

GE Healthcare

MUSE™ Cardiology Information Systems

Hardware Manual

Software Version 8.0

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MUSE Cardiology Information System
English
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Publication Information

The information in this manual applies only to MUSE™ Cardiology Information System Version 8.0. It does not apply to earlier product versions. Due to continuing product innovation, specifications in this manual are subject to change without notice.

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The document part number and revision are on each page of the document. The revision identifies the document's update level. The revision history of this document is summarized in the following table.

Revision	Date	Comments
A	29 March 2011	Initial release of this document.
B	24 August 2011	Updated the replacement part number for the Disk Drive; 20344800-002 is no longer available and has been replaced by 2034800-003 per SPR HCSDM00093570.
C	23 April 2012	Updated for new HP G7 server. Updates per SPR 133398: The System Components — Server chapter had updates to the HP DL360 G7 section, sub sections: • Specifications Changes made for RAID and Usable Storage • Replacement Parts The following parts were updated: • Access Panel • System Fan Module • Hot-Plug Power Supply • DIMM 2-GB, PC3_10600R, dual-rank • HDD 600-GB, SATA, 10,000-rpm • AC Power Cord
D	14 February 2013	Updated for the HP rp5800 platform.
E	19 March 2015	Updated HP rp5800 part numbers for RAM and the Internal Hard Drive.

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To access Original Equipment Manufacturer (OEM) documents, go to the device manufacturer's website.

Service Manual Language Information

WARNING (EN)	This service manual is available in English only. • If a customer's service provider requires a language other than English, it is the customer's responsibility to provide translation services. • Do not attempt to service the equipment unless this service manual has been consulted and is understood. • Failure to heed this warning may result in injury to the service provider, operator, or patient, from electric shock, mechanical or other hazards.
ПРЕДУПРЕЖДЕНИЕ (BG)	Това упътване за работа е налично само на английски език. • Ако доставчикът на услугата на клиента изиска друг език, задължение на клиента е да осигури превод. • Не използвайте оборудването, преди да сте се консултирали и разбрали упътването за работа. • Неспазването на това предупреждение може да доведе до нараняване на доставчика на услугата, оператора или пациент в резултат на токов удар или механична или друга опасност.
警告 (ZH-CN)	本维修手册仅提供英文版本。 • 如果维修服务提供商需要非英文版本，客户需自行提供翻译服务。 • 未详细阅读和完全理解本维修手册之前，不得进行维修。 • 忽略本警告可能对维修人员，操作员或患者造成触电、机械伤害或其他形式的伤害。
警告 (ZH-TW)	本維修手冊只提供英文版。 • 如果客戶的維修人員有英語以外的其他語言版本需求，則由該客戶負責提供翻譯服務。 • 除非您已詳閱本維修手冊並了解其內容，否則切勿嘗試對本設備進行維修。 • 不重視本警告可能導致維修人員、操作人員或病患因電擊、機械因素或其他因素而受到傷害。
UPOZORENJE (HR)	Ove upute za servisiranje dostupne su samo na engleskom jeziku. • Ukoliko korisnički servis zahtijeva neki drugi jezik, korisnikova je odgovornost osigurati odgovarajući prijevod. • Nemojte pokušavati servisirati opremu ukoliko niste konzultirali i razumjeli ove upute. • Nepoštivanje ovog upozorenja može rezultirati ozljedama servisnog osoblja, korisnika ili pacijenta prouzročenim električnim udarom te mehaničkim ili nekim drugim opasnostima.
VAROVÁNÍ (CS)	Tento provozní návod existuje pouze v anglickém jazyce. • V případě, že externí služba zákazníkům potřebuje návod v jiném jazyce, je zajištění překladu do odpovídajícího jazyka úkolem zákazníka. • Nesnažte se o údržbu tohoto zařízení, aniž byste si přečetli tento provozní návod a pochopili jeho obsah. • V případě nedodržování této varování může dojít k poranění pracovníka prodejního servisu, obslužného personálu nebo pacientů vlivem elektrického proudu, respektive vlivem mechanických či jiných rizik.

Service Manual Language Information (cont'd.)

ADVARSEL (DA)	Denne servicemanual findes kun på engelsk. • Hvis en kundes tekniker har brug for et andet sprog end engelsk, er det kundens ansvar at sørge for oversættelse. • Forsøg ikke at servicere udstyret medmindre denne servicemanual har været konsulteret og er forstået. • Manglende overholdelse af denne advarsel kan medføre skade på grund af elektrisk, mekanisk eller anden fare for teknikeren, operatøren eller patienten.
WAARSCHUWING (NL)	Deze service manual is alleen in het Engels verkrijgbaar. • Indien het onderhoudspersoneel een andere taal nodig heeft, dan is de klant verantwoordelijk voor de vertaling ervan. • Probeer de apparatuur niet te onderhouden voordat deze service manual geraadpleegd en begrepen is. • Indien deze waarschuwing niet wordt opgevolgd, zou het onderhoudspersoneel, de gebruiker of een patiënt gewond kunnen raken als gevolg van een elektrische schok, mechanische of andere gevaren.
HOIATUS (ET)	Käesolev teenindusjuhend on saadaval ainult inglise keeles. • Kui klienditeeninduse osutaja nõuab juhendit inglise keelest erinevas keeles, vastutab klient tõlketeenuse osutamise eest. • Ärge üritage seadmeid teenindada enne eelnevalt käesoleva teenindusjuhendiga tutvumist ja sellest aru saamist. • Käesoleva hoiatuse eiramine võib põhjustada teenuseosutaja, operaatori või patsiendi vigastamist elektrilöögi, mehaanilise või muu ohu tagajärjel.
VAROITUS (FI)	Tämä huolto-ohje on saatavilla vain englanniksi. • Jos asiakkaan huoltohenkilöstö vaatii muuta kuin englanninkielistä materiaalia, tarvittavan käännöksen hankkiminen on asiakkaan vastuulla. • Älä yritä korjata laitteistoa ennen kuin olet varmasti lukenut ja ymmärtänyt tämän huolto-ohjeen. • Mikäli tätä varoitusta ei noudateta, seurauksena voi olla huoltohenkilöstön, laitteiston käyttäjän tai potilaan vahingoittuminen sähköiskun, mekaanisen vian tai muun vaaratilanteen vuoksi.
CẢNH BÁO (VI)	Tài Liệu Hướng Dẫn Sửa Chữa chỉ có bản tiếng Anh. • Nếu các đơn vị cung cấp dịch vụ cho khách hàng yêu cầu một ngôn ngữ nào khác tiếng Anh, thì khách hàng sẽ có trách nhiệm cung cấp các dịch vụ dịch thuật. • Không được sửa chữa thiết bị trừ khi đã tham khảo và hiểu Tài liệu Hướng dẫn Sửa chữa. • Không tuân thủ những cảnh báo này có thể dẫn đến các tổn thương cho người thực hiện sửa chữa, người vận hành hay bệnh nhân, do sốc điện, các rủi ro về cơ khí hay các rủi ro khác.

Service Manual Language Information (cont'd.)

WARNUNG (DE)	Diese Serviceanleitung ist nur in englischer Sprache verfügbar. - Falls der Kundendienst eine andere Sprache benötigt, muss er für eine entsprechende Übersetzung sorgen. - Keine Wartung durchführen, ohne diese Serviceanleitung gelesen und verstanden zu haben. - Bei Zuwiderhandlung kann es zu Verletzungen des Kundendiensttechnikers, des Anwenders oder des Patienten durch Stromschläge, mechanische oder sonstige Gefahren kommen.
ΠΡΟΕΙΔΟΠΟΙΗΣΗ (EL)	Το παρόν εγχειρίδιο σέρβις διατίθεται στα αγγλικά μόνο. - Εάν το άτομο παροχής σέρβις ενός πελάτη απαιτεί το παρόν εγχειρίδιο σε γλώσσα εκτός των αγγλικών, αποτελεί ευθύνη του πελάτη να παρέχει υπηρεσίες μετάφρασης. - Μην επιχειρήσετε την εκτέλεση εργασιών σέρβις στον εξοπλισμό εκτός εάν έχετε συμβουλευτεί και έχετε κατανοήσει το παρόν εγχειρίδιο σέρβις. - Εάν δεν λάβετε υπόψη την προειδοποίηση αυτή, ενδέχεται να προκληθεί τραυματισμός στο άτομο παροχής σέρβις, στο χειριστή ή στον ασθενή από ηλεκτροπληξία, μηχανικούς ή άλλους κινδύνους.
FIGYELMEZTETÉS (HU)	Ez a szerviz kézikönyv kizárólag angol nyelven érhető el. - Ha a vevő szerviz ellátója angoltól eltérő nyelvre tart igényt, akkor a vevő felelőssége a fordítás elkészítése. - Ne próbálja elkezdni használni a berendezést, amíg a szerviz kézikönyvben leírtakat nem értelmezték és értették meg. - Ezen figyelmeztetés figyelmen kívül hagyása a szerviz ellátó, a működtető vagy a páciens áramütés, mechanikai vagy egyéb veszélyhelyzet miatti sérülését eredményezheti.
AÐVÖRUN (IS)	Þessi þjónustuhandbók er eingöngu fáanleg á ensku. - Ef að þjónustuveitandi viðskiptamanns þarfnast annars tungumáls en ensku, er það skylda viðskiptamanns að skaffa tungumálþjónustu. - Reynið ekki að afgreiða tækið nema þessi þjónustuhandbók hefur verið skoðuð og skilin. - Brot á að sinna þessari aðvörun getur leitt til meiðsla á þjónustuveitanda, stjórnanda eða sjúklingi frá raflosti, vélrænum eða öðrum áhættum.
PERINGATAN (ID)	Manual servis ini hanya tersedia dalam bahasa Inggris. - Jika penyedia jasa servis pelanggan memerlukan bahasa lain selain dari Bahasa Inggris, merupakan tanggung jawab dari penyedia jasa servis tersebut untuk menyediakan terjemahannya. - Jangan mencoba melakukan servis terhadap perlengkapan kecuali telah membaca dan memahami manual servis ini. - Mengabaikan peringatan ini bisa mengakibatkan cedera pada penyedia servis, operator, atau pasien, karena terkena kejut listrik, bahaya mekanis atau bahaya lainnya.

Service Manual Language Information (cont'd.)

AVVERTENZA (IT)	Il presente manuale di manutenzione è disponibile soltanto in Inglese. - Se un addetto alla manutenzione richiede il manuale in una lingua diversa, il cliente è tenuto a provvedere direttamente alla traduzione. - Si proceda alla manutenzione dell'apparecchiatura solo dopo aver consultato il presente manuale ed averne compreso il contenuto. - Il non rispetto della presente avvertenza potrebbe far compiere operazioni da cui derivino lesioni all'addetto, alla manutenzione, all'utilizzatore ed al paziente per folgorazione elettrica, per urti meccanici od altri rischi.
警告 (JA)	このサービスマニュアルは英語版しかありません。 - サービスを担当される業者が英語以外の言語を要求される場合、翻訳作業はその業者の責任で行うものとさせていただきます。 - このサービスマニュアルを熟読し、十分に理解をした上で装置のサービスを行ってください。 - この警告に従わない場合、サービスを担当される方、操作員あるいは患者が、感電や機械的又はその他の危険により負傷する可能性があります。
경고 (KO)	본 서비스 지침서는 영어로만 이용하실 수 있습니다. - 고객의 서비스 제공자가 영어 이외의 언어를 요구할 경우, 번역 서비스를 제공하는 것은 고객의 책임입니다. - 본 서비스 지침서를 참고했고 이해하지 않는 한은 해당 장비를 수리하려고 시도하지 마십시오. - 이 경고에 유의하지 않으면 전기 쇼크, 기계상의 혹은 다른 위험으로부터 서비스 제공자, 운전자 혹은 환자에게 위험을 가할 수 있습니다.
ЕСКЕРТУ (KK)	Бұл қызмет көрсету бойынша нұсқаулығы тек ағылшын тілінде қолжетімді. - Тұтынушының қызмет провайдері ағылшын тілінен басқа тілдегі нұсқаны талап етсе, аудару бойынша қызметтерімен қамтамасыз ету тұтынушы жауапкершілігінде болуы тиіс. - Бұл қызмет көрсету бойынша нұсқаулығын назарға алып, түсінбегенше, жабдыққа қызмет көрсетуден бас тартыңыз. - Бұл ескертуді елемей қызмет провайдері, оператор немесе емделушінің электр шоғынан, механикалық немесе басқа қауіптер нәтижесінде жарақат алуына әкелуі мүмкін.
BRĪDINĀJUMS (LV)	Šī apkalpotāju rokasgrāmata ir pieejama tikai angļu valodā. - Ja apkalpošanas sniedzējam nepieciešama informācija citā, nevis angļu, valodā, klienta pienākums ir nodrošināt tās tulkošanu. - Neveiciet aprīkojuma apkopi, neizlasot un nesaprotot apkalpotāju rokasgrāmatu. - Šī brīdinājuma neievērošana var radīt elektriskās strāvas trieciena, mehānisku vai citu risku izraisītu traumu apkopes sniedzējam, operatoram vai pacientam.
ĮSPĖJIMAS (LT)	Šis eksploataavimo vadovas yra prieinamas tik anglų kalba. - Jei kliento paslaugų tiekėjas reikalauja vadovo kita kalba - ne anglų, numatyti vertimo paslaugas yra kliento atsakomybė. - Nemėginkite atlikti įrangos techninės priežiūros, nebent atsižvelgėte į šį eksploataavimo vadovą ir jį supratote. - Jei neatkreipsite dėmesio į šį perspėjimą, galimi sužalojimai dėl elektros šoko, mechaninių ar kitų paslaugų tiekėjui, operatoriui ar pacientui.

Service Manual Language Information (cont'd.)

