro-DOCSIS, by facilitating inventory management.

This product benefits from an improved receiving performance by the use of a world class tuner. The TCM420 is using the same industrial design as the previous generation, the TCM410, ideal for vertical and horizontal standing and also consistent throughout Thomson's product line of WI-FI modems and VoIP modems.

#### Other Broadband Cable Products:

TCM425:	DOCSIS 2.0 certified (new enclosure)
TCW710:	One port EuroDOCSIS/DOCSIS 2.0 802.11g Wireless Cable Modem
THG520:	EuroDOCSIS/DOCSIS 2.0 VoIP E-MTA
TCW690:	One port EuroDOCSIS/DOCSIS 2.0 802.11g Wireless Cable Modem

- ▶ Euro-DOCSIS 2.0 certified
- ▶ Dual-Mode cable modem (DOCSIS and Euro-DOCSIS)
- ▶ Bridging between the USB and Ethernet port
- ▶ Easy Access to Advanced Diagnostics Web Pages
- ▶ USB port for easy installation
- ▶ Reliable high-performance platform
- ▶ Surf the Internet Up to 100 Times Faster than a 56k analog Modem <sup>(1)</sup>
- ▶ Internet On-Off button for enhanced security

1 - Compared with a 56 kbps analog telephone modem. Internet access sold separately. Microsoft Windows and the Windows logo are registered trademarks of Microsoft Corporation in the United States and/or other countries.

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## Digital Cable Modem



### Euro-DOCSIS Approved Design

The cable modem is certified to work on any Euro-DOCSIS based HFC cable system. Resident 2.0 hardware enables future upgrades to advanced Euro-DOCSIS 2.0 features.

### Dual-Mode cable modem

The cable modem is able to work with both Euro-DOCSIS and DOCSIS standards (if using the Euro-DOCSIS bandwidth).

### Bridging

Allows simultaneous connection of two PC's and enables Ethernet and USB port data traffic bridging.

### E-Z Start-Up Indicators

Easy-to-use LED lights on the front of the unit provide the user an intuitive mechanism for verifying the modem's operation and connectivity.

### Simple-to-Use Illustrated Setup Guide

The guide steps users through the connections of the broadband cable, electrical power, and Ethernet or USB cables.

### Security

Supports BPI+ communications privacy to support secure data exchange between modems and cable operators' servers.

### LED Administrative Disable Indicator

Helps prevent unnecessary truck rolls.

### Internal Web Pages

TCM420 contains multiple integrated Web pages allowing direct access to information about the status of the modem and product settings (including privacy and security).

### Internet Security Button

Turning the modem off puts the modem into "standby" mode. The modem remains locked to the CMTS, responding to SNMP, enabling subscribers to resume activity quickly when toggled again. The button serves as a security feature, assuring the customer that the PC network connection is de-activated when the button is in the off position, alleviating security concerns of an "always on" connection.

### Propane® technology

This advanced transport technology (Dynamic Payload Header Suppression) provides the subscriber with faster data transfers. It also allows operators to increase the number of subscribers on their network without affecting subscriber connection speeds. Under typical network conditions, both the subscribers and operators can benefit from more data bandwidth per customer, more voice channels for IP-telephony, and more users per fiber node.

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Illustration of product finish may vary from actual color.

