



ELECTROCENTRALE BUCUREȘTI S.A.

„în insolvență”, „in insolvency”, „en procedure collective”



CTE GROZAVESTI

APROBAT
DIRECTOR GENERAL ADJUNCT
Dan Laurentiu TUDOR

AVIZAT
DIRECTOR TEHNIC
Constantin DOBRE

0704 2017

SECȚIUNEA II

CAIET DE SARCINI nr. 7 G / 2017

pentru furnizarea: Piese de schimb pentru sistemul de conducere al cazanului de abur nr.1 din CTE Grozavesti

Cap.I Obiectul caietului de sarcini

Obiectul prezentului caiet de sarcini este furnizarea pieselor de schimb detaliate in anexa nr.1 .

Cap.II Scopul achiziției produselor

Achiziția produselor din prezentul caiet de sarcini se face în scopul asigurării funcționării în condiții optime de exploatare, siguranță și la parametrii ai Cazanului de abur nr.1.

Cap.III Termenul de livrare

1. Termenul de livrare pentru piesele de schimb ce fac obiectul prezentului caiet de sarcini este de **50 zile calendaristice** de la data perfectării contractului.

2. Electrocentrale Bucuresti SA nu va accepta decalări ale termenelor de livrare după semnarea contractului

Cap. IV Caracteristicile tehnice ale produselor

1. Caracteristicile pieselor de schimb ce fac obiectul prezentului caiet de sarcini sunt precizate in anexa nr.1 si in anexa nr.2, ce fac parte integranta din prezentul caiet de sarcini.

Cap.V Cerinte tehnice impuse de autoritatea contractanta in faza de ofertare

Oferta tehnica va cuprinde date tehnice si informatii care sa dovedeasca ca produsele oferite indeplinesc toate conditiile tehnice descrise in anexele mentionate.

1. In oferta tehnica ofertantul va certifica furnizarea produselor solicitate in anexa nr. 1.

2. Specificatiile tehnice ce trebuie respectate se afla in anexa nr. 2.

3. In oferta tehnica se vor inscrie in mod obligatoriu informatii privind termenul de livrare al produselor oferite.

4. Se vor prezenta specificatiile tehnice si orice alte informatii care contribuie la descrierea cat mai amanuntita a produselor oferite.

5. Deoarece se impune achizitionarea de produse 100 % compatibile (din toate punctele de vedere: dimensional, tehnic, design, software, etc.) cu cele din instalatie, in documentatie au fost specificate date tehnice ale pieselor originale existente in instalatie.

6. In cadrul ofertei tehnice se vor prezenta acte doveditoare care sa confirme ca produsele ce fac obiectul prezentului caiet de sarcini sunt fabricate in sistemul de management al calitatii conform cu SR EN ISO 9001 in vigoare sau conform oricarui alt standard de sistem de management al calitatii echivalent.

Cap.VI Cerinte tehnice impuse de autoritatea contractanta pe parcursul derularii contractului

1) Documentatia de executie este asigurata de furnizor.

2) Piesele de schimb executate trebuie sa corespunda documentatiilor tehnice de executie si de calitate, tuturor probelor si incercarilor finale prevazute in documentatiile proiectantului, caietului de sarcini si procedurilor de management al calitatii prevazute in manualul de calitate propriu in conformitate cu **SR EN ISO 9001/in vigoare**

3) Materialele din care se vor confecciona piesele de schimb trebuie sa fie in termenul de garantie acordat de furnizor. Este interzisă utilizarea materialelor care au depasit termenul de garantie acordat de furnizor sau care, fiind in termenul de garantie, s-au deteriorat datorita depozitarii necorespunzatoare.

4) Furnizorul isi va asuma intreaga responsabilitate pentru calitatea si performantele produselor furnizate.

5) Sa execute fara plata piesele de schimb efectuate cu deficiente si abateri de la documentatii, standarde, prescriptii tehnice, constatate la receptie sau in perioada de garantie.