ADVARSEL (NO)	Denne servicehåndboken finnes bare på engelsk. • Hvis kundens serviceleverandør trenger et annet språk, er det kundens ansvar å sørge for oversettelse. • Ikke forsøk å reparere utstyret uten at denne servicehåndboken er lest og forstått. • Manglende hensyn til denne advarselen kan føre til at serviceleverandøren, operatøren eller pasienten skades på grunn av elektrisk støt, mekaniske eller andre farer.
OSTRZEŻENIE (PL)	Niniejszy podręcznik serwisowy dostępny jest jedynie w języku angielskim. • Jeśli dostawca usług klienta wymaga języka innego niż angielski, zapewnienie usługi tłumaczenia jest obowiązkiem klienta. • Nie należy serwisować wyposażenia bez zapoznania się i zrozumienia niniejszego podręcznika serwisowego. • Niezastosowanie się do tego ostrzeżenia może spowodować urazy dostawcy usług, operatora lub pacjenta w wyniku porażenia elektrycznego, zagrożenia mechanicznego bądź innego.
AVISO (PT-BR)	Este manual de assistência técnica só se encontra disponível em inglês. • Se o serviço de assistência técnica do cliente não for GE, e precisar de outro idioma, será da responsabilidade do cliente fornecer os serviços de tradução. • Não tente reparar o equipamento sem ter consultado e compreendido este manual de assistência técnica. • O não cumprimento deste aviso pode por em perigo a segurança do técnico, operador ou paciente devido a choques elétricos, mecânicos ou outros.
AVISO (PT-PT)	Este manual técnico só se encontra disponível em inglês. • Se a assistência técnica do cliente solicitar estes manuais noutro idioma, é da responsabilidade do cliente fornecer os serviços de tradução. • Não tente reparar o equipamento sem ter consultado e compreendido este manual técnico. • O não cumprimento deste aviso pode provocar lesões ao técnico, ao utilizador ou ao paciente devido a choques eléctricos, mecânicos ou outros.
AVERTISMENT (RO)	Acest manual de service este disponibil numai în limba engleză. • Dacă un furnizor de servicii pentru clienți necesită o altă limbă decât cea engleză, este de datoria clientului să furnizeze o traducere. • Nu încercați să reparați echipamentul decât ulterior consultării și înțelegerii acestui manual de service. • Ignorarea acestui avertisment ar putea duce la rănirea depanatorului, operatorului sau pacientului în urma pericolelor de electrocutare, mecanice sau de altă natură.
ПРЕДУПРЕЖДЕНИЕ (RU)	Настоящее руководство по обслуживанию предлагается только на английском языке. • Если сервисному персоналу клиента необходимо руководство не на английском, а на каком-то другом языке, клиенту следует обеспечить перевод самостоятельно. • Прежде чем приступать к обслуживанию оборудования, обязательно обратитесь к настоящему руководству и внимательно изучите изложенные в нем сведения. • Несоблюдение требований данного предупреждения может привести к тому, что специалисты по обслуживанию, операторы или пациенты получат удар электрическим током, механическую травму или другое повреждение.

Service Manual Language Information (cont'd.)

UPOZORENJE (SR)	Ovo servisno uputstvo je dostupno samo na engleskom jeziku. - Ako klijentov serviser zahteva neki drugi jezik, klijent je dužan da obezbedi prevodilačke usluge. - Ne pokušavajte da opravite uređaj ako niste pročitali i razumeli ovo servisno uputstvo. - Zanemarivanje ovog upozorenja može dovesti do povređivanja serviser, rukovaoca ili pacijenta usled strujnog udara, ili mehaničkih i drugih opasnosti.
VAROVANIE (SK)	Tento návod na obsluhu je k dispozícii len v angličtine. - Ak zákazníkov poskytovateľ služieb vyžaduje iný jazyk ako angličtinu, poskytnutie prekladateľských služieb je zodpovednosťou zákazníka. - Nepokúšajte sa o obsluhu zariadenia skôr, ako si neprečítate návod na obsluhu a neporozumiete mu. - Zanedbanie tohto varovania môže vyústiť do zranenia poskytovateľa služieb, obsluhujúcej osoby alebo pacienta elektrickým prúdom, mechanickým alebo iným nebezpečenstvom.
OPOZORILO (SL)	Ta servisni priročnik je na voljo samo v angleškem jeziku. - Če ponudnik storitve stranke potrebuje priročnik v drugem jeziku, mora stranka zagotoviti prevod. - Ne poskušajte servisirati opreme, če tega priročnika niste v celoti prebrali in razumeli. - Če tega opozorila ne upoštevate, se lahko zaradi električnega udara, mehanskih ali drugih nevarnosti poškoduje ponudnik storitev, operater ali bolnik.
ADVERTENCIA (ES)	Este manual de servicio sólo existe en inglés. - Si el encargado de mantenimiento de un cliente necesita un idioma que no sea el inglés, el cliente deberá encargarse de la traducción del manual. - No se deberá dar servicio técnico al equipo, sin haber consultado y comprendido este manual de servicio. - La no observancia del presente aviso puede dar lugar a que el proveedor de servicios, el operador o el paciente sufran lesiones provocadas por causas eléctricas, mecánicas o de otra naturaleza.
VARNING (SV)	Den här servicehandboken finns bara tillgänglig på engelska. - Om en kunds servicetekniker har behov av ett annat språk än engelska ansvarar kunden för att tillhandahålla översättningstjänster. - Försök inte utföra service på utrustningen om du inte har läst och förstår den här servicehandboken. - Om du inte tar hänsyn till den här varningen kan det resultera i skador på serviceteknikern, operatören eller patienten till följd av elektriska stötar, mekaniska faror eller andra faror.
UYARI (TR)	Bu servis kılavuzunun sadece İngilizcesi mevcuttur. - Eğer müşteri teknisyeni bu kılavuzu İngilizce dışında bir başka lisandan talep ederse, bunu tercüme ettirmek müşteriye düşer. - Servis kılavuzunu okuyup anlamadan ekipmanlara müdahale etmeyiniz. - Bu uyarıya uyulmaması, elektrik, mekanik veya diğer tehlikelerden dolayı teknisyen, operatör veya hastanın yaralanmasına yol açabilir.

Service Manual Language Information (cont'd.)

ЗАСТЕРЕЖЕННЯ (UK)	Дане керівництво з сервісного обслуговування постачається виключно англійською мовою. • Якщо сервісний інженер потребує керівництво іншою мовою, користувач зобов'язаний забезпечити послуги перекладача. • Не намагайтеся здійснювати технічне обслуговування даного обладнання, якщо ви не читали, або не зрозуміли інформацію, надану в керівництві з сервісного обслуговування. • Недотримання цього застереження може призвести до травмування сервісного інженера, користувача даного обладнання або пацієнта внаслідок електричного шоку, механічного ушкодження або з інших причин невірної обслуговування обладнання.
CẢNH BÁO (VI)	Tài Liệu Hướng Dẫn Sửa Chữa chỉ có bản tiếng Anh. • Nếu các đơn vị cung cấp dịch vụ cho khách hàng yêu cầu một ngôn ngữ nào khác tiếng Anh, thì khách hàng sẽ có trách nhiệm cung cấp các dịch vụ dịch thuật. • Không được sửa chữa thiết bị trừ khi đã tham khảo và hiểu Tài liệu Hướng dẫn Sửa chữa. • Không tuân thủ những cảnh báo này có thể dẫn đến các tổn thương cho người thực hiện sửa chữa, người vận hành hay bệnh nhân, do sốc điện, các rủi ro về cơ khí hay các rủi ro khác.

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Introduction

This chapter provides general information required for the proper use of the system and this manual. Familiarize yourself with this information before using the system.

Manual Information

This section provides information for the correct use of this manual.

Keep this manual with the equipment at all times and periodically review it. You should request training assistance from GE Healthcare, if needed.

Intended Audience

The ***MUSE Cardiology Information System Hardware Manual*** is intended for the following personnel.

- Sales
- Qualified GE Healthcare Service Engineers
- Third-party service engineers authorized by GE Healthcare
- Project Management
- Customers

Manual Purpose

The purpose of this manual is to provide component information for GE Healthcare-supplied hardware.

Regulatory and Safety Information

This section provides information about the safe use and regulatory compliance of this system. Familiarize yourself with this information, and read and understand all instructions before attempting to use this system. The system software is considered medical software. As such, it was designed and manufactured to the appropriate medical regulations and controls.

NOTE:

Disregarding the safety information provided in this manual is considered abnormal use of this system and could result in injury, data loss, or a voided warranty.

Safety Conventions

A **Hazard** is a source of potential injury to a person, property, or the system.

This manual uses the terms DANGER, WARNING, CAUTION, and NOTICE to point out hazards and to designate a degree or level of seriousness. Familiarize yourself with the following definitions and their significance.

Definitions of Safety Conventions

Safety Convention	Definition
DANGER	Indicates an imminent hazard, which, if not avoided, will result in death or serious injury.
WARNING	Indicates a potential hazard or unsafe practice, which, if not avoided, could result in death or serious injury.
CAUTION	Indicates a potential hazard or unsafe practice, which, if not avoided, could result in moderate or minor injury.
NOTICE	Indicates a potential hazard or unsafe practice, which, if not avoided, could result in the loss or destruction of property or data.

Safety Hazards

The following messages apply to the system as a whole. Specific messages may also be provided elsewhere in the manual.

WARNING:

ACCIDENTAL SPILLS: If liquids have entered the system, take it out of service and have it checked by a service technician before it is used again.

To avoid electric shock or device malfunction, liquids must not be allowed to enter the system.

WARNING:

CONNECTION TO MAINS: This is Class I equipment.

The mains plug must be connected to an appropriate power supply.

The file server may contain an internal battery pack. There is risk of fire and burns if the battery pack is not handled properly. To reduce the risk of personal injury:

- Do not attempt to recharge the battery.
- Do not expose to temperatures higher than 60° C (140° F).
- Do not disassemble, crush, puncture, short external contacts or dispose of in fire or water.
- Replace only with the appropriate spare parts designated for this product.

WARNING:

ELECTRIC SHOCK: To reduce the risk of electric shock, do NOT remove cover (or back).

Refer servicing to qualified personnel.

WARNING:

ELECTRIC SHOCK: Improper use of this device presents a shock hazard. Strictly observe the following warnings. Failure to do so may endanger the lives of the user, and bystanders.

When disconnecting the device from the power line, remove the plug from the wall outlet first, before disconnecting the cable from the device; otherwise, there is a risk of coming in contact with line voltage by inadvertently introducing metal parts in the sockets of the power cord.

Devices may be connected to other devices or to parts of systems only after making certain that there is no danger to the patient, the operators, or the environment as a result. Standards EN/IEC 60601-1-1 must be complied with in all cases.

WARNING:

EMI PERFORMANCE HAZARD: Users should be aware of known Radio Frequency (RF) sources, such as:

- radio and TV stations
- portable and mobile RF communication devices (cell phones, two-way radios)

and consider them when installing the medical device or system.

See the "Electromagnetic compatibility" section found either in this manual and/or the service manual for recommended separation distances.

Adding accessories or components, or modifying the medical device or system may degrade the Electromagnetic Interference (EMI) performance. Consult with qualified personnel regarding changes to the system configuration.

WARNING:

EXPLOSION HAZARD: Flammable anesthetic vapors or liquids can cause explosions.

Do NOT use in the presence of flammable anesthetic vapors or liquids.

Document Conventions

This manual uses the following conventions.

Typographical Conventions

Convention	Description
Bold Text	Indicates keys on the keyboard, text to enter, or hardware items such as buttons or switches on the equipment.
<i>Italicized-Bold Text</i>	Indicates software terms that identify menu items, buttons or options in various windows.
CTRL+ESC	Indicates a keyboard operation. A plus (+) sign between the names of two keys indicates that while holding the first key, you should press and release the second key. For example, Press CTRL+ESC means to press and hold the CTRL key and then press and release the ESC key.

Convention	Description
<space>	Indicates that you must press the spacebar. When instructions are given for typing a precise text string with one or more spaces, the point where you must press the spacebar is indicated as <space>. This ensures that the correct number of spaces is inserted in the correct positions within the literal text string. The purpose of the < > brackets is to distinguish the command from the literal text within the string.
Enter	Indicates that you must press the Enter or Return key on the keyboard. Do not type Enter .
>	The greater than symbol, or right angle bracket, is a concise method to indicate a sequence of menu selections. For example, the statement "From the main menu, select System > Setup > Options to open the Option Activation window" replaces the following: 1. From the main menu, select System to open the System menu. 2. From the System menu, select Setup to open the Setup menu. 3. From the Setup menu, select Options to open the Option Activation window.

Illustrations

All illustrations in the manual are provided as examples only. Depending on system configuration, screens in the manual may differ from the screens on your system.

All patient names and data are fictitious. Any similarity to actual persons is coincidental.

Notes

Notes provide application tips or additional information that, while useful, are not essential to the correct operation of the system. They are called out from the body text through a flag word and indentation, as follows:

NOTE:

The tip or additional information is indented below the **NOTE** flag word.

Related Documents

The following documents provide additional information that may be helpful in the installation, configuration, maintenance, and use of this system.

For hardware specifications and replacement parts on older GE Healthcare supplied hardware not covered in this manual, refer to the original service manual that shipped with your MUSE system.

Part Number	Document Title
2034539-044	MUSE Cardiology System Information Pre-Installation manual
2034539-049	MUSE Cardiology System Information Application Server Installation manual
2034539-050	MUSE Cardiology System Information Client Installation manual
2034539-180	MUSE Cardiology System Information Devices and Interfaces manual
2034539-043	MUSE Cardiology System Information Service manual

Additional Assistance

GE Healthcare maintains a trained staff of application and technical experts to answer questions and respond to issues and problems that may arise during the installation, maintenance, and use of this system.