### Technical Specifications

<b>► Standards</b>	
<ul style="list-style-type: none"><li>• Euro-DOCSIS certification board</li><li>• 2.0 upgradeability</li><li>• CMTS Interoperability</li></ul>	Euro-DOCSIS 2.0 certified DOCSIS* and Euro-DOCSIS Any qualified Euro-DOCSIS and DOCSIS*
<ul style="list-style-type: none"><li>• Operating Systems supported</li></ul>	Any with Ethernet connection, Windows 98SE, 2000, Me and XP with USB
<b>► Receiver</b>	
<ul style="list-style-type: none"><li>• Downstream Modulation</li><li>• Downstream Frequency Range</li><li>• Maximum Downstream Data Rate</li><li>• RF Input Sensitivity</li></ul>	64/256 QAM 108-862 MHz 41.71/55.61 Mbps (64QAM/256QAM) +43 to +73 dBµV(64QAM), +47 to +77 dBµV(256QAM)
<ul style="list-style-type: none"><li>• BER &lt;10<sup>-6</sup></li></ul>	64QAM:C/N>25.5dB, 256QAM: for +47dBµV to +54 dBµV C/N >34.5dB, +54 dBµV to +77 dBµV, C/N >31.5dB
<ul style="list-style-type: none"><li>• Input Impedance</li></ul>	75 Ohm
<b>► Transmitter</b>	
<ul style="list-style-type: none"><li>• Frequency Range</li><li>• Upstream Modulator (Euro-DOCSIS 1.1 requirements)</li><li>• Additional Upstream Modulation types for DOCSIS 2.0</li><li>• Channel Bandwidth</li></ul>	5-65 MHz QPSK/16QAM 8QAM,32QAM, 64QAM for S-CDMA and TDMA channels 200KHz, 400KHz, 800KHz, 1.6MHz, 3.2MHz, 6.4MHz (**)
<ul style="list-style-type: none"><li>• Maximum Upstream Data Rate</li></ul>	Max 5.12/10.24Mbps (QPSK/16QAM), Max 30.720Mb/s(64QAM)(**)
<ul style="list-style-type: none"><li>• RF Output Level</li></ul>	+68 to +115 dBµV (8QAM & 16QAM) +68 to +118 dBµV (QPSK) ; +68 to +114 dBµV (32QAM & 64QAM) (**); +68 to +113 dBµV (S-CDMA all modulation types) (**)
<ul style="list-style-type: none"><li>• Automatic Level Adjust</li><li>• Gain Control Range</li><li>• Frequency Stability</li><li>• Output Impedance</li></ul>	Yes 50dB ± 5 kHz 75 Ohms
<b>► Software Features</b>	
<ul style="list-style-type: none"><li>• Software Downloadable</li><li>• Bridging</li><li>• Number of PCs supp.</li><li>• Safety Internet button</li></ul>	Yes Between USB and Ethernet 32 When turned Off, the modem can be accessed by the head-end but the connection to the PC is Off, so that nobody can access it
<ul style="list-style-type: none"><li>• Class-of-Service (COS)</li><li>• Protocol Filtering</li><li>• SNMP Management</li><li>• Security</li><li>• IP Security</li><li>• LED Diagnostics</li><li>• HTTP Server (CM status)</li></ul>	Yes Ethernet & IP V2, V3 BPI+ Hardware support 5-step LED Yes
<b>► Packaging &amp; Content</b>	
<ul style="list-style-type: none"><li>• Cabinet Dimensions (cm)</li><li>• Shipping Weight appr.</li><li>• Packaging dimensions (cm)</li><li>• Overpack dimensions (cm)</li><li>• Overpack shipping Weight appr.</li><li>• Overpack Quantity</li><li>• Operating Temp.</li><li>• Cables</li><li>• CD-ROM</li></ul>	126mm (L) x 110mm (D) x 42mm (H) 1,4 kg 255mm (L) x 170mm (D) x 85mm (H) 780mm (L) x 350mm (D) x 258mm (H) 10 kg 10 0°C to +40°C USB & Ethernet Yes
<b>► I/O Interfaces</b>	
<ul style="list-style-type: none"><li>• Ethernet 10Base-T or 100Base-T</li><li>• RF Connector</li><li>• Power (Wall Pack)</li><li>• USB Port</li><li>• User Switches</li></ul>	RJ45 – auto-detect F-Type 230Vac 50Hz Yes Internet On/Off & Reset

(\*) Using the Euro-DOCSIS frequency band width with a DOCSIS CMTS  
(\*\*) Euro-DOCSIS 2.0 specific

### For more information

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