Cap.VII Receptia

1) Calitatea produselor este atestata de furnizor prin certificate de calitate, conformitate etc., ce insotesc produsele catre beneficiar.

2) Receptia cantitativa si calitativa la beneficiar se efectueaza in termen de 3 zile de la data primirii produselor, pe baza documentelor care insotesc transportul mentionate si a testelor facute de beneficiar.

Cap.VIII Conditii impuse privind ambalarea, conservarea, livrarea si transportul produselor

1. Livrarea produselor se face franco depozit beneficiar – CTE Grozavesti, Splaiul Independentei nr. 229, sector 6, in intervalul orar 7-15 in zilele lucratoare, cu asigurarea mijloacelor de transport si suportarea cheltuielilor aferente de catre furnizor.

2. Produsele se vor livra cu ambalaj sau fara in functie de specificul acestora si conditiile impuse prin caietul de sarcini sau documentatii tehnice.

3. Furnizorul, pe cat posibil, va utiliza ambalaje biodegradabile.

4. Ambalarea si conservarea produselor livrate se face in asa fel incat acestea sa-si pastreze caracteristicile calitative pe toata perioada de garantie daca nu au fost introduse la montaj.

5. Marcajul se face conform standardelor, caietelor de sarcini, documentatiilor de executie ale furnizorului.

6. Fiecare transport va fi însoțit obligatoriu de următoarele documente:

- dispoziție de livrare - aviz de expediție;
- certificate de calitate pentru produsele noi;
- certificate de garanție pentru produsele noi ;

7. Riscul pentru eventualele pierderi sau deteriorări ale produselor pe timpul transportului, revine furnizorului, care în situații deosebite va acționa și pretinde despăgubiri de la căraș.

Cap. IX Garanții

1. Garanția tehnică solicitată este de minimum **12 luni** de la livrare pentru produsele noi și **6 luni** pentru cele refurbished și second hand.

2. Furnizorul are obligația de a garanta că produsele furnizate sunt în conformitate cu specificațiile tehnice și de calitate prevăzute în ofertă.

Cap. X Alte clauze

1. Anexele nr. 1 și 2 fac parte integrantă din prezentul caiet de sarcini.

2. La elaborarea ofertei tehnice se va ține seama de cerințele descrise în prezentul caiet de sarcini și în fișa de date la capitolul specific "Modul de prezentare a propunerii tehnice".

DIRECTOR CTE GROZĂVEȘTI

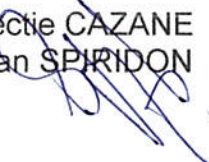
Sorin TUDOR



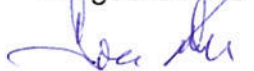
BTMIUTI
Haig DANIELIAN



Secție CAZANE
Ioan SPIRIDON



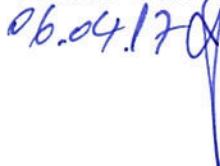
RESPONSABIL BTMIUTI
Dragos SIRBU



RESP. MC
Viorel OLTEANU



VIZAT
Serviciu Tehnic și Mentenanță
Adrian OLTEANU



06.04.17

BDUR
Ion VASILE




Responsabil BDUR



MIRCEA YERCU


LISTA DE CANTITATI DE ECHIPAMNTE / PIESE DE SCHIMB

Nr.crt	Denumire echipamnt / piese deschimb	UM	Cantitate	Termen de livrare solicitat
0	1	2	3	4
1	HDD Seagate Cheetah ST37345LC, Capacity 73 GB, 15 K RPM, SCSI Drive new, or refurbished / second hand	buc	8	50 zile calendaristice
2	Sursa de alimentare statie DCS Dell Antec Sp-350p 350 W sau echivalent pentru Dell Optilex GX620 de backup DCS Ovation New, or  refurbished / second hand	buc	1	50 zile calendaristice
3	Imprimanta echivalenta cu HP Inkjet 2800 cu drivere pentru windows server 2000, 2003, XP - <i>new</i>	buc	1	50 zile calendaristice
4	Statie de lucru Dell Optilex GX620 second/refurbished	buc	2	50 zile calendaristice
5	Server Power Edge 830 second/refurbished	buc	1	50 zile calendaristice
6	Dell Power Edge 2800 Server TW second/refurbished	buc	1	50 zile calendaristice
7	Monitor 23 inch new - nou	buc	4	50 zile calendaristice