Contact your local GE Healthcare representative to request additional assistance.

System Components — Platforms

This section provides a description of the MUSE system platform hardware.

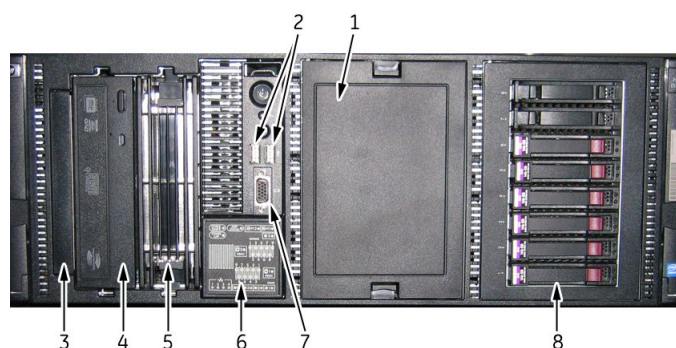
Server Systems

The following sections provide information about the supported MUSE server platforms.

HP ProLiant DL370 G6

This section describes basic information for the HP ProLiant DL370 G6 server. This server was provided by GE Healthcare for use as a MUSE application and database server. Additional information, including troubleshooting and parts replacement instructions, can be found the HP web site's ProLiant DL370 G6 support page: <http://h20000.www2.hp.com/bizsupport/TechSupport/Home.jsp?lang=en&cc=us&prodSeriesId=3890172&prodTypeId=15351>.

Front View

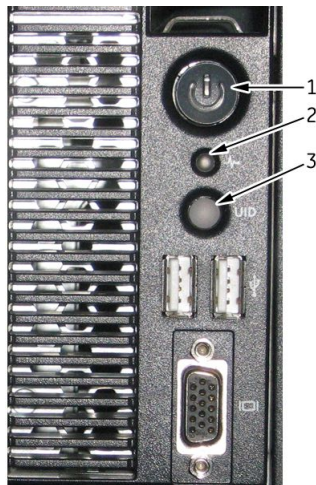


HP DL370 G6 — Front View

Item	Name	Description
1	Drive Cage Blank	Reserved area for additional drives
2	USB Connectors (2)	USB devices can connect to these ports
3	Optical Drive Blank	Not used
4	DVD-ROM Drive	Reads and writes to DVD-RW

HP DL370 G6 — Front View (cont'd.)

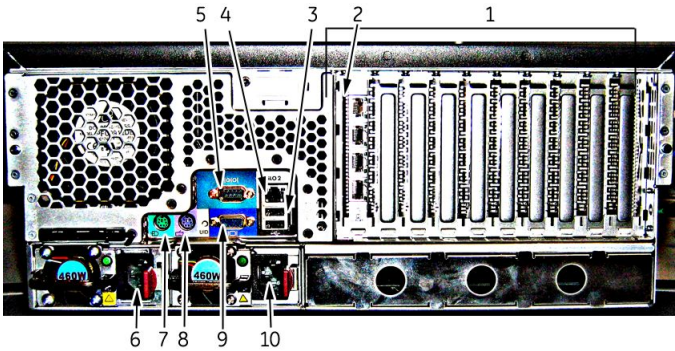
Item	Name	Description
5	Removable Media Bay	Not used
6	Systems Insight Display	LEDs represent the system board layout
7	Front Video Connector (rack model only)	Connects to the monitor
8	SATA 146 GB Drives (6)	Hard Drive Storage



HP DL370 G6 — Front Panel LEDs and Buttons

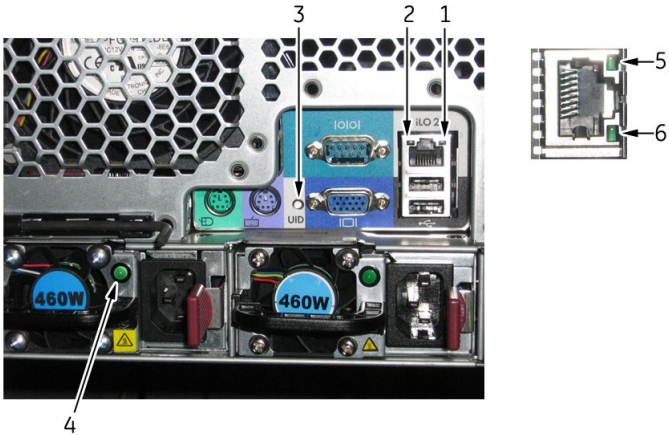
Item	Description	Status
1	Power On/Standby Button and System Power LED	Green = Normal (system on) Amber = System in standby, but power still applied Off = Power cord not attached or power supply failure
2	Health LED	Green = Normal (system on) Amber = System health is degraded Red = System health is critical Off = Normal (system off)
3	UID LED	Blue, Solid = System is activated Blue, Flashing = System is managed remotely Off = System is deactivated

Back View



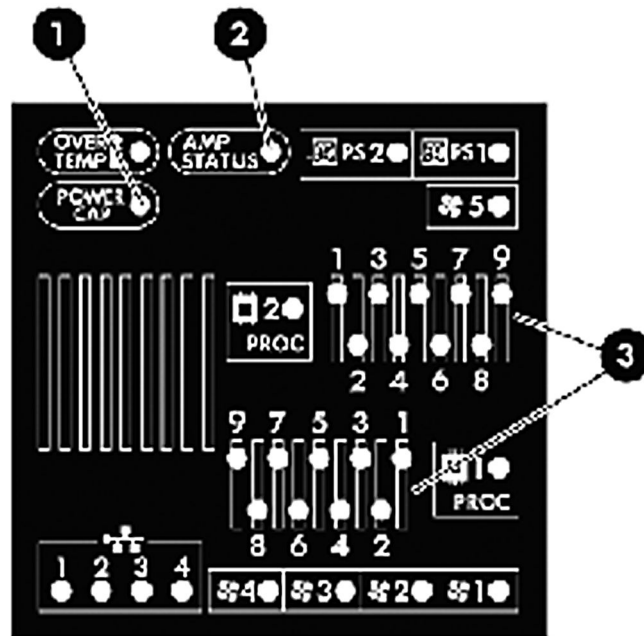
HP DL370 G6 — Back View

Item	Name	Description
1	PCI Expansion Slots	Not used
2	NIC Connectors (4)	Connects to the Network Cables
3	USB Connectors (2)	Connects to USB devices
4	iLO 2 Connector	Remote management port
5	Serial Connector	Connect an optional modem
6	Power Supply Bay 1	Location of Power Supply
7	Mouse Connector	Connects to the mouse
8	Keyboard Connector	Connects to the keyboard
9	Video Connector	Connects to the monitor
10	Power Supply Bay 2	Location of Power Supply



HP DL370 G6 — Back Panel LEDs

Item	Description	Status
1	iLO 2 Link LED	Green = Linked to network Off = No network connection
2	iLO 2 activity LED	Green or flashing green = Network activity Off = No network activity
3	UID LED	Blue, solid = System is activated Blue, Flashing = System is managed remotely Off = System is deactivated
4	Power Supply LED	Green = System has AC power and is powered up Off = System has no AC power, the system is off, or the power supply has failed
5	NIC Link LED	Green = Linked to network Off = No network connection
6	NIC Activity LED	Green or flashing green = Network activity Off = No network activity



HP DL370 G6 — Insight Display

Item	Description	Status
1	Power cap	To determine Power cap status, see the section <i>Systems Insight Display LED combinations</i> in the <i>HP ProLiant DL/ML370 G6 Server Maintenance and Service Guide</i> PN 513481-004.
2	AMP Status	Green = AMP mode enabled Amber = Failover Flashing Amber = Invalid Configuration Off = AMP mode disabled
3	DIMM LEDs	All LEDs flashing = DIMM unseated
	All other LEDs	Amber = Failure Off = Normal

Specifications

The specifications listed below are specific to this server as configured by GE Healthcare for use as a MUSE Server. See the *HP ProLiant DL/ML370 G6 Server Maintenance and Service Guide* for additional specifications.

HP DL370 G6 Server

Component	Description
Model	HP DL370 G6
Form Factor	4U
CPU	1–Xeon E5506 Quad Core 2.13 GHz
RAM	3–2 GB DIMM
Hard Drive	6–300 GB
RAID	5+0
Usable Storage	1 TB
Optical Drive	CD/DVD-ROM
1.44 MB Diskette Drive	Not included
Tape Drive	Not included
Serial Port	1
Parallel Port	Not included
USB 2.0 Port	4
Video Port	2
Keyboard Port	PS/2
Mouse Port	PS/2
Network Port	4–10/100/1000 Mbps (teamed)
Graphics Resolution	1024 x 768

HP DL370 G6 Server (cont'd.)

Component	Description
Power Supply	2
Fan	2
Digi AccelePort® Serial Adapter (PCI-X)	8 ports
Power Specifications — Input Requirements	
Rated input voltage	100 to 120 VAC, 200 to 240 VAC
Rated input frequency	50 Hz to 60 Hz
Rated input current	5.5 A at 100 VAC, 2.6 A at 200 VAC
Rated input power	526 W at 100 V AC input, 505 W at 200 V AC input
Power Supply Output	
Rated steady-state power	460 W at 100 V to 120 V AC input 460 W at 200 V to 240 V AC input
Maximum peak power	460 W at 100 V to 120 V AC input 460 W at 200 V to 240 V AC input

Replacement Parts

GE Part Numbers for HP DL370 G6 Server

HP Part Number	GE Part Number	Description	Qty
519557-001	2051430-002	Access Panel	1
519563-001	2051430-003	Rack Bezel	1
519560-001	2051430-004	Miscellaneous Hardware Kit: Fan Blank Power Supply Blank Hard Drive Cage Blank Media Bay Blank	1
519558-001	2051430-005	Air Baffle	1
511777-001	2051430-006	Power Supply, 460W	2
519559-001	2051430-007	Fan	2
153009-001	2051430-008	Battery	1
495942-L21	2056678-001	Processor, Intel 2.13 GHz Xeon E5506 Quad Core	1
508996-001	2051430-010	Heatsink	1
491838-001	2051430-011	NC375i Adapter NIC	1
519562-001	2051430-012	I/O Bezel	1
511786-001	2051430-013	Systems Insite Display	1
491835-001	2051430-014	System Board	1
491836-001	2051430-015	Power Supply Backplane w/cables	1

GE Part Numbers for HP DL370 G6 Server (cont'd.)

HP Part Number	GE Part Number	Description	Qty
511785-001	2051430-016	8-Bay Backplane LFF	1
447464-001	2051430-017	DVD-ROM Drive	1
381679-001	2051430-018	Rack Mounting Kit	1
500656-B21	2054841-001	DIMM 2 GB	1
519565-001	2051430-020	Miscellaneous Cable Kit: SAS Drive Cable 2 Bay LFF LED Cable I/O Bezel Cable Power On Button Cable SID Sideband Cable	1
489426-001	2051430-021	Mini-SAS cable	1
507127-B21	2049045-001	SFF Hard Drive SAS 300 GB	6
412799-001	2051430-023	Smart Array P410i Ctlr	1
405836-001	2051430-024	Smart Array Ctlr Cache Mod (256 MB)	1
409124-001	2051430-025	Smart Array Ctlr Battery Cbl 11.5 in.	1
409125-001	2051430-026	Smart Array Ctlr Battery Cbl 24 in.	1
505836-001	2051430-027	TPM	1
488138-001	2051430-028	Battery Cable 24 in.	1

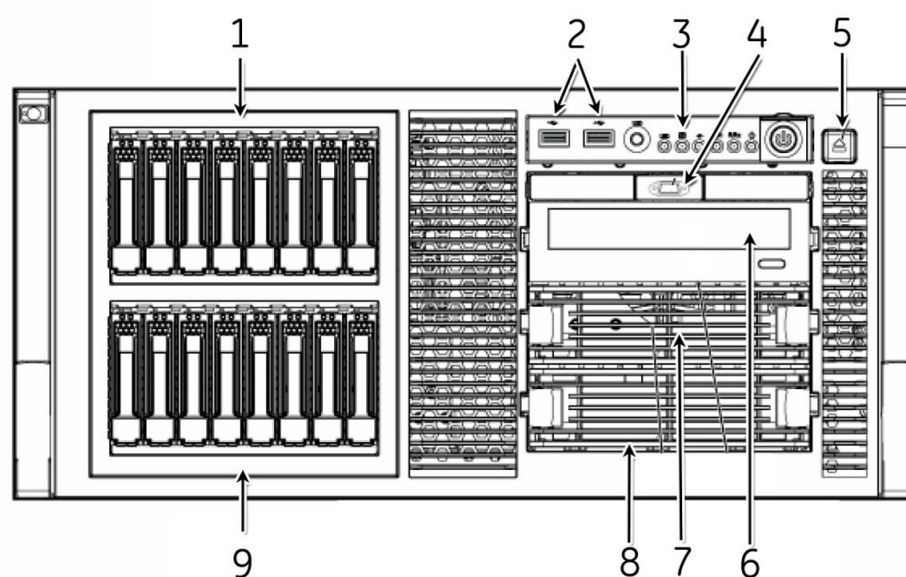
OEM Part Numbers for HP DL370 G6 Server

OEM Part Number	GE Part Number	Description	Quantity
77000889	2054076-001	Digi AccelePort® 8 Port Serial Adapter	1

HP ProLiant ML370 G5 Server

This section describes basic information for the HP ProLiant ML370 G5 server. This server was provided by GE Healthcare for use as a MUSE application and database server. Additional information, including troubleshooting and parts replacement instructions, can be found the HP web site's ProLiant ML370 G5 support page: <http://h20000.www2.hp.com/bizsupport/TechSupport/Home.jsp?lang=en&cc=us&prodSeriesId=1121486&prodTypeId=15351>.

