



Cable MODEM Termination System (CMTS) Jade family DOCSIS CMTS for cable Networks solution

The Jade-xxx, Cable modem Termination System (CMTS) family is a high- performance, scalable, cost-effective solution for small and medium sizes of cable networks.

Its modular design allows cable operators to interoperate cost effectively with standard CATV and DOCSIS-compliant equipments.

The Jade-xxx CMTS is designed to comply with the Data over Cable Service Interface Specification (DOCSIS) 1.0, 1.1 and PacketCable 1.0 standards.

Interoperability with any DOCSIS compliant cable modem is assured. It opens the door to dependable high-speed service such as high-speed Data including controlled Quality-of-Service (QoS), Cable Telephony (VoIP), and Streaming Video services between cable modem subscriber and the backbone data network.

Also, Jade-xxx can be configured with 1 to 4 upstream channels per downstream, with integrated up converter or not to fit the operator's capacity and plant quality needs.

All Jade CMTS supports Simple Network Management Protocol (SNMP) for easy administration.

In addition, the system can be managed locally or remotely using Telnet

System and user security is assured with the Jade- xxx CMTS's flexible Packet Filtering capability which is provisioned by cable operators.

Jade-xxx CMTS is compliant with DOCSIS Baseline Privacy Interface (BPI) specifications to ensure communication security.



- JADE-S 1DS/4US
- ✓ **DOCSIS Compliance** (Software upgrade to DOCSIS 1.1)
 - ✓ **Operations Support** (Network, Element and Customer Management) (SNMP and Telnet Automatic Software upgrade and configuration)
 - ✓ **Account/Billing Support** (future)
 - ✓ **Remote Control**
 - ✓ **Standalone capability**
 - ✓ **Firewall protection** (Packet Filtering)
 - ✓ **Quality of Service provisioning**
 - ✓ **User Admission** (Support - Provisioned Registration) only for JADE-PICO
 - ✓ **Security** (B P I)
 - ✓ **Full System Scalability**
 - ✓ **Low-cost initial deployment**

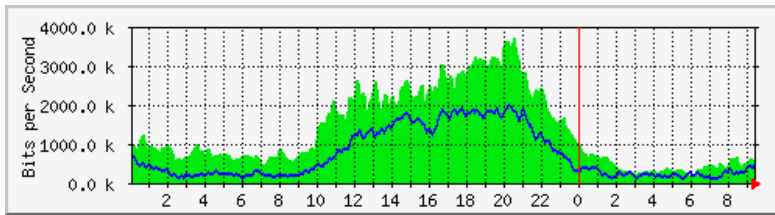


DATA - PHONE - NETWORK

DAPHNE JADE on site statistics

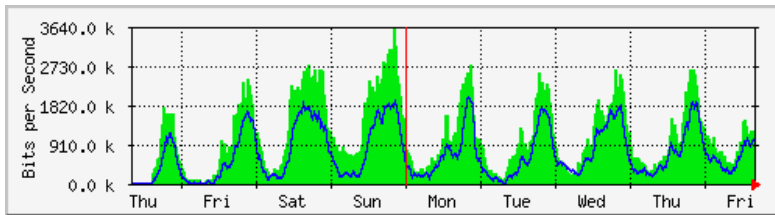
Friday 17 January 2003 to 16:27, 'Jade v1.0' start-up since 30 days 3:31:07.

Daily Graphic (/ 5 minutes : Average)



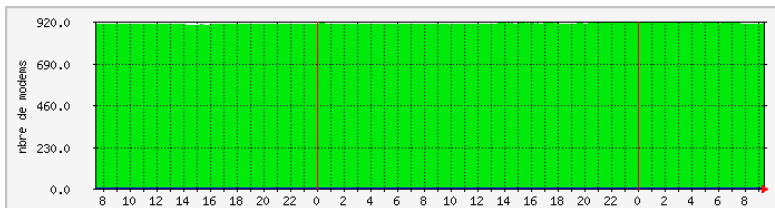
Max In: 2881.4 kb/s (28.8%) Mean In: 1134.9 kb/s (11.3%)
Max Out: 2097.8 kb/s (21.0%) Mean Out: 798.3 kb/s (8.0%)

Weekly Graphic (/ 30 minutes : Average)



Max In: 3615.8 kb/s (36.2%) Moyenne In: 1151.0 kb/s (11.5%)
Max Out: 2037.1 kb/s (20.4%) Moyenne Out: 729.2 kb/s (7.3%)