Prezenta lista de cantitati de produse contine un numar de 7 pozitii si un numar de 1 pagini

Sectia CAZANE
Ioan SPIRIDON 

BTMIUTI
Haig DANIELIAN 

Responsabil BTMIUTI
Dragos SIRBU 

Vizat,

Şef Serviciu Tehnic si Mentenanta
Adrian OLTEANU 

Şef BDUR
Ion VASILE 

Responsabil BDUR
MIRCEA VOICU 

Specificatii tehnice piese de schimb pentru DCS aferent cazanului de abur nr. 1 din CTE Grozavesti

1	HDD Seagate Cheetah ST37345LC, Capacity 73 GB, 15 K RPM, SCSI Drive
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Seagate Cheetah 15K.5 3.5 inch Hard Disk Drive

- o 73.4GB Capacity
- o 15K RPM spindle speed
- o 16-MB cache
- o 3-Gb/s Serial Attached SCSI (SAS) interface
- o 24 pin Mother Board

2	Sursa de alimentare statie DCS Dell Antec Sp-350p 350 W sau echivalent pentru Dell Optiplex GX620 de backup DCS Ovation
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- ATX12V version 2.0
 - o Dual 12V output circuitry provides added system stability and meets 240VA UL requirements and safety purpose: 12V1 for Motherboard and peripherals; 12V2 for processor
 - o ATX12V v2.0 compliance allows SmartPower 2.0 to consume up to 25% less power than standard power supplies, saving you money on your electric bill. 24-pin power connector with detachable 4-pin section.
 - o 4 SATA Connectors support Serial ATA drives
 - o Flow-through dual 80mm fans (one intake and one exhaust)
 - o **Unique Dual Fans Technology: exhaust fan starts to spin when the power supply reaches certain temperatures to ensure proper airflow, the second fan spins on power up**
 - o Industrial grade protection prevents damage resulting from short circuits, power overloads, excessive current, low voltages and excessive voltages
 - o Increased 12V output capability for system components that consume more power from 12V rail
 - o PCI-E graphic connector
 - o Safety approvals: UL, CUL, TUV, CB, FCC Class B, CE, CCC
 - o Increased MTBF: 80,000 hours
 - o Size: 5.9" (W) x 3.4" (H) x 6.1"(D)
 - o PF value greater than 90% (EU only)
 - o Gold plated connector for superior conductivity
 - o **Unit Dimensions:**
 - 3.4"(H) x 5.9"(W) x 5.5"(D)
 - 8.64cm(H) x 14.99cm(W) x 13.97cm(D)

- **Package dimensions:**
 - 12.8" (H) x 10.2" (W) x 4" (D)
 - 32.51cm (H) x 25.91cm (W) x 10.16 cm (D)
- **Weight:**
 - Net: 5.00lb / 2.27kg
 - Gross: 6.00lb / 2.72kg

3	Imprimanta echivalenta cu HP Inkjet 2800 cu drivere pentru windows server 2000, 2003, XP new - noua
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HP Business Inkjet 2800 series printer specificatii –
se accepta ceva echivalent ca si compatibilitate si performanta

Technical specifications

HP Business Inkjet 2800 printer (C8174A)
 HP Business Inkjet 2800dt printer (C8163A)
 HP Business Inkjet 2800dtn printer (C8164A)

Print speed (letter)