Front (Rack Mount)

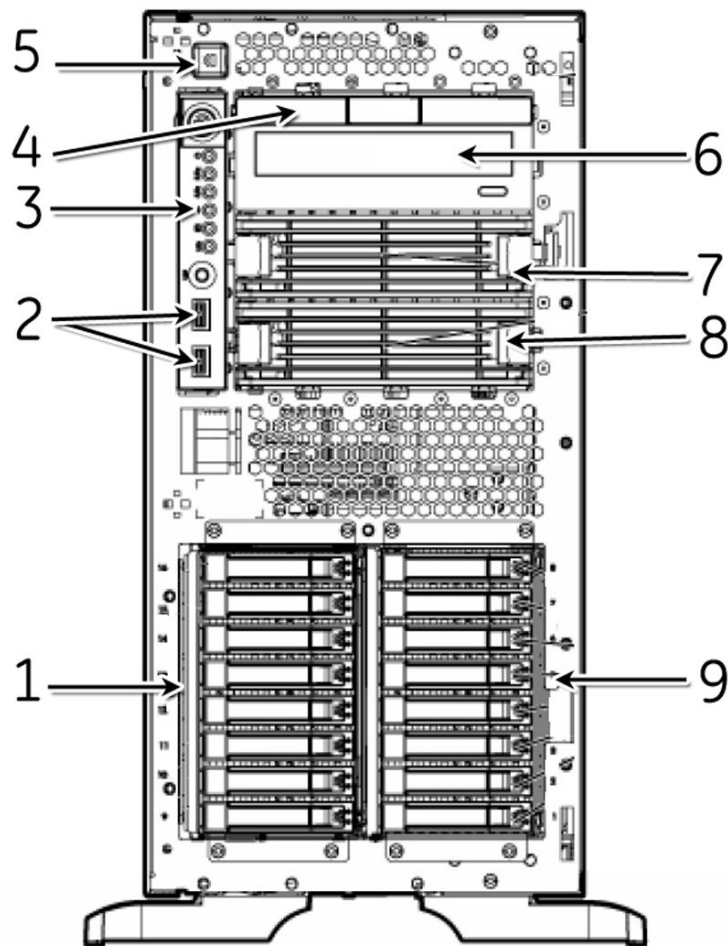


HP ML370 G5 Server — Front (Rack Mount)

Item	Description
1	Hard drive bays 9-16 (not used)
2	USB connectors
3	HP Systems Insight Display
4	Video connector (rack-mounted model only)
5	HP Systems Insight Display ejector button
6	Optical drive
7	Floppy drive
8	Optional Tape Drive
9	Hard drive bays 1-8 ¹

1. Only bays 1-6 are used.

Front (Tower)

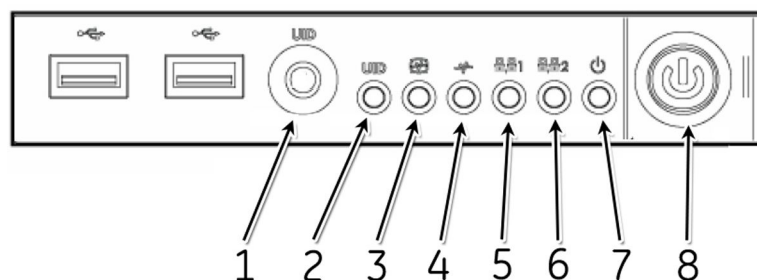


HP ML370 G5 Server — Front (Tower)

Item	Description
1	Hard drive bays 9-16 (not used)
2	USB connectors
3	HP Systems Insight Display
4	Media bay spacer (tower model only)
5	HP Systems Insight Display ejector button
6	Optical drive
7	Floppy drive
8	Optional Tape Drive
9	Hard drive bays 1-8 ²

² Only bays 1-6 are used.

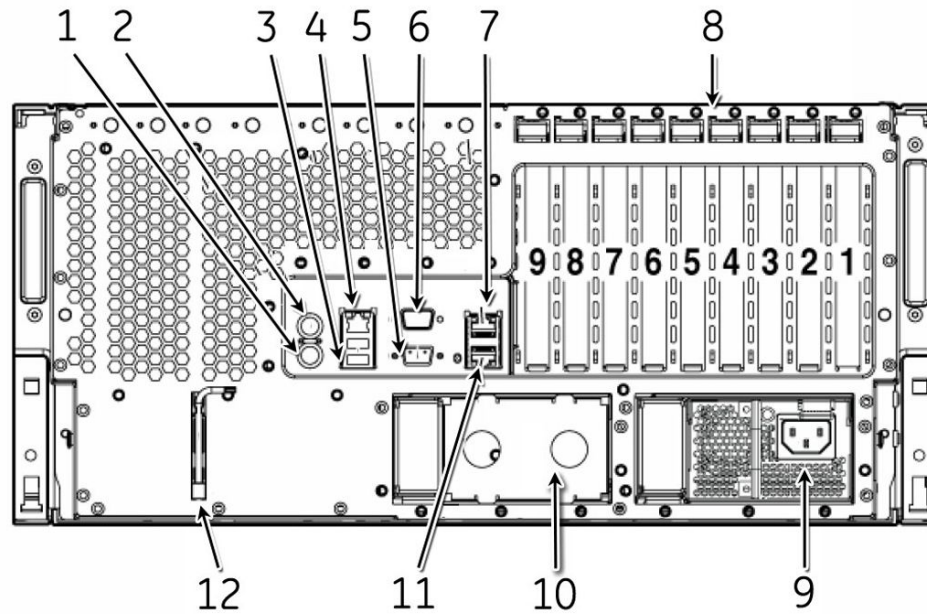
Front LED and Buttons (Rack and Tower)



HP ML370G5 Server LEDs and Buttons

Item	Description	Status	
		Indicator	Description
1	UID Button	–	–
2	UID LED	Solid Blue	Activated
		Flashing Blue	System managed remotely
		Off	Deactivated
3	Internal System Health LED	Green	Normal, system on
		Amber	System health is degraded
		Red	System health is critical
		Off	Normal, system off
4	External System Health LED (power supply)	Green	Normal, system on
		Amber	Redundant power supply failure
		Red	Power supply failure. No operational power supplies.
		Off	Normal, system off
5	NIC 1 Link/Activity LED (embedded NIC)	Green	Linked to network
		Flashing green	Linked with network activity
		Off	No network connectivity
6	NIC 2 Link/Activity LED (embedded NIC)	Green	Linked to network
		Flashing green	Linked with network activity
		Off	No network connectivity
7	System Power LED	Green	System has AC power and is powered up
		Amber	System has AC power and is in standby mode
		Off	System has no AC power
8	Power On/Standby Button	–	–

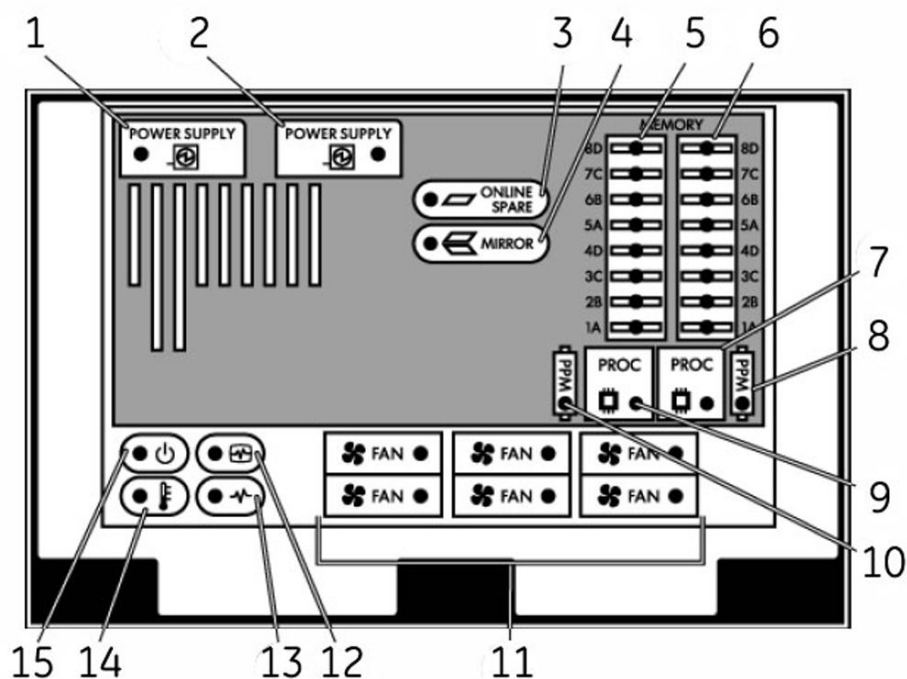
Back Panel



HP ML370 G5 Server, Back Panel

Item	Description
1	Keyboard connector
2	Mouse connector
3	HP Systems Insight Display connectors
4	iLO 2 management connector
5	Video connector
6	Serial connector
7	NIC 2 connector
8	PCI expansion slots
9	Hot-plug power supply (primary bay)
10	Hot plug power supply blank (redundant bay)
11	NIC 1 connector
12	T-10/T-15 Torx screwdriver

HP Insight 2 Display



HP Insite 2 Display

Item	Description	Indicator	Description
1	Primary Power Supply	Amber	Failure
		Off	Normal
2	Primary Power Supply	Amber	Failure
		Off	Normal
3	Online Spare Memory	Green	Protection enabled
		Amber	Memory failure occurred
		Flashing Amber	Memory configuration error
		Off	No protection
4	Mirrored Memory	Green	Protection enabled
		Amber	Memory failure occurred
		Flashing Amber	Memory configuration error
		Off	No protection
5	FBDIMM LEDs (Mem board 1) ³	Amber	Failure
		Off	Normal

3. If all LEDs for a memory board are flashing, it indicates the memory board is unseated.

HP Insite 2 Display (cont'd.)

Item	Description	Indicator	Description
6	FBDIMM LEDs (Mem board 2) ⁴	Amber	Failure
		Off	Normal
7	Processor 1	Amber	Failure
		Off	Normal
8	PPM 1	Amber	Failure
		Off	Normal
9	Processor 2	Amber	Failure
		Off	Normal
10	PPM 2	Amber	Failure
		Off	Normal
11	Hot-plug fan	Amber	Failure or fan not installed
		Off	Normal
12	Internal system health	Green	Normal, system on
		Amber	Degraded health
		Red	Critical health
		Off	System off
13	External system health (power supply)	Green	Normal, system on
		Amber	Redundant power failure
		Red	Power supply failure, no operational power
		Off	System off
14	Over temperature	Red	Critical overheating
		Off	Normal
15	System power	Green	AC power on
		Amber	System in standby mode
		Off	No AC power

4. If all LEDs for a memory board are flashing, it indicates the memory board is unseated.

Specifications

The specifications listed below are specific to this server as configured by GE Healthcare for use as a MUSE Server. See the *HP ProLiant ML370 Generation 5 Server Maintenance and Service Guide* for additional specifications.

ML370 G5 File Server

Component	Description
Model	HP ML370 G5
Form Factor	Rack (5U) or Tower
CPU	1 — Xeon E5410 2.33 GHz
RAM	1 GB DIMM
Hard Drive	6 — 146 GB
RAID	5
Usable Storage	578 GB
Optical Drive	CD/DVD — RW
1.44 MB Diskette Drive	1
Tape Drive	Sony AIT-2 SDX-500V or Sony AIT-2T SDX-550V
Serial Port	1
Parallel Port	Not included
USB 2.0 Port	4
Video Port	2 (Rack) 1 (Tower)
Keyboard Port	PS/2
Mouse Port	PS/2
Network Port	2–10/100/1000 Mbps (teamed)
Graphics Resolution	1024 x 768
Power Supply	2
Fan	2
Digi AccelePort® Serial Adapter (PCI)	8 ports
Power Specifications	
Rated input voltage	100 VAC to 240 VAC ⁵
Rated input frequency	47 Hz to 63 Hz
Rated input current	10 A (100 V) to 6.7 A (200 V)
Rated input power	1500 W

5. 100 to 127 VAC is required for 10 A; 200 to 240 VAC is required for 6.7 A.

ML370 G5 File Server (cont'd.)

