

# TERAYON TJ 700x CABLE MODEM PLATFORM

Terayon's TJ 700x series of cable modems are a cable operator's future-proof solution for delivering high-speed Internet access today, and for delivering new services tomorrow. An embedded self-diagnostic tool simplifies trouble shooting and reduces the total cost of ownership.

## MATURE, PROVEN PRODUCTS

Terayon, the leader in DOCSIS®2.0 technology, offers the only end-to-end DOCSIS 2.0 certified/qualified solution. The DOCSIS 2.0 certified TJ 715x represents Terayon's third generation of DOCSIS 2.0 modems and is the most widely deployed DOCSIS 2.0 modem. Terayon's DOCSIS 2.0 products have been rigorously tested in both the field and laboratory for performance and to assure interoperability.

## FUTURE-PROOF SOLUTION

Cable operators can deploy TJ 700x modems system-wide with the assurance that they will not become obsolete as operators upgrade from DOCSIS 1.0 to DOCSIS 1.1 and 2.0. The TJ 700x will grow with a system allowing operators to generate new revenue streams by offering services that require more upstream bandwidth such as on-line gaming, peer-to-peer file sharing and video teleconferencing.

The TJ 700x also provides maximum flexibility. Operators can order the modem pre-configured for DOCSIS 1.1 or 2.0 deployment.

## INNOVATION REDUCES TOTAL COST OF OWNERSHIP

The TJ 700x modems are equipped with innovative features for easy installation. An embedded web page, Dr. Modem™, is a trouble-shooting tool that speeds the identification of potential issues. The front panel LEDs supply readings on SNR, power and other parameters that enable reliable modem installations without special monitoring tools and minimize the need for future truck rolls.

### FEATURES

"Plug and play" USB connections

10/100 BaseT Ethernet

DOCSIS 2.0 Technology

LEDs - Power, Cable, PC, Data, Test

Lightning protection

Desk or wall mountable

SNMP management via DOCSIS MIBs

IGMP Proxy

Supports up to 32 PCs

Filtering via Ethernet, LLC and IP,  
operator configurable

Embedded web server

24/7/365 Technical Support

Self-installable

### BENEFITS

Simplified installation

Enhanced network flexibility

Increased upstream capacity and high immunity  
to noise

Immediate visual status reporting

Resistant to electrical surges

Space saving and easily accessible

Remote administration

Supports multicast services

Ideal for office networks

Provides secure, shared Internet access

Easy and powerful troubleshooting for subscriber, customer service representative and/or field technician

A trusted partnership

Reduced technical support



*The TJ 700x family of cable modem platforms. DOCSIS 2.0 certified, the new TJ 700x series provides cable operators with a competitive edge for delivering advanced broadband services today and well into the future.*



*The TJ 715x offers easy-to-use troubleshooting tools including the Dr. Modem web page that is embedded in every modem.*