5

Black

24 ppm Draft; 12.5 ppm Fast Normal; 6.5 ppm Normal; 4 ppm Best

Color 21 ppm Draft; 12 ppm Fast Normal; 5 ppm Normal; 4 ppm Best

Print cartridge volume

Black: 69 ml; cyan, magenta, yellow: 28 ml each

Resolution

HP PhotoREt III, up to 4800 by 1200 optimized dpi on
 premium photo paper, 1200 by 600 dpi black and white

Color calibration

ColorSync, ICC Profiles, PANTONE®

Processor : 256 MHz

Memory :96 MB RAM (upgradeable to 352 MB with two 100-pin SDRAM DIMM) with Memory Enhancement technology (MEt)
 Duty cycle

Up to 12,000 pages per month

Automatic duplex printing

Optional

Standard

Automatic paper sensor

Standard

Media

Input capacity 150-sheet main tray 150-sheet main tray, 250-sheet input tray

Output capacity

100-sheet output tray

Custom sizes 3.54 by 5.75 in (90 by 146 mm) to 13 by 19 in (330 by 483 mm)

Standard sizes

Letter, legal, tabloid, super B, executive, statement, index cards, envelopes (No. 10, Monarch)

Weights Tray 1: 16 to 76 lb (60 to 286 g/m²) (including plain and photo media); Tray 2: 16 to 24 lb (60 to 90 g/m²)

Types

Tray 1: Paper (plain, inkjet, photo), envelopes, transparencies, labels, cards (index, greeting); tray 2: plain paper only

Connectivity

Interfaces

IEEE 1284-compliant parallel, Full-Speed USB 2.0, one open EIO slot

IEEE 1284-compliant parallel, Full-Speed USB 2.0,

HP Jetdirect 620n Fast Ethernet internal print server

Printer language HP PCL 6, HP PCL 5e, HP postscript level 3 emulation

Fonts

Supports HP80 fonts (45 TrueType and 35 PostScript® fonts built-in, all postscript emulation and HP PCL 5e and HP PCL 6 accessible). Intellifont and TrueType rasterizer built into HP PCL 5e and HP PCL 6. Built-in support for Arabic, Cyrillic, Greek, Hebrew, and Ukrainian symbol sets.

There are 49 symbol sets in HP PCL

5e and HP PCL 6 to support all the languages that use these characters.

Client operating systems Windows 2000, XP; Mac OS X v10.2.8, v10.36, v10.4 and higher

Network operating systems

Windows 2000, Windows 2003 Server, NetWare (4.2, 5.1, 6.5), NT4 Terminal Server, NT4 Terminal Server with Citrix MetaFrame v 1.8, NT4 Terminal Server with Citrix MetaFrame XP, Window 2000 Terminal Services, Windows 2000 Terminal Services with Citrix MetaFrame 1.8, Windows 2000 Terminal Services with Citrix MetaFrame XP, Windows 2003 Terminal Services, Windows 2003 Terminal Services with Citrix MetaFrame Presentation Server

Minimum system requirements

CD ROM; Microsoft Internet Explorer v. 5 or later; Windows 2000: Pentium 300, 64 MB RAM, 160 MB on hard disk;

Windows XP 32: Pentium 233, 64 MB RAM, 160 MB on hard disk;
Windows XP 64: Pentium 233, 128 MB RAM, 160 MB on hard disk
iMac 600 MHz, 128 MB; Power Mac G3 or later 400 MHz, 128 MB; iBook 366 MHz, 128 MB

Dimensions (w by d by h)
26.6 by 19.6 by 7.8 in (676 by 498 by 199 mm)
26.6 by 23.1 by 10.4 in (676 by 588 by 263 mm)

Weight
29.7 lb (13.5 kg) 41.8 lb (19 kg)