Component	Description
Power supply output	Rated steady-state power 800 W (low line) 1000 W (high line)
Maximum peak power	1000 W (low line), 1200 W (high line)

Replacement Parts

HP Part Number	GE Part Number	Description	Quantity
409410-001	2036800-001	Access Panel (Top Cover)	1
409411-001	2036800-002	Front Bezel (Tower Only)	1
409412-001	2036800-003	Rack Bezel (Rack Only)	1
409413-001	2036800-004	Tower Configuration Panel	1
409433-001	2036900-005	Center Wall	1
409414-001	2036900-006	Removable Media Blank	1
409415-001	2036800-007	Media Bay Spacer	1
409416-001	2036800-008	SAS Drive Cage Blank	1
409417-001	2036800-010	Power Supply Blank	1
409419-001	2036800-011	Processor Air Baffle	1
413965-001	2036800-012	T-10/T-15 Torx Screwdriver L-Head	1
409420-001	2036800-013	System Display Tray with Eject button	1
403781-001	2036800-014	Hot Plug Power Supply 1000-W	1
409421-001	2036800-015	Hot-Plug Fan, 120-MM	1
153099-001	2036800-016	3.3-V Lithium Battery	1
416794-001	2036800-017	Dual-Core Xeon Processor 5120	1
409426-001	2036800-018	Heatsink Grease/Alcohol Pad	1
409427-001	2036800-019	Display Panel with Brd, Lbl, Bezel	1
409428-001	2036800-020	Sys Board with Processor Cage	1
407748-001	2036800-021	PPM	1
399787-001	2036800-022	Power Supply Backplane	1
409429-001	2036800-023	SAS Backplane Duplex Brd wDrive Cage	1
409430-001	2036800-024	Memory Board	1
384069-001	2036800-025	DVD-RW	1
399397-001	2036800-026	Diskette Drive	1
409431-001	2036800-027	Plastics Kit	1
409432-001	2036800-028	Hardware Kit	1
377839-001	2036800-029	Rack-Mounting Kit	1

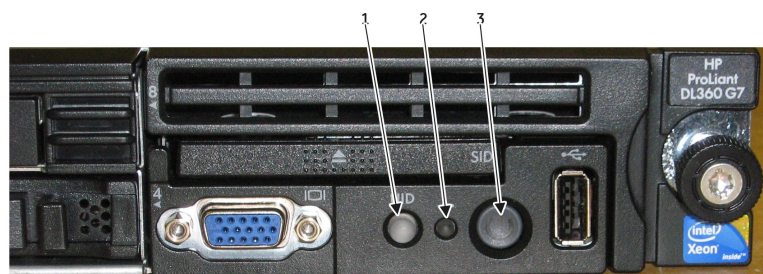
HP Part Number	GE Part Number	Description	Quantity
409434-001	2036800-030	Return Kit Packing Box and Cushions	1
409436-001	2036800-031	Miscellaneous Cable Kit	1
389952-001	2036800-032	SAS Option Cable	1
431243-001	2036800-033	Diskette Drive Cable	1
418300-001	2036800-034	2nd Parallel/Serial Port Cable	1
432320-001	2036800-036	SFF Hard Drive 146 GB	6 (Rack) 4 (Tower)
405832-001	2036800-038	Smartarray P400 Controller Cache Mod	1
392613-001	2036798-003	DL360 Hard Drive Blank LFF	1
187335-011	2036798-021	DL360 AC Power Cord	1
416471-001	2036798-017	FBDIMM PC2-5300F Fully-Buffered	1
SDX-500V/RB	2024244-001	Sony Tape Drive AIT-2 SDX-500V/RB Int	1
SDX-550V/RB	2024244-003	Sony Tape Drive AIT-2T Turbo SDX-550V	1

HP ProLiant DL360 G7

This section describes basic information for the HP ProLiant DL370 G7 server. This server is provided by GE Healthcare as a HL7 interface for MUSE v8. Additional information, including troubleshooting and parts replacement instructions, can be found the HP web site's ProLiant DL360 G7 support page: <http://h20000.www2.hp.com/bizsupport/TechSupport/Home.jsp?lang=en&cc=us&prodSeriesId=4091408&prodTypeId=15351>.

HP DL360 G7 — Front Panel

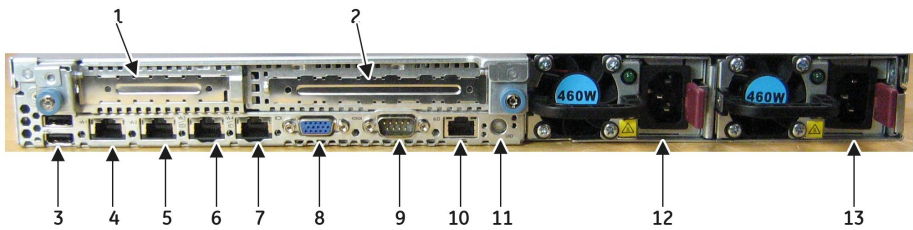
The HP DL360 G7 server is primarily used as a HL7 Interface server.



HP DL360 G7 — Front Panel

Item	Description
1	UID (Unit Identification) light
2	System Health LED
3	Power On/Standby button and system power LED

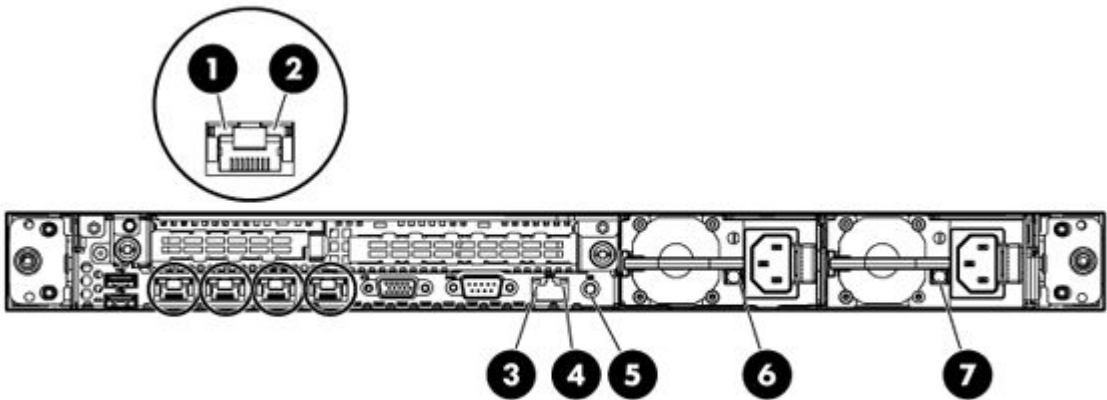
HP DL360 G7 — Rear Panel



HP DL360 G7 — Rear Panel

Item	Status
1	PCI Express expansion slot 1, low-profile, half-length
2	PCI Express expansion slot 2
3	USB connector
4	NIC 1 connector
5	NIC 2 connector
6	NIC 3 connector
7	NIC 4 connector
8	Serial connector
9	Video connector
10	iLO 3 NIC Connector
11	UID Light
12	Power supply bay 2
13	Power supply bay 1

HP DL360 G7 LEDs and Buttons — Rear Panel



HP DL360 G7 LEDs and Buttons — Rear Panel

Item	Description	Status
1	10/100/1000 NIC activity LED	Green = Activity exists Flashing green = Activity exists Off = No activity exists
2	10/100/1000 NIC activity LED	Green = Link exists Off = No link exists
3	iLO 3 NIC activity LED	Green = Activity exists Flashing green = Activity exists Off = No activity exists
4	iLO 3 NIC link LED	Green = Link exists Off = No link exists
5	UID button/LED	Blue = Identification is activated Flashing blue = System is being managed remotely Off = Identification is deactivated
6	Power supply 2 LED	Green = Normal Off = One or more of the following conditions exists: • AC power unavailable • Power supply failed • Power supply in standby mode • Power supply exceeded current limit
7	Power supply 1 LED	Green = Normal Off = One or more of the following conditions exists: • AC power unavailable • Power supply failed • Power supply in standby mode • Power supply exceeded current limit

Specifications

The specifications listed below are specific to this server as configured by GE Healthcare for use as a MUSE Server. See the *HP ProLiant DL360 G7 Server Maintenance and Service Guide* for additional specifications.

DL360 G7

Component	Description
Model	HP ProLiant DL360 G7
Form Factor	1U Rack form factor (1.75"), less than 28 inches (70.5 cm) deep
CPU	1 — Xeon E5603 Quad Core 1.60 GHz

DL360 G7 (cont'd.)

Component	Description
RAM	2–2 GB DIMM
Hard Drive	2–600 GB
RAID	1 + 0
Usable Storage	558 GB
Optical Drive	CD-ROM, DVD-ROM
1.44 MB Diskette Drive	Not included
Tape Drive	Not included
Serial Port	1
Parallel Port	Not included
USB 2.0 Port	4 (3 External, 1 Internal)
Video Port	2
Keyboard Port	Use USB port
Mouse Port	Use USB port
Network Port	4–10/100/1000 Mbps
Graphics Resolution	1280 x 1024
Power Supply	2
Fan	6
Digi AccelePort® Serial Adapter (PCI)	Not included
Power Specifications	
Rated input voltage	100 VAC to 240 VAC
Rated input frequency	50 Hz to 60 Hz
Rated input current	4.5A rms (at 120VAC); 2.2A rms (at 240VAC)
Rated input power	526 Watts Max
Power supply output	460 Watts

Replacement Parts

HP Part Number	GE Part Number	Description	Quantity
532146-001	2062765-002	Access Panel	1
532392-001	2062765-003	Hardware and plastics kit	1
392613-001	2036798-003	Hard Drive Blank	1
532391-001	2062765-004	Hard drive cage	1
533877-001	2062765-005	Rack Mounting Hardware Kit	1
360105-001	2036798-005	Cable management arm	1
532149-001	2052606-003	System fan module	6

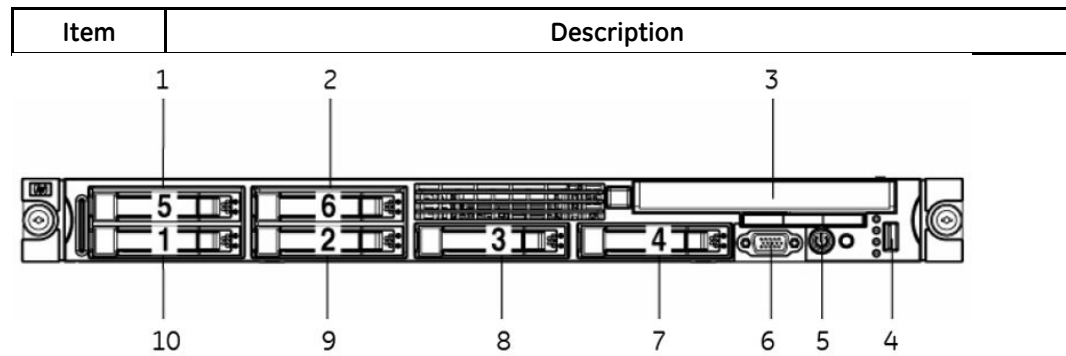
Item	Description		
511777-001	2051430-006	Hot-Plug Power Supply, 460 W, 92%	2
493802-001	2062765-006	PCI Riser Board Assembly	1
628700-001	2062765-007	1.60-GHz Intel Xeon processor E5603	1
507672-001	2062765-008	Processor heatsink kit	1
468290-001	2062765-009	Thermal kit (cleaning pad and thermal grease)	1
602512-001	2062765-010	System Board 90 W	1
532148-001	2062765-011	Primary hard drive backplane assembly and cable, bottom	1
532147-001	2062765-012	Optional hard drive backplane assembly and cable, top	1
599380-001	2062765-013	Systems Insight Display, LED module w/ power button assy and cbl	1
532390-001	2062765-014	DVD tray	1
481428-001	2052606-005	SATA DVD-ROM drive, slimline	1
501533-001	2050332-001	DIMM 2-GB, PC3-10600R, dual-rank	3
581311-001	2062765-015	HDD 600-GB, SATA, 10,000-rpm	2
578882-001	2062765-016	FBWC module, 512-MB	1
587324-001	2062765-017	FBWC capacitor pack	1
234556-001	2036798-022	Battery, 3.3 V, Lithium	1
187335-001	2030506-020	AC power cord	1
532393-001	2062765-018	Cable kit	1

HP ProLiant DL360 G5

This section describes basic information for the HP ProLiant DL360 G5 server. This server is provided by GE Healthcare as a MUSE EveryWARE and HL7 Interface for MUSE v7. Additional information, including troubleshooting and parts replacement instructions, can be found the HP web site's ProLiant DL360 G5 support page: <http://h20000.www2.hp.com/bizsupport/TechSupport/Home.jsp?lang=en&cc=us&prodSeriesId=1121486&prodTypeId=15351>.

HP DL360 G5 — Front Panel

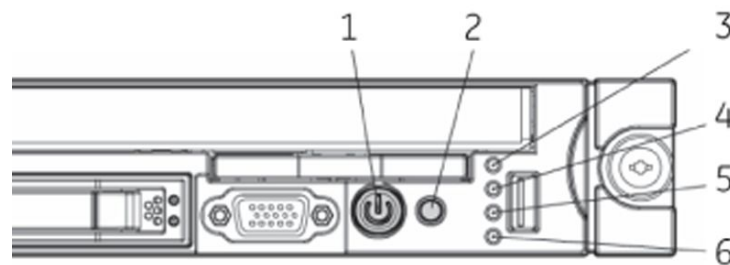
The HP DL360 G5 server is primarily used as a MUSE EveryWARE file server.



HP DL360 G5 — Front Panel

Item	Description
1	Hard drive bay 5 (not used)
2	Hard drive bay 6 (not used)
3	CD/DVD Drive
4	USB connector
5	HP Systems Insight Display
6	Video connector
7	Hard drive bay 4 (not used)
8	Hard drive bay 3 (not used)
9	Hard drive bay 2
10	Hard drive bay 1

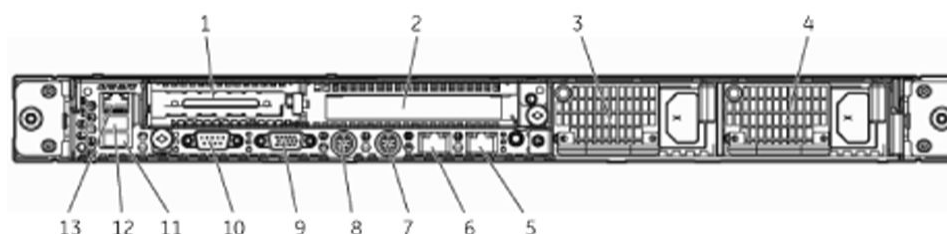
HP DL360 G5 LEDs and Buttons — Front Panel



HP DL360 G5 LEDs and Buttons — Front Panel

Item	Description	Status
1	Power On/ Standby button and system power LED	Green = System is on. Amber = System is shut down, but power is still applied. Off = Power cord is not attached, power supply failure has occurred, no power supplies are installed, facility power is not available, or disconnected power button cable.
2	UID button/ LED	Blue = Identification is activated. Flashing blue = System is being remotely managed. Off = Identification is deactivated.
3	Internal health LED	Green = System health is normal. Amber = System health is degraded. Red = System health is critical. Off = System health is normal (when in standby mode).
4	External health LED (power supply)	Green = Power supply health is normal. Amber = Power redundancy failure occurred. Off = Power supply health is normal when in standby mode.
5	NIC 1 link/ activity LED	Green = Network link exists. Flashing green = Network link and activity exist. Off = No link to network exists. If power is off, the front panel LED is not active. View the LEDs on the RJ-45 connector for status by referring to the rear panel LEDs.
6	NIC 2 link/ activity LED	Green = Network link exists. Flashing green = Network link and activity exist. Off = No link to network exists. If power is off, the front panel LED is not active. View the LEDs on the RJ-45 connector for status by referring to the rear panel LEDs.

