

JADE Family

Cost effective Cable Modem Termination Systems

DOCSIS / EURODOCSIS CMTS for cable Networks solution

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

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

The Jade CMTS is designed to comply with the Data over Cable Service Interface Specification (DOCSIS) 1.0, 1.1 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 data network.

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 CMTS's flexible Packet Filtering capability which is provisioned by cable operators.

- ✓ **DOCSIS/Euro- DOCSIS Compliance**
- ✓ **Low-cost initial deployment**
- ✓ **Operations Support**
(SNMP and Telnet Automatic Software upgrade and configuration)
- ✓ **Remote Control**
- ✓ **Standalone capability with integrated up converter**
- ✓ **Quality of Service provisioning**
- ✓ **Security**
- ✓ **Full System Scalability**

Jade can also be configured with 1 to 4 upstream channels per downstream, with or without integrated up converter to fit the operator's capacity and plant quality needs.

The smallest version of Jade family is **Jade-Tiny** :

Jade-Tiny is configured with 1 downstream and 1 upstream channel and software licensed for 50 to 250 users by step of 50 users. Jade Tiny can be supplied in option with an onboard mini OSS called Pico

The middle size Jade is **Micro Jade** configured with 1 downstream and 2 upstream channel. Micro Jade can be supplied in option with an onboard mini OSS called Pico.

The most powerful version of the Jade family is **Jade-S** configured with 1 downstream and 4 upstream channels.

Jade -S for outdoor applications is called **Hardened Jade-NS** :

Jade-NS Node size CMTS is specifically designed for streets and neighbourhoods where active equipments have to be installed in difficult locations such as pedestal boxes, vaults, street cabinets and pole mount enclosures, as well as in conventional rooms such as basements, closets etc.

JADE-S 1DS/4US



JADE-S Options

- **1DS/4US**
- **Software Licences for 2US,3US,4US**
- **Integrated up converter**

JADE MICRO 1DS/2US



JADE-Micro Options

- **1DS/2US**
- **Software Licences for 1 US, 2US,**
- **Integrated up converter**
- **Mini OSS Pico on board provisioning OSS**

TINY JADE 1DS/1US



JADE-Tiny Options

- **1DS/1US up to 250 users**
- **Software Licences by 50 users,**
- **Integrated up converter**
- **Pico on board provisioning OSS**

Mini OSS PICO features

- **Web access, User Admission**
- **Monitoring, SNR graphs**
- **Support - Provisioned Registration**
- **DHCP/TOD/TFTP/HTTP services**
- **Subscriber and modem data base management**
- **Billing option: Prepaid, post-paid traffic limited**

JADE-NS Hardened 1DS/4US



- **Extended environmental conditions**



DATA-PHONE-NETWORK

Daphne guides your first steps in Cable Internet World

Specifications: Jade-Family

<i>RF Specifications</i>	<i>Network and Security</i>	<i>Environnemental</i>
<p><u>Downstream</u></p> <ul style="list-style-type: none"> ➤ Bandwidth: 6MHz or 8 MHz ➤ Modulation: 64QAM, 256QAM ➤ Error Correction: Reed Solomon ➤ Frequency Range: 88MHz to 860Mhz (Optional 37 or 44 MHz IF) ➤ Spectral Occupancy: 64 QAM: 0.18 SRRC 256 QAM: 0.12SRRC ➤ Return Loss: 14 dB ➤ Output Impedance: 75 ohms <p><u>Integrated up converter option:</u></p> <ul style="list-style-type: none"> ➤ Output RF level: 50 to 60 dBmV ➤ Output frequency range: 88 MHz to 880 MHz <p><u>Upstream</u></p> <ul style="list-style-type: none"> ➤ Modulation: QPSK, 16QAM ➤ Error Correction: Reed Solomon ➤ Frequency Range: 5MHz to 65Mhz agile, in 100Hz steps ➤ Symbol Rate: 160, 320, 640, 1280, 2560 ksym/s <p>Input Level: 0 dBmV -15 dBmV</p>	<p><u>Network Management</u></p> <ul style="list-style-type: none"> ➤ SNMP ➤ MIB Group: MIB II, DOCSIS MIB, Vendor-Specific MIB ➤ DHCP Relay (future) ➤ PPPoE ➤ Telnet <p><u>Media-Access-Control (MAC)</u></p> <ul style="list-style-type: none"> ➤ DOCSIS 1.0, DOCSIS 1.1 ➤ DOCSIS 1.1 futures <ul style="list-style-type: none"> ➤ Fragmentation ➤ Payload Header suppression ➤ Concatenation ➤ Quality-of-Service Controls ➤ High-Performance Scheduler ➤ Rule-based packet filtering upstream and downstream <p><u>Network Interfaces</u></p> <p>10/100 Base-T Ethernet (RJ45 CAT-5)</p> <ul style="list-style-type: none"> ➤ 	<p><u>Environmental parameters</u></p> <ul style="list-style-type: none"> ➤ Operating temperature 0°C ~ 40°C ➤ Storage temperature -25°C ~ 60°C ➤ Humidity 10 % ~ 90 % (non-condensing) <p><u>Power Supply</u></p> <p>Full range switching power supply</p> <p><u>Mini OSS pico</u></p> <p>Available on board on all type of CMTS up to 500 users</p> <ul style="list-style-type: none"> ➤ Web access, ➤ User Admission ➤ Configuration file building ➤ Support - Provisioned Registration ➤ DHCP/TOD/TFTP/HTTP services ➤ Subscriber and modem data base management ➤ Billing option: Prepaid, post-paid traffic limited ➤ Monitoring, SNR graphs ➤ CMTS configuration

Sales and Service points

Daphne SA
Chaussée de Binche 101
7000 Mons - BELGIUM

Sales contact:

TEL : + 32 65 84 11 04
FAX: + 32 65 84 31 56
Sales@daphne-sa.be
<http://www.daphne-sa.be>



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