What's in the box
Printer, Set up Roadmap, 4 print cartridges (HP 10 black ink cartridge, 26 ml; HP 11 cyan ink cartridge, 28 ml; HP 11 magenta ink cartridge, 28 ml; HP 11 yellow ink cartridge, 28 ml), 4 printheads (HP 11 black printhead, HP 11 cyan printhead, HP 11 magenta printhead, HP 11 yellow printhead), Getting Started Guide, power cord, driver CD

Also includes Automatic two-sided printing unit, 250-sheet tray Automatic two-sided printing unit, 250-sheet tray, HP Jetdirect 620n Fast Ethernet internal print server (installed)

4	Satie de lucru Dell Optilex GX620 second/refurbished	buc	1
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OptiPlex GX620 Specificatii Originale

System Processor Type Intel 945G chipset, Intel Pentium D processor with Dual Core architecture, Intel Pentium D processor with 800 MHz front side bus, Hyper-Threading and up to 2MB L2 cache or Celeron D processor with 533MHz front side bus and 256K L2 cache.

Processor Features

Intel Pentium D 800MHz FSB socket T with Dual Core technology XD EM64T and EIST

Intel Pentium

4 800MHz FSB socket T with HT, XD EM64T, and
 1MB L2 cache
 Intel[®]
 Pentium[®]
 4 800MHz FSB socket T with HT, XD EM64T, 2MB
 L2 cache and EIST¹
 Intel[®]
 Celeron[®]
 D 533 MHz FSB Socket T with XD EM64T
 Operating Systems
 Dell recommends Microsoft[®]
 Windows[®]
 XP; Microsoft Windows[®]
 XP Professional and Microsoft Windows XP Home
 Memory
 4 DIMM slots (2 DIMM slots on USFF chassis) Non-ECC dual
 channel shared²
 DDR2 SDRAM system memory (533MHz) up to
 4GB³
 Video Graphics
 Integrated Intel[®]
 Graphics Media Accelerator 950[®]
 ;¹
 Controller
 DVI Adapter card; 128MB ATI Radeon[™]
 X600SE with DVI and
 TV-out
 Hard Drive
 40GB⁴
 ; 80GB⁴
 and 160GB⁴
 250GB⁴
 7200RPM Serial ATA
 Network Controller
 Broadcom[®]

5751 Gigabit Ethernet LAN solution 10/100/1000

Ethernet with Remote Wake Up and PXE support

Standard I/O Ports

Eight USB 2.0 (two front and six rear), USFF offers 7 USB 2.0 (2 front and 5 rear), one Ethernet (RJ45), one nine-pin serial (16550 compatible), one parallel (25-hole, bi-directional), 1 VGA out, (DVI-I out on USFF) Optional Second serial port (Not available on USFF), stereo line-in, microphone-in (front), speakers/line-out and headphone (front)

Chassis

Dimensions

Small Form Factor 12.4" x 3.6" x 13.4" (31.63cm x 9.26cm x 34cm)

Desktop 15.6" x 4.5" x 13.7" (39.59cm x 11.43cm x 34.77cm)

Mini-Tower 16.2" x 7.3" x 17" (41.14cm x 18.96cm x 43.18cm)

Ultra Small Form Factor 10.3" x 3.5" x 9.9" (26.3cm x 8.9cm x 25.28cm)

Power Supply

Small Form Factor 275W; Desktop 280W; Mini-Tower 305W; Ultra small form factor 220W (External)

Peripherals

Monitors

Ultrasharp 15" TFT Flat Panel

UltraSharp 17" TFT Flat Panel

UltraSharp 19" TFT Flat Panel

15" TFT Flat Panel

17" TFT Flat Panel

19" TFT Flat Panel

17" E773 CRT (16.0" V.I.S.)

17" M783 CRT (15.35" V.I.S.)

19" UltraScan M993 (17.9" V.I.S.)