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	TJ 715x (NA DOCSIS)	TJ 720x (Europe)	TJ 735x (Japan)
<b>CERTIFICATION</b>	DOCSIS 1.1, 2.0	Euro-DOCSIS 1.0, 1.1	
<b>PHYSICAL</b>			
Client PC	10/100Base-T, RJ-45 USB "B" type receptacle (USB can be disabled)	10/100Base-T, RJ-45 USB "B" type receptacle (USB can be disabled)	10/100Base-T, RJ-45 USB "B" type receptacle (USB can be disabled)
CATV network	Female "F" type connector, 360° threaded for all models		
LEDs	Power, Cable, PC, Data, Test	Power, Cable, PC, Data, Test	Power, Cable, PC, Data, Test
Dimensions - Modem	5.6" wide (14.20 cm); 6.70" deep (17.02 cm) including length of RF connectors; 1.58" high (4.01 cm)		
<b>INSTALLATION</b>	Desktop: vertical or horizontal orientation	Wall: vertical orientation	
<b>PRODUCT WARRANTY</b>	1 year	1 year	1 year
<b>OPERATING REQUIREMENTS</b>			
Operating temperature	32° to 104° F (0° to 40° C)	32° to 104° F (0° to 40° C)	32° to 104° F (0° to 40° C)
Storage temperature	-4° to 140° F (-20° to 60° C)	-4° to 140° F (-20° to 60° C)	-4° to 140° F (-20° to 60° C)
Humidity	10%-95% non-condensing	10%-95% non-condensing	10%-95% non-condensing
Electrical	10-12V, 750 mA	10-12V, 750 mA	10-12V, 750 mA
<b>NETWORK MANAGEMENT</b>	TJ 700 modems can be managed via any SNMP-management platform		
<b>DOWNSTREAM RF SPECIFICATION</b>			
Modulation type	ITU-T J.83 Annex B	ITU-T J.83 Annex A	ITU-T J.83 Annex B
Channel information bit rate			
For 256 QAM	38.810701 Mbps	51.253961 Mbps	38.810701 Mbps
for 64-QAM	26.97035 Mbps	38.440471 Mbps	26.97035 Mbps
Channel bandwidth	6 MHz	8 MHz	6 MHz
Receive center frequency range	91-857 MHz (Standard, HRC, IRC channels)	112-858 MHz	115-857 MHz
Input level	-15 to +15 dBmV	+43 to +73 dBμV for 64 QAM +47 to +77 dBμV for 256 QAM	-15 to +15 dBmV
Input impedance	75 ohm	75 ohm	75 ohm
C/N (Es/No) for 10-8 BER			
64 QAM, 10 <sup>-8</sup> BER@C/N	≥23.54 dB	≥25.5 dB	≥23.54 dB
256QAM, 10 <sup>-8</sup> BER@C/N	≥30 dB (-6 to +15 dBmV)	≥31.5 dB (+54 to +77 dBμV)	≥30 dB (-6 to +15 dBmV)
256 QAM, 10 <sup>-8</sup> BER@C/N	≥33 dB (-15 to -6 dBmV)	≥34.5 dB (+47 to +54 dBμV)	≥33 dB (-15 to -6 dBmV)
<b>UPSTREAM RF SPECIFICATION</b>			
Modulation	QPSK, 8 QAM, 16 QAM, 32 QAM, 64 QAM and 128 QAM for all models		
Channel access	TDMA, A-TDMA, S-CDMA	TDMA, A-TDMA, S-CDMA	TDMA, A-TDMA, S-CDMA
Channel transmission rate	320 kbps - 30.72 Mbps	320 kbps - 30.72 Mbps	320 kbps - 30.72 Mbps
Channel symbol rate	160 kSps - 5.12 MSps	160 kSps - 5.12 MSps	160 kSps - 5.12 MSps
Channel bandwidth	200 kHz - 6.4 MHz	200 kHz - 6.4 MHz	200 kHz - 6.4 MHz
Transmit frequency range	5 - 42 MHz	5 - 65 MHz	5 - 55 MHz
Output power	+8 to +58 dBmV	+68 to +118 dBμV	+8 to +58 dBmV
<b>NETWORK LAYER</b>			
Downstream performance	38 Mbps	50 Mbps	38 Mbps
Upstream performance	29 Mbps	29 Mbps	29 Mbps
Upstream concatenation	Supported	Supported	Supported
Upstream rate limiting	Supported using Token Bucket algorithm for all models		
SNMP	DOCSIS MIBs	DOCSIS MIBs	DOCSIS MIBs
IGMP	IGMP Proxy to support multicast services for all models		
CPE devices supported	32	32	32
Filtering	Ethernet, LLC and IP filtering, operator-configurable for all models		
IP Filtering Rules	32	32	32
LLC Filtering Rules	32	32	32
<b>REGULATORY SPECIFICATIONS</b>			
Safety Compliance	EN 60950, TUV, UL 1950, CSA 950 CE Mark		
EMC	FCC Class B, CISPR 22 Class B, VCCI Class B, BS EN55024, EN6 1000-3-2, EN6 100-3-3, BS EN55022 Class B, ICES-003 Class B and AS/NZS 3548 CE MARK		

## About Terayon

Terayon Communication Systems provides innovative broadband systems and solutions for the delivery of advanced carrier-class voice, data and video services. Terayon, headquartered in Santa Clara, California, has sales and support offices worldwide, and is traded on the NASDAQ under the symbol TERN. Terayon can be found on the web at [www.terayon.com](http://www.terayon.com).

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