HP DL360 G5 — Rear Panel



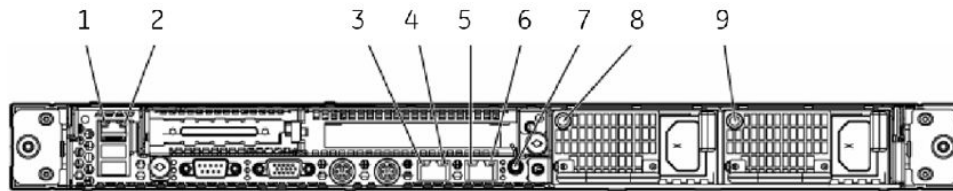
HP DL360 G5 — Rear Panel

Item	Status
1	PCI Express expansion slot 1, low-profile, half-length
2	PCI Express expansion slot 2
3	Power supply bay 2
4	Power supply bay 1

HP DL360 G5 — Rear Panel (cont'd.)

Item	Status
5	NIC 2 connector
6	NIC 1 connector
7	Keyboard connector
8	Mouse connector
9	Video connector
10	Serial connector
11	USB connector
12	USB connector
13	iLO 2 NIC connector

HP DL360 G5 LEDs and Buttons — Rear Panel



HP DL360 G5 LEDs and Buttons — Rear Panel

Item	Description	Status
1	iLO 2 NIC activity LED	Green = Activity exists Flashing green = Activity exists Off = No activity exists
2	iLO 2 NIC link LED	Green = Link exists Off = No link exists
3	10/100/1000 NIC 1 activity LED	Green = Activity exists Flashing green = Activity exists Off = No activity exists
4	10/100/1000 NIC 1 link LED	Green = Link exists Off = No link exists
5	10/100/1000 NIC 2 activity LED	Green = Activity exists Flashing green = Activity exists Off = No activity exists
6	10/100/1000 NIC 2 link LED	Green = Link exists Off = No link exists

HP DL360 G5 LEDs and Buttons — Rear Panel (cont'd.)

Item	Description	Status
7	UID button/LED	Blue = Identification is activated Flashing blue = System is being managed remotely Off = Identification is deactivated
8	Power supply 2 LED	Green = Normal Off = System is off or power supply has failed
9	Power supply 1 LED	Green = Normal Off = System is off or power supply has failed

Specifications

The specifications listed below are specific to this server as configured by GE Healthcare for use as a MUSE Server. See the *HP ProLiant DL/ML370 G6 Server Maintenance and Service Guide* for additional specifications.

DL360 G5

Component	Description
Model	HP DL360 G5
Form Factor	1U
CPU	2 — Xeon E5506 Dual Core 1.60 GHz
RAM	2-2 GB DIMM
Hard Drive	2-72 GB
RAID	1
Usable Storage	72 GB
Optical Drive	CD-ROM
1.44 MB Diskette Drive	Not included
Tape Drive	Not included
Serial Port	1
Parallel Port	Not included
USB 2.0 Port	2
Video Port	2
Keyboard Port	PS/2
Mouse Port	PS/2
Network Port	2-10/100/1000 Mbps (teamed)
Graphics Resolution	1280 x 1024
Power Supply	2

DL360 G5 (cont'd.)

Component	Description
Fan	2
Digi AccelePort® Serial Adapter (PCI)	8 ports
Power Specifications	
Rated input voltage	100 VAC to 240 VAC
Rated input frequency	50 Hz to 60 Hz
Rated input current	7.1 A (at 120 VAC); 3.5A (at 240 VAC)
Rated input power	852 W
Power supply output	Rated steady-state power 700 W

Replacement Parts

HP Part Number	GE Part Number	Description	Quantity
412209-001	2036798-001	Access Panel	1
412208-001	2036798-002	Plastics Kit	1
392613-001	2036798-003	Hard Drive Blank LFF	1
360104-001	2036798-004	Rack Mounting Hardware Kit	1
360105-001	2036798-005	Cable management arm	1
412212-001	2036798-006	System fan module	1
412211-001	2036798-007	Hot-Plug Power Supply, 700 W	1
412200-001	2036798-008	PCI Riser Board Assembly	1
416795-001	2036798-009	Dual-Core Intel® Xeon™ Processor 5110 (1.6-GHz, 1066 MHz FSB, 2x2 MB L2 cache)	1
412210-001	2036798-010	Heatsink with grease and alcohol swab	1
412205-001	2036798-011	HP Smart Array E200i Controller, integrated SAS	1
412199-001	2036798-012	System board with processor cage supporting Intel® Xeon™	1
412201-001	2036798-013	SAS backplane	1
412201-001	2036798-014	Multibay media backplane	1
412204-001	2036798-015	HP System Insight Display, LEDs, and Power Button assembly with cable	1
228508-001	2036798-016	CD-ROM Slimline Drive	1
416471-001	2036798-017	FBDIMM, PC2-5300F, Fully-Buffered DIMM	2
376597-001	2036798-018	SAS Hard Drives 72 GB, 10,000 rpm	2

HP Part Number	GE Part Number	Description	Quantity
412800-001	2036798-019	HP Smart Array E200i Controller Memory Module, 64 MB	1
408763-001	2036798-020	SAS Cable	1
187335-001	2036798-021	AC Power Cord	1
234556-001	2036798-022	Battery, 3.3 V, Lithium	1

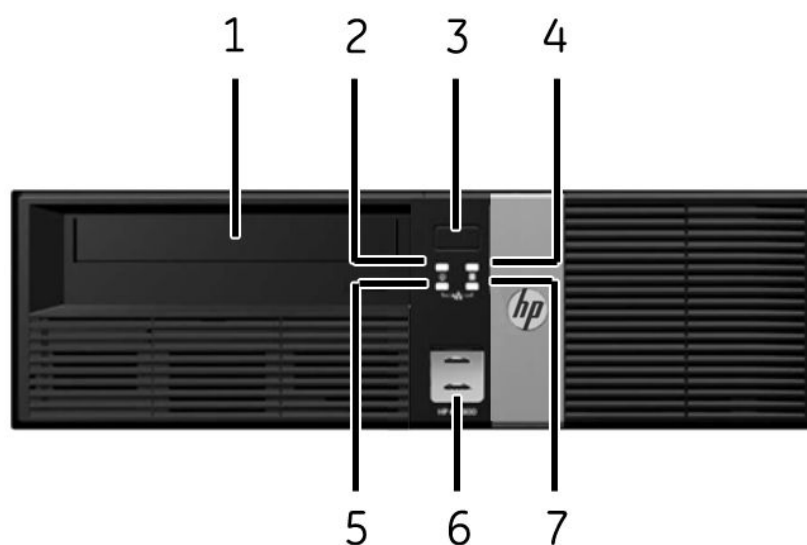
Workstations

The following sections provide information about the supported MUSE workstation platforms.

HP rp5800

This section provides basic information for the HP rp5800 workstation. This workstation is provided by GE Healthcare for use as a MUSE client. Additional information, including troubleshooting and parts replacement instructions, can be found the HP web site's rp5800 support page: <http://h20000.www2.hp.com/bizsupport/TechSupport/Home.jsp?lang=en&cc=us&prodSeriesId=5081352&prodTypeId=12454>.

HP rp5800 Front View



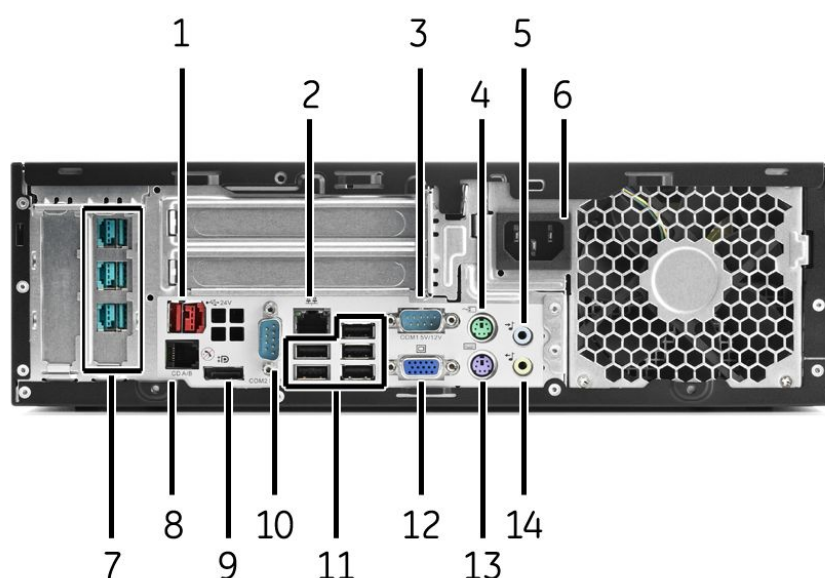
HP rp5800 — Front View

Item	Name	Description
1	Optical Drive	5.25-inch DVD-R/DVD-RW capable drive
2	Power Light	A steady green light indicates the system is powered on. A flashing red light indicates there is a problem with the system and displays a diagnostic code. Refer to the OEM's <i>Maintenance and Service Guide</i> to interpret the code.

HP rp5800 — Front View (cont'd.)

Item	Name	Description
3	Power Button	Dual state power button
4	Hard Drive Light	LED flashes when internal hard drive is being accessed
5	NIC Link Light	LED lights up to indicate a network connection.
6	USB Ports	2 USB 2.0 ports behind a sliding cover
7	NIC Activity Light	LED flashes to indicate network activity.

HP rp5800 Rear View



HP rp5800 — Back View

Item	Name	Description
1	Powered USB	Powered USB port, 24V
2	LAN Port	RJ-45 network connector
3	Serial Connector	COM1 serial port
4	Mouse Connector	PS/2 mouse connector (green)
5	Audio Connector	Line-in audio connector (blue)
6	Mains	Mains power cord connector
7	Powered USB	Powered USB ports, 12V
8	Cash Drawer Connector	Similar in size and shape to standard modem jack. To avoid damaging the computer, DO NOT attempt plug a network or phone cable into the connector.
9	Display/Port	DVI display connector
10	Serial Connector	COM2 serial port

HP rp5800 — Back View (cont'd.)

Item	Name	Description
11	USB	Un-powered USB ports
12	VGA Connector	VGA display connector
13	Keyboard Connector	PS/2 keyboard connector (purple)
14	Speaker connector	Line-out speaker connector (green)

Specifications

The specifications listed below are specific to this workstation as configured by GE Healthcare for use as a MUSE workstation. See the *HP RP5800 Hardware Reference Guide* for additional specifications.

HP rp5800 Small Form Factor Workstation

Component	Description
Processor Type	Intel® Core i3-2120, 2 cores/4 threads
Processor Speed	3.30 GHz
Cache	3 MB
RAM	2 GB
Serial Ports	2 RS-232 Serial Ports
USB Ports	Two (2) USB 2.0 ports, front, Five (5) USB 2.0 ports, rear Three (3) Powered USB ports, 12V, rear
Keyboard Type	PS/2
Mouse Type	PS/2
Video Resolution	1280 x 1024 @ 16-bit color depth
Ethernet Connection	10/100/1000 Mbps Ethernet, RJ-45 connector
Expansion Slots	PCI – Two (2) 4.2 inch height, 6.6 inch length, 25W PCI Express x1 — One (1) 2.5 inch low profile, 6.6 inch length, 10W PCI Express x16 — One (1) 2.5 inch low profile, 6.6 inch length, 25W
Optical Drive	DVD-R/DVD-RW capable
Hard Drive	One (1) 250 GB SATA 3.0, 3.5 inch, internal
Voltage	120 VAC 220 VAC
Rated Line Frequency	50/60 Hz
Rated Power Consumption	110 VAC: 38.55 W (Operating), 2.65 W (Sleep), 0.93 W (Off) 220 VAC: 38.62 W (Operating), 2.90 W (Sleep), 1.12 W (Off)
Heat Dissipation	110 VAC: 132 BTU/hr (Operating), 9 BTU/hr (Sleep), 3 BTU/hr (Off) 220 VAC: 132 BTU/hr (Operating), 10 BTU/hr (Sleep), 4 BTU/hr (Off)

HP rp5800 Small Form Factor Workstation (cont'd.)