All In One Solutions

Ultra Sharp 17" All In One (SF Chassis); Ultra Sharp 19" All In One (SF Chassis); 17" All In One (USFF chassis)

Keyboard (105 Keys)

Dell Enhanced QuietKey™

USB, Enhanced Performance USB, Smart Card keyboard USB (available in selected countries)

Mouse

Dell USB two-button and Dell USB optical two-button scroll Speakers

Internal Dell Business Audio speaker, Dell A215, AS500 and AS500PA sound bar available with select FP monitors

Storage Devices
Removable Media
Floppy Drive, CD-ROM, CDRW

⁹, CD-RW/DVD

⁶ Combo,

Storage Devices

DVD-ROM

^{6,9} and DVD+/-RW

⁷

USB Storage Keys

Dell USB Memory Key 256MB USB 2.0 full speed compliant and

bootable

Security

Security

Trusted Platform Module 1.2 (TPM 1.2) standard on the GX620

Chassis intrusion switch standard on GX620

Environmental, Ergonomics & Regulatory Service & Support

Standards

TCO99, Blue Angel, Green PC, Energy Star, BSMI, C-TICK, CE, FCC,

IRAM, NEMKO, NFPA 99, SABBS, SASO, TCO, TUV, UL, VCCI, USB

2.0

Se are in vedre doar modelul dektop cu sursa de 350 W

5	Server Power Edge 830 second/refurbished, CPU 3.6 GHz, 4 Gb RAM, HDD 73Gb 15K RPM	buc	1
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Processor(s) Single Intel® Pentium® D (dual core) processor (up to 3.2GHz)

Single Intel Pentium 4 processor (up to 3.6GHz)

Single Intel Celeron® D processor (2.53GHz) Front side bus 800MHz for Pentium 4;

800MHz for Pentium D; 533MHz for Celeron Cache 1MB or 2MB for Pentium 4, two 1MB for Pentium D;

256K for Celeron Chipset Intel E7230 Memory Up to 8GB DDR2-533/667 I/O channels Five total: two PCI Express™ slots (1x8 lane and 1x1 lane);

two PCI-X® slots (64-bit/133MHz, 3.3v);

one PCI slot (32-bit/33MHz) Drive controller Embedded SATA;

optional U160 RAID controller CERC SATA 6 channel;

PERC4/SC; PERC4e/DC Drive bays Four cabled SATA or cabled,

front access or hot-plug Ultra320 SCSI

Maximum internal storage Up to 1TB SATA or up to 1.2TB1 SCSI Hard drives4 80GB, 160GB and 250GB4 (7,200 rpm) SATA 73GB,

146GB and 300GB (10,000 rpm) SCSI 36GB

and 73GB (15,000 rpm) SCSI Internal storage performance 10K/15K RPM U320 SCSI drives;

7200 RPM SATA drives External storage Dell PowerVault™ tape

or SCSI Tape backup options Dell PowerVault IDE

and SCSI solutions Network interface card Single embedded Gigabit2 ethernet Power supply 420W Availability DDR2-533/667 ECC memory; hot-plug SCSI Video XGI XG20 on motherboard with 16MB memory Remote management Baseboard management controller; optional DRAC/4p Systems management Dell OpenManage™ Rack support 3rd party only Operating systems Windows® 2000 Server, Standard Edition (service pack 4); Windows 2003 Standard Edition, x64 Edition; Small Business Server, x64 Edition; Red Hat® Enterprise Linux® ES v3, v4 IA32, v4 for EM64T; Novell® NetWare® v6.5 Pack 3; SUSE® Linux ES9, EM64T

6	Dell Power Edge 2800 Server TW second/refurbished, CPU 3.8 GHz, 4 Gb RAM, HDD 73Gb 15K RPM	buc	1
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Form factor Tower or 5U rack-mount

Processors Up to two single-core 64-bit Intel® Xeon™ processors at up to 3.8GHz or up to two dual-core 64-bit Intel Xeon processor at 2.8GHz

Front side bus 800MHz Cache Up to 2MB L2 per processor core Chipset Intel E7250

Memory 256MB/12GB DDR-2 400 SDRAM;

