

JADE-NS

Hardened "Node Size"

Cable Modem Termination System

Hardened DOCSIS systems enable carriers to offer scalable, secured high speed, value-added IP services into neighbourhoods and industrial areas

To extend DOCSIS technology beyond buildings and into the telecom access network, several key issues need to be addressed including :

- Environmental
- Physical size
- Power
- Field practices

DAPHNE hardened DOCSIS systems are 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...

These outside locations are subject to extremes of heat, cold, humidity, shock and vibration.

The Hardened Jade-NS , from the DAPHNE Cable Modem Termination System (CMTS) family JADE, is a high-performance, scalable, cost-effective solution for all sizes of cable networks.

With more than 12 years of experience in delivering industrial hardened systems, DAPHNE has a unique skill-set in the industry that enables the deliver of very high speed and cost effective DOCSIS systems for the industrial environment.

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

The Hardened Jade-NS is designed to comply with the Data over Cable Service Interface Specification (DOCSIS) 1.0, 1.1 standards. It is designed on the base of JADE-S on site experience.

Interoperability with any DOCSIS/EURODOCSIS 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 subscribers and the backbone data network.

The Hardened Jade-NS is configured with 4 upstream channels per downstream, with integrated up converter to fit the operator's capacity and plant quality needs.

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

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

Up to 500 users it can be embedded by internal mini OSS

JADE-NS



Hardened JADE

- ✓ **Extended Environmental Conditions**
- ✓ **DOCSIS/EURODOCSIS compliance**
- ✓ **Integrated up-converter**
- ✓ **Operations Support**
SNMP and Telnet access
- ✓ **Remote Control**
- ✓ **Packet Filtering**
- ✓ **Quality of Service provisioning**
- ✓ **User Admission**
(Support - Provisioned Registration)
- ✓ **100% of interoperability with all DOCSIS & EURO-DOCSIS systems**
- ✓ **Full System Scalability**
- ✓ **Remote Configuration Management**
- ✓ **Low-cost initial deployment**
- ✓ **PPPoE support**
- ✓ **DHCP Relay support** *(Next future)*



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Specifications: Hardened Jade-NS

RF Specifications	Network and Security	Environnemental
<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 36.125 or 44 MHz IF) ➤ Spectral Occupancy: 64 QAM: 0.18 SRRC 256 QAM: 0.12SRRC ➤ Return Loss: 14 dB ➤ Output Impedance: 75 ohms <p><i>Integrated up converter option:</i></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 ➤ Input Level: 0 dBmV -15 dBmV 	<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 1.1 <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>	<p><u>Environmental parameters</u></p> <ul style="list-style-type: none"> ➤ Qualified temperature -10°C ~ 60°C ➤ Operating temperature -10°C ~ 55°C ➤ Storage temperature -25°C ~ 60°C ➤ Humidity 10% ~ 90% (non-condensing) <p><u>Power Supply</u></p> <p>Full range switching power supply 220V AC or 50V AC</p>

Sales and Service points



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