Component	Description
Dimensions (HxWxD)	3.95 in. x 13.30 in. x 14.90 in. 10.03 cm x 33.78 cm x 37.84 cm
Weight	15.06 lbs 6.84 kg
Operating Temperature	32° to 104° F 0° to 40° C
Operating Humidity	10% to 90%, non-condensing
Operating Atmospheric Pressure	10,000 feet 3,048 meters
Storage Temperature	-22° to 149° F -30° to 65° C
Storage Humidity	0% to 95%, non-condensing
Storage Atmospheric Pressure	30,000 feet 9,144 meters

Replacement Parts

GE Part Numbers for HP rp5800

HP Part Number	GE Part Number	Description	Qty
653026-001	2066875-002	Access panel	1
653025-001	2066875-003	Front Bezel	1
628930-001	2066875-004	System Board, Trusted Platform Module (TPM)	1
659246-001	2066875-006	Power Supply	1
671613-001	2089411-001	RAM, 4GB, DDR3-1600 DIMM (1X4GB)	1
638629-001	2066875-021	Intel Core i3 2120 (3.3-GHz, 3-MB L3 cache, 65W)	1
655579-001	2066875-008	Front USB and power switch assembly	1
653023-001	2066875-009	Powered serial cable	1
638813-001	2066875-013	SATA cable, 19.5 inch, 2 straight ends	1
638814-001	2066875-016	SATA cable, 25.2 inch, 1 straight end, 1 angled end	1
603250-001	2066875-017	Adapter, Display Port to VGA	1
484156-001	2066875-020	Adapter, Display Port to DVI	1
617450-001	2066875-030	Adapter, Display Port to HDMI	1

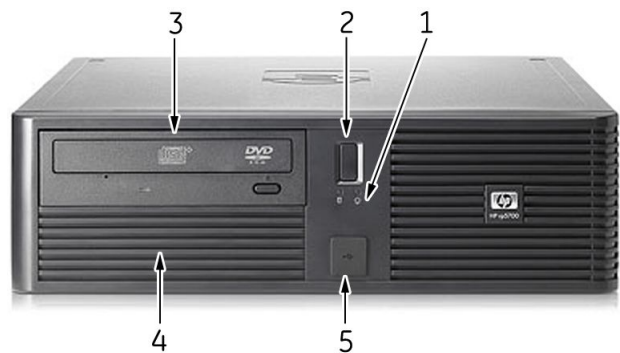
GE Part Numbers for HP rp5800 (cont'd.)

HP Part Number	GE Part Number	Description	Qty
487562-001	2066875-031	Display Port cable	1
653028-001	2066875-032	Cable cover	1
645326-001	2066875-033	Heat sink and replacement thermal material	1
653024-001	2066875-034	Chassis fan	1
636925-001	2066875-035	Speaker	1
638817-001	2066875-036	Printer port, PCI card	1
636921-001	2066875-037	Fan duct	1
638946-001	2066875-038	Serial port (COMB) card	1
490689-001	2066875-039	Modem, LSI, v.92	1
645558-001	2066875-012	eSATA port assembly, PCI card	1
537745-001	2066875-040	PS/2, basic for use in the United States	1
609250-001	2066875-041	PS/2, basic	1
636929-001	2089413-001	Internal Hard Drive, 500-GB, 7200-rpm	1
419496-001	2066875-022	16X SATA DVD-ROM drive	1
638947-001	2066875-042	2-port powered serial card	1
638944-001	2066875-011	PCIe to PCIe riser – 24V	1
638945-001	2066875-043	Powered USB card – 12V	1
637591-001	2066875-010	HP FireWire / IEEE 1394a PCIe x1 card	1
635523-001	2066875-014	Intel PRO/1000CT NIC, includes bracket	1

HP rp5700

This section provides basic information for the HP rp5700 workstation. This workstation is provided by GE Healthcare for use as a MUSE client. Additional information, including troubleshooting and parts replacement instructions, can be found the HP web site's rp5700 support page: <http://h20000.www2.hp.com/bizsupport/TechSupport/DocumentIndex.jsp?cc=us&taskId=135&prodClassId=-1&contentType=SupportManual&prodSeriesId=3375926>.

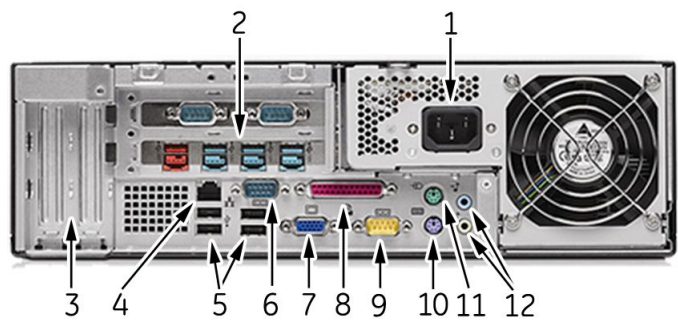
HP rp5700 Front View



HP rp5700 — Front View

Item	Name	Description
1	LEDs	Power and activity lights
2	Power Button	Recessed power button
3	Optical Drive	CD/DVD
4	Hard Drive	Internal hard drive
5	USB Ports	2 USB 2.0 ports with rubber cover

HP rp5700 Back View



HP rp5700 — Back View

Item	Name	Description
1	Mains	240W 80 PLUS® – Active PFC power supply (no line switching required)
2	PCI Slots	2 full-height PCI slots
3	Expansion Slots	2 low-profile slots: left ADD2/SDVO slot, right PCI3-x1
4	LAN Jack	RJ-45 LAN jack
5	USB Ports	4 USB 2.0 ports
6	Serial Connectors	RS232 serial COM2 port For use with optional RSS modem

HP rp5700 — Back View (cont'd.)

Item	Name	Description
7	VGA Port	Plug in a monitor
8	Parallel Port	Plug in a parallel printer or optional external parallel OmniDrive
9	Serial Connectors	RS232 serial COM1 port For use with optional RSS modem
10	Keyboard Port	Plug in a PS/2 keyboard
11	Audio Jacks	Line in and line out audio jacks
12	Mouse Port	Plug in a PS/2 mouse

Specifications

The specifications listed below are specific to this server as configured by GE Healthcare for use as a MUSE workstation. See the *HP RP5700 Hardware Reference Guide* for additional specifications.

RP5700

Component	Description
Model	HP RP5700
CPU	Intel Core 2 Duo 2.13 GHz
RAM	1 GB
Hard Drive	160 GB
Optical Drive	CD/DVD-ROM
1.44 MB Diskette Drive	Not included (external USB drive provided)
Serial Port	2
Parallel Port	1
USB 2.0 Port	4
Video Port	1
Keyboard Port	PS/2
Mouse Port	PS/2
Network Port	10/100/1000 Mbps
Graphics Resolution	1280 x 1024
Power Specifications	
Operating Voltage Range	96–264 VAC
Rated Voltage Range	100–240 VAC
Rated Line Frequency	50–60 Hz
Power Output	240 W
Rated Input Current (maximum)	5A @ 90 VAC

Replacement Parts

GE Part Numbers for HP rp5700

HP Part Number	GE Part Number	Description	Qty
445766-001	2040746-001	FRU rp5700 Hood Assy W/FRT Bezel	1
445771-001	2040746-002	FRU rp5700 Power Supply	1
445759-001	2040746-003	FRU rp5700 Power Switch w/LED and Cable	1
445768-001	2040746-004	FRU rp5700 Serial Port W/Cable	1
440499-001	2040746-005	FRU rp5700 HD Drive 160 GB 7200 RPM SATA	1
445757-001	2040746-006	FRU rp5700 System Board	1
450470-001	2040746-007	FRU rp5700 CPU 2 GB E6400 2.13 GHz	1
39800038-001	2036936-022	FRU dc5750 1 GB, PC2-5300, CL5	1
445758-001	2040746-008	FRU rp5700 Memory Riser Card	1
445775-001	2040746-009	FRU rp5700 USB Expansion Card W/CBL	1
445761-001	2040746-010	FRU rp5700 Fan	1
445774-001	2040746-011	FRU rp5700 Heatsink	1
417966-001	2040746-012	FRU rp5700 Mouse PS/2 Optical	1
153099-001	2036800-016	FRU HP ML370 3.3 v Lithium Battery	1
445766-001	2040746-013	FRU rp5700 Front Bezel	1
445762-001	2040746-014	FRU rp5700 Speaker Internal	1
445767-001	2040746-015	FRU rp5700 Fan Duct	1
445770-001	2040746-016	FRU rp5700 Tower Stand	1
RV629AV	2040746-017	SATA 16X SUPERMULTILIGHTSCRIBE ALL	1

HP dc7600

This section describes basic information for the HP dc7600 workstation. This workstation is provided by GE Healthcare for use as a MUSE client. Additional information, including troubleshooting and parts replacement instructions, can be found the HP web site's dc7600 support page: <http://h20000.www2.hp.com/bizsupport/TechSupport/DocumentIndex.jsp?contentType=SupportManual&lang=en&cc=us&taskId=101&prodSeriesId=472276>.

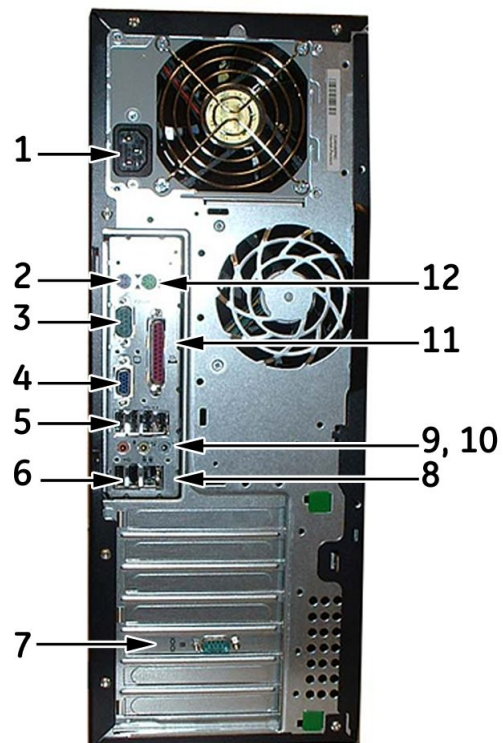
HP dc7600 Front View



HP dc7600 — Front View

Item	Name	Description
1	DVD-RW Drive	Reads and writes to DVD-RW and CD-RW
2	Power Button	Turns system on or off
3	Universal Serial Bus Connectors 2.0	Front USB connectors
4	Headphone Jack	Not used
5	Microphone Jack	Not used

HP dc7600 Back View



HP dc7600 — Back View

Item	Name	Description
1	AC Input Connector	Connects unit to power outlet
2	Keyboard Connector	Connects to the keyboard (purple)
3	Serial 1 Connector	Extra serial connector
4	Video Connector	Connects to the monitor
5	USB Ports 1 – 4	Connects to the USB keyboard and other USB devices
6	USB Ports 5 – 6	Other USB devices can connect to these ports
7	Serial Connectors	Extra serial connector; use for the modem
8	Ethernet Connector	Connects to network (connection on the left)
9	Audio Connector	Not used
10	Audio Connector	Not used
11	Parallel Port	Connects to parallel printer
12	Mouse Connector	Connects the mouse (green)

Specifications

The specifications listed below are specific to this server as configured by GE Healthcare for use as a MUSE Server. See the *HP DC7600 Technical Reference Guide* for additional specifications.

Component	Description
Model	HP RP 5700 CMT
Form Factor	Mini- Tower
CPU	Intel Pentium 4, 3.0 GHz
RAM	512 MB
Hard Drive	40 GB
Optical Drive	CD-ROM
1.44 MB Diskette Drive	1
Serial Port	2
Parallel Port	1
USB 2.0 Port	8
Video Port	1
Keyboard Port	PS/2
Mouse Port	PS/2
Network Port	10/100/1000 Mbps

Replacement Parts

HP Part Number	GE Part Number	Description	Quantity
393599-001	2030505-018	Computer Cover Assembly Front Bezel w/o inserts	1
381024-001	2030505-019	Power Supply 5 Output 240W DC7600	1
365555-001	2030505-020	40 GB\7200 RPM SATA Hard Drive DC7600	1
326773-005	2030505-021	48X CDROM Drive w/Mounting Screws DC7600	1
391739-001	2030505-022	SATA Hard Drive Cable 19.5 inch DC7600	1
392410-001	2030505-023	Power Switch/LED Cable use w/370857-001	1
393606-001	2030505-024	Front I/O Device w/Cable USB +Audio 7600	1
370501-001	2030505-025	CD Drive Bezel w/Disk Drive Slot	1
394778-001	2030505-026	Speaker HP DC7600 SF	1
382024-001	2030505-027	Heatsink w/Thermal Grease & Alcohol Pad	1
392412-001	2030505-028	Chassis Fan HP DC7600 SFF	1

HP Part Number	GE Part Number	Description	Quantity
375514-001	2030505-029	Heatsink Duct Baffle DC7600 SFF	1
370708-001	2030505-030	Foot Kit Oval and Round (4 each) 7600 SFF	1

3

System Components — Accessories

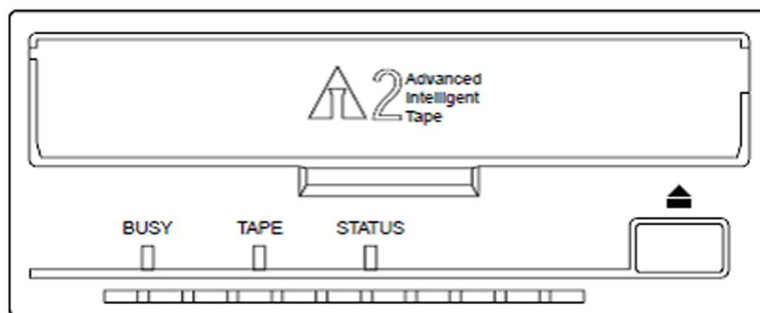
Sony AIT Tape Drive

The ML370 G5 server is equipped with a Sony Tape drive for backup of the MUSE database. For additional information on the tape drive go to the Sony web site <http://www.sony.net/Products/storagesolution/documents/manual.html> and click on the appropriate link to access the User's Guide.