16Gb with availability of dual rank 4GB DIMMS1 I/O channels Seven total:

two PCI Express™ slots (1 x 4 lane and 1 x 8 lane); four PCI-X™ slots (64-bit/133MHz);

one PCI slot (32-bit/33MHz, 5v) Drive controller Embedded dual channel Ultra320 SCSI RAID controller Optional dual channel ROMB (PERC4/Di), PERC4/DC and PERC4e/DC2 Drive bays Eight 1" + Two 1"

Ultra320 hot-plug SCSI drives with internal tape drive support Maximum internal storage

e Up to 1.46GB or up to 3TB with availability of 300GB hard drive Hard drives 36GB, 73GB, 146GB and 300GB3 (10,000 rpm)

Ultra320 SCSI 18GB, 36GB, 73GB and 146GB (15,000 rpm)

Ultra320 SCSI Internal storage 10K/15K RPM SCSI drives

External storage Dell PowerVault™ SCSI and Dell/EMC® fibre channel storage Tape backup options Internal:

PowerVault 100T and 110T External: PowerVault 114T, 122T, 132T, 136T

and 160T Network interface card Dual embedded Intel 10/100/1000 Gigabit NIC, Intel PRO/1000 MT Gigabit NIC (copper),

Intel PRO/1000 MF Gigabit NIC (fibre)

Power supply 930W, optional hot-plug redundant power Availability ECC memory,

Hot-plug PCI Express slots, Single Device Data Correction (SDDC),

Spare Bank, Memory Mirroring; hot-plug SCSI hard drives;

optional hot-plug redundant power; hot-plug redundant cooling; tool-less chassis;

high availability fibre channel and SCSI cluster support; optional ROMB with battery-backed cache;

optional Split Backplane; LCD panel;

Active ID Video Embedded ATI Radeon 7000-M with 16MB SDRAM

Remote management Baseboard Management Controller with IPMI 1.5 compliance,

accessible via network or serial port;

optional slot-free DRAC4/I Systems management Dell OpenManage™ Rack support 4-post (Dell rack)

and 3rd party Operating systems Microsoft® Windows® Server 2003, Standard x64 Edition; Microsoft Windows Server 2003;

Enterprise x64 Edition, Microsoft Windows Server 2003, Standard Edition; Microsoft Windows Server 2003,

Enterprise Edition; Microsoft Windows Small Business Server 2003,

Standard/Premium Red Hat® Linux® Enterprise v2.1 AS and ES;

Red Hat Linux Enterprise v3 AS and ES; Red Hat Linux Enterprise v3 Advance Server EM64T; Novell® NetWare® 5.1 and

7	Monitor 23 inch	buc	4
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Diagonala :23 inch
 Rezolutie native :1920 x 1080 pixeli
 Tehnologie ;Full HD
 Format ecran :16:9
 Contrast:1000:1
 Contrast dynamic :2.000.000:1
 Timp de raspuns :8 ms
 Intensitate luminoasa :250 cd/mp
 Dimensiune punct :0.2652 mm
 Reproducere culori :16.7 milioane
 Unghi maxim vizibilitate orizontala/verticala :178 / 178 grade

Conectori

D-Sub : Da
 DVI : Da
 DisplayPort ;Da
 USB ; Da

Multimedia

Tuner TV: Nu
 Boxe incorporate :Nu

Caracteristici Generale

Dimensiuni (l x L x A) : 363~493 x 545.8 x 180 mm
 Greutate : 3.34 kg
 Culoare : Negru
 Putere consumata : Tipic: 20 W; Maxim: 38 W
 Montare pe perete : VESA 100 x 100mm
 Pivot :Da

Garantie

Garantie (luni): 36

Sectia CAZANE
 Ioan SPIRIDON

BTMIUTI
 Haig DANIELIAN

Responsabil BTMIUTI
 Dragos SIRBU