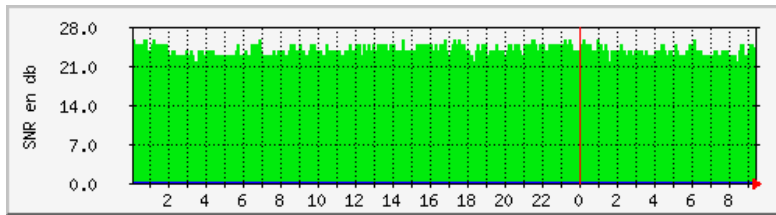
Modems UP CMTS Daphne



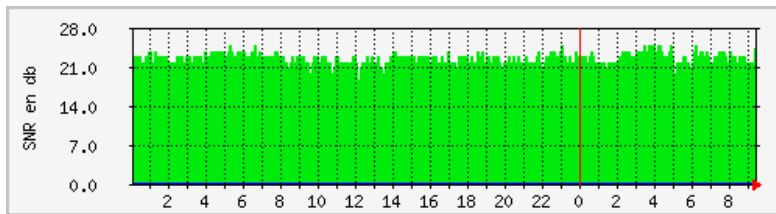


MRTG CMTS Daphne

CMTS Daphne upstream 1



CMTS Daphne upstream 2



JADE CMTS FAMILY



JADE-M up to 4000 internet users



JADE-S up to 1000 internet users



JADE-PICO up to 250 users + mini OSS

CMTS Daphne		
Sortie	Modems Online (chaque 5 min)	S N R instantané (min 22 db)
Date de la mesure	Mon Jan 13 09:31:59 CET 2003	Mon Jan 13 09:36:50 CET 2003
Upstream 1	212 modems	24 db
Upstream 2	225 modems	22.6 db
Upstream 3	237 modems	SNR trop bas 21.5 db
Upstream 4	238 modems	SNR trop bas 21.7 db
Total	912 modems	netplus/2003
Rafraichissement automatique toutes les 90 secondes		



DATA - PHONE - NETWORK

Specifications: Jade-xxx CMTS

<i>RF Specification</i>	<i>Environmental</i>	<i>Security</i>
<p><u>Downstream</u></p> <p>Bandwidth: 6MHz or 8 MHz</p> <p>Modulation: 64QAM, 256QAM</p> <p>Error Correction: Reed Solomon</p> <p>Frequency Range: 88MHz to 860Mhz (Optional 37 or 44 MHz IF)</p> <p>Spectral Occupancy: 64 QAM: 0.18 SRRC 256 QAM: 0.12SRRC</p> <p>Return Loss: 14 dB</p> <p>Output Impedance: 75 oh s</p> <p><u>Upstream</u></p> <p>Modulation: QPSK, 16QAM</p> <p>Error Correction: Reed Solomon</p> <p>Frequency Range: 5MHz to 65Mhz agile, in 100Hz steps</p> <p>Symbol Rate: 160, 320, 640, 1280, 2560 ksym/s</p> <p>Input Levels: -16dBmV to +26 dBmV</p>	<p>Operating temperature 0°C ~ 40°C</p> <p>Storage temperature -20°C ~ 60°C</p> <p>Humidity 10 % ~ 90 % (non-condensing)</p> <p><u>Network Management</u></p> <p>SNMP v1 and v3</p> <p>MIB Group: MIB II, DOCSIS MIB, Vendor-Specific MIB DHCP Relay Telnet</p> <p><u>Media-Access-Control (MAC)</u></p> <p>DOCSIS1.0 (upgradeable to DOCSIS 1.1)</p> <p>DOCSIS 1.1</p> <p>Fragmentation Payload Header suppression Concatenation Quality-of-Service e Controls High-Performance Scheduler Rule-based packet filtering Upstream and downstream</p>	<p>DOCSIS Baseline Privacy (BPI)</p> <p>Software upgradeable to BPI+</p> <p><u>Power Supply</u></p> <p>Full range switching power supply</p> <p><u>Network Interfaces</u></p> <p>10/100 Base-T Ethernet (RJ45 CAT-5)</p> <p><u>Dimensions</u></p> <p><u>1 U unit for 19” rack</u></p> <p>430 X 540 X 45 mmXmmXmm</p>



DATA - PHONE - NETWORK

Sales and Service points

Belgium

Headquarters :

Daphne SA 101 Chaussé de Binche 7000 Mons

Sales contact: Sales@daphne-sa.be

Web site: www.daphne-sa.be

Tel: 32 065 84 11 04 Fax: 32 065 84 31 56



Laceytech LLC
11607 Buckingham Road
Austin, TX 78759
+1 512 335 7422 phone
sales@laceytech.com
www.laceytech.com