The ML370 G5 server is shipped with two different tape drives:

- AIT-2 SDX 500V
- AIT-2T SDX 550V

Front View- Sony AIT-2 SDX 500V

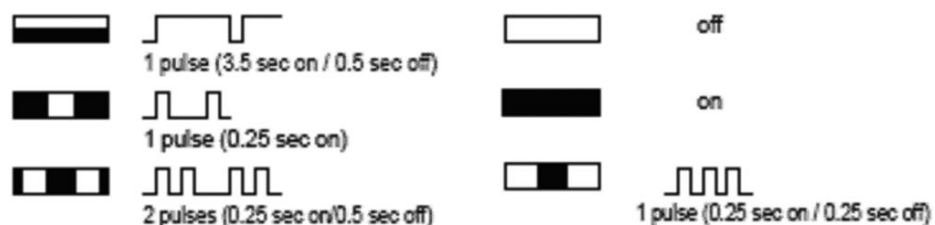


Sony AIT 2 SDX 500V Tape Drive Front View

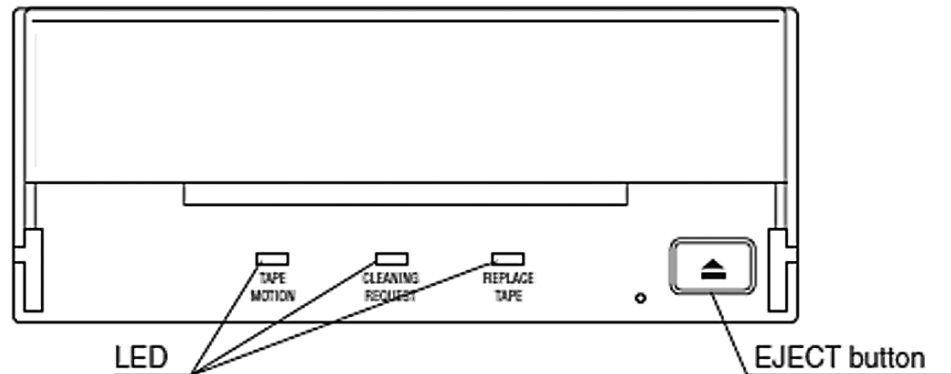
The LED indicators are defined as follows.

LED			State		
BUSY	TAPE	STATUS	Activity	Cartridge	Other
			None	None	None
			SCSI	None	None
			Drive	Loading/Unloading	None
			Drive	Loading/Unloading	Write Protected
			None	Loaded	Cleaning Tape at EOM
			None	Loaded	None
			SCSI	Loaded	None
			SCSI/Drive	Loaded	None
Independent			*	Loaded	Write Protected
Independent		Independent	*	Loaded	Error Rate Warning
*	*		*	*	Cleaning Request
*	*		*	*	Self test Failure
	*	*	*	*	Waiting for Reset
*		*	*	*	Waiting for Eject

* : Not defined.



Front View- Sony AIT-2 SDX 550V



Sony AIT-2 SDX 550V Tape Drive Front View

The LED indicators are defined as follows.

LED			
TAPE MOTION	CLEANING REQUEST	REPLACE TAPE	Sense
	Independent	Independent	Tape Loaded
	Independent	Independent	Tape Access in Progress (write/read)
	Independent	Independent	Tape Access in Progress (others)
Independent		Independent	Cleaning is requested
Independent		Independent	Cleaning is Not Completed
Independent	Independent		Media Error Occurred
			H/W Error Occurred

on
 Slow
 1 pulse (0.9 sec on/0.3 sec off)
 Fast
 1 pulse (0.3 sec on/0.3 sec off)

Modems

Modems are used to transmit patient ECGs from the ECG Cart to the MUSE server. For additional information on the tape drive go to the Multitech web site, http://www.multitech.com/en_US/DOCUMENTS/Collateral/Manuals/ and search for the appropriate modem Users Guide.

Multitech MT5634ZBA

LED Connectors



The LED indicators on the front panel indicate status, configuration and activity.

LED Indicator Name	Description
TD — Transmit Data	Flashes when the modem is transmitting data to another modem.
RD — Receive Data	Flashes when the modem is receiving data.
CD — Carrier Detect.	Lights when the modem detects a valid carrier signal from another modem. It is on when the modem is communicating with the other modem, and off when the link is broken.
56 – 56K Mode (56,000–28,000 bps)	Lights whenever the modem is set for or connects using the V.90 or V.92 protocol. The actual connection speed depends on ISP server capabilities and line conditions.
33 – V.34 Mode (33,600–2,400 bps)	Lights whenever the modem connects using the V.34 protocol.
14 – V.32bis Mode (14,400–7,200 bps)	Lights when the modem connects using the V.32bis protocol. The modem can connect at lower than V.32bis speeds, but no speed indicator lights during the connection.
OH – Off-Hook	Lights when the modem is off-hook, which occurs when the modem is dialing, online, or answering a call. Flashes when the modem pulse-dials.
TR – Terminal Ready	Lights when a communications program is using the modem. It means the modem is ready for an outgoing or incoming call. It goes off when the communications program disconnects the serial port. When it goes off, a connected modem will also disconnect.

LED Indicator Name	Description
EC – Error Correction (V.42)	Lights continuously when the modem is in V.42 error correction mode, and flashes when compression is activated.
FX – Fax	Lights when the modem is in fax mode.

NOTE:

When you turn on the modem, the protocol indicators flash briefly as the modem does a self-test. The 56 indicator lights will then flash briefly. After a call, the indicator for the protocol used in the connection remains lit until another call is made or the modem is reset. If you connect at a rate under 14,400 bps, all protocol indicators remain off after the connection is broken, even though the modem is still turned on.

Specifications

For modem specifications, see the Multitech web page http://www.multitech.com/en_US/DOCUMENTS/Collateral/Manuals/ and search for the appropriate modem Users Guide.

Replacement Parts

The Multitech MT9234ZBA is replaced by Multitech. See the Multitech web page http://www.multitech.com/en_US/DOCUMENTS/Collateral/Manuals/ and search for the appropriate modem Users Guide.

Multitech MT9234ZBA

LED Connectors



The LED indicators on the front panel indicate status, configuration and activity.

LED Indicator Name	Description
TD — Transmit Data	Flashes when the modem is transmitting data to another modem.
RD — Receive Data	Flashes when the modem is receiving data.
CD – Carrier Detect.	Lights when the modem detects a valid carrier signal from another modem. It is on when the modem is communicating with the other modem, and off when the link is broken.

LED Indicator Name	Description
OH – Off-Hook	Lights when the modem is off-hook, which occurs when the modem is dialing, online, or answering a call. Flashes when the modem pulse-dials.
TR – Terminal Ready	Lights when a communications program is using the modem. It means the modem is ready for an outgoing or incoming call. It goes off when the communications program disconnects the serial port. When it goes off, a connected modem will also disconnect.
Power	The Power LED lights when the system is applying power to the modem.

Specifications

For modem specifications, see the Multitech web page http://www.multitech.com/en_US/DOCUMENTS/Collateral/Manuals/ and search for the appropriate modem Users Guide.

Replacement Parts

GE Part Number	Descriptions
2003097-001	Fax/CSI/Xmodem Modem Kit 120V
2003097-002	Fax/CSI/Xmodem Modem Kit 220V

Displays

The following displays have been provided with the MUSE workstation.

HP LE1911 19 inch display	For additional information, see the HP User's Guide PN 594300–002, on the HP web site at the following link http://h20000.www2.hp.com/bizsupport/TechSupport/Home.jsp , and searching on the part number.
HP L1910 19 inch display	For additional information, see the HP User's Guide PN 594300–002, on the HP web site at the following link http://h20000.www2.hp.com/bizsupport/TechSupport/Home.jsp , and searching on the part number.
NEC 1990SXi	For additional information, see the NEC 1990SXi User's manual found on the NEC web site at the following link http://www.necdisplay.com/SupportCenter , and searching on the desktop displays.

Specifications

For display specifications, refer to the appropriate User's Guide found at the web sites mentioned in the previous table.

Replacement Parts

GE Part Number	Description
2040982-001	HP LE1911 display
N/A	HP L1910 display replaced by HP LE1911 display
N/A	NEC 1990SXi display replaced by HP LE1911 display

Barcode Readers

GE Healthcare purchased the barcode readers that may be used with your system from the original equipment manufacturer (OEM). Due to the constant changes in design and specifications, please refer to the OEM web sites for additional information not located in this manual.

Hand Held 3800G Barcode Reader

Specifications

For barcode specifications, refer to User's Guide found at the OEM web site.

Parts Replacement

GE Part Number	OEM Part Number	Description
2038834-001	3800G04-USBKITE	Bar code scanner hand held products
2040065-001	42206132-02E	Scanner Cable PS2 hand held products

Hand Held Flexpoint HS-1M Barcode Reader

Specifications

For barcode specifications, refer to User's Guide found at the JadaKtech web site, www.jadatech.com.

Parts Replacement

All replacement parts are provided by Honeywell. Please see the JadaKtech web site, www.jadatech.com.

HP LaserJet P4015 Printer

Specifications

The following table describes the specifications for the HP LaserJet P4015 printer.

HP LaserJet P4015 Printer

Speed	Up to 52 ppm
Resolution	Up to 1200 x 1200 dpi
Memory, Standard	128 MB
Memory, Maximum	640 MB
First Page Out	< 9 seconds
Power Requirements	100–127 V (50–60 Hz) 220–240 V (50–60 Hz)
Power Consumption, Active	840 watts
Power Consumption, Standby	18 watts
Power Consumption, Powersave	12 watts
Power Consumption, Off	0 watts
Operating Temperature	50° — 90° F 10° — 32° C
Storage Temperature	32° — 95° F 0° — 35° C
Dimensions (HxWxD)	16.5 x 17.7 15.5 inches 41.91 x 44.95 x 39.37 centimeters
Weight	59.92 lbs. 27.2 kg.

Replacement Parts

GE Healthcare does not repair or provide replacement parts for printers. Replacement printers are only available as whole units and must be ordered through your sales representative. If service or repair of the printer is desired, contact a local HP representative. Due to constant changes in design and specifications, new printers may not match the make or model of your existing printer.

Diskette Drive: HP DC361B

A floppy drive is required to accommodate older ECG carts and workflows where ECGs are saved at the cart on a floppy disk and then acquired from the disk at the workstation. Newer GE Healthcare-supplied workstations are not equipped with internal floppy drives. In these cases, GE Healthcare supplies an external USB floppy drive that can be connected directly to the GE Healthcare workstation.

Specifications

For specifications, refer to the Sabrent web site.

Replacement Parts

GE Part Number	Sabrent Part Number	Descriptions
2034800-003	SBT-UFDB	Disk Drive Floppy USB 2.0 Ext Black

SD Reader Memory Card

An SD Card reader connected to the MUSE system workstation can be used to acquire data from ECG Carts that support storage of ECGs on a Secure Digital (SD) card. GE Healthcare purchased the SD Card Readers that may be used with your system from the original equipment manufacturer (OEM). Due to the constant changes in design and specifications, please refer to the OEM web sites for additional information not located in this manual.

Specifications

For specifications, refer to the HP web site.

Replacement Parts

GE Part Number	HP Part Number	Descriptions
2027495-001	N/A	SD Card Reader Memory Card 18 in 1

Peripherals Specifications

HP LE1911 19-inch LCD Display

The following table describes the specifications for the HP LE1911 monitor.

HP LE1911 19-inch LCD Monitor

LCD Module	19-inch diagonal active matrix TFT (thin film transistor)
Display Size (Diagonal)	19 inches 48.3 centimeters
Native Resolution/Refresh Rate	1280 x 1024 @ 60 Hz
Viewing Angle	160 degrees, horizontal 160 degrees, vertical
Brightness	250 nits (cd/m ²)
Contrast Ratio	1000:1
Response Rate	5 milliseconds (on and off)
Frequency Range — Horizontal	24 — 83 kHz
Frequency Range — Vertical	50 — 76 Hz
AC Input Power	Auto-Ranging; 100 to 240 VAC; internal power supply
Power Consumption	Maximum: 28.0 watts Typical: 19.5 watts Power Save Mode: <2 watts
Operating Temperature	41° to 95°F 5° to 35°C
Non-operating Temperature	–4° to 140° F –20° to 60° C
Dimensions with Stand (HxWxD)	16.4 x 16.3 x 8.1 inches 41.6 x 41.4 x 20.6 centimeters

HP LE1911 19-inch LCD Monitor (cont'd.)

Dimensions without Stand (HxWxD)	13.7 x 16.3 x 2.3 inches 34.7 x 41.4 x 5.8 centimeters
Weight without stand	9.0 lbs. 4.1 kg.

HP LaserJet P4015 Printer

The following table describes the specifications for the HP LaserJet P4015 printer.

HP LaserJet P4015 Printer

Component	Description
Speed	Up to 52 ppm
Resolution	Up to 1200 x 1200 dpi
Memory, Standard	128 MB
Memory, Maximum	640 MB
First Page Out	< 9 seconds
Power Requirements	100–127 V (50–60 Hz) 220–240 V (50–60 Hz)
Power Consumption, Active	840 watts
Power Consumption, Standby	18 watts
Power Consumption, Powersave	12 watts
Power Consumption, Off	0 watts
Operating Temperature	50° — 90° F 10° — 32° C
Storage Temperature	32° — 95° F 0° — 35° C
Dimensions (HxWxD)	16.5 x 17.7 15.5 inches 41.91 x 44.95 x 39.37 centimeters
Weight	59.92 lbs. 27.2 kg.

MultiTech MT9234ZBA Modem

The following table describes the specifications for the MultiTech MT9234ZBA modem.

MultiTech MT9234ZBA Modem

Manufacturer/Model	MultiTech MT9234ZBA
Server-to-Client Data Rates	56K speeds when accessing a V.90 or V.92 server (actual speed depends on server capabilities and line conditions)
Client-to-Server Data Rates	Up to 48 Kbps when accessing a V.92 server (actual speed depends on server capabilities and line conditions); otherwise the same as client-to-client data rates (see next listing).
Client-to-Client Data Rates	33600, 31200, 28800, 26400, 24000, 21600, 19200, 16800 bps, 14400, 12000, 9600, 7200, 4800, 2400, 1200, 0-300 bps
Fax Data Rates	33600, 31200, 28800, 26400, 24000, 21600, 19200, 16800
Voice Compatibility	TIA/EIA IS-101 (Voice Option only)
Data Format	Serial, binary, asynchronous
Modem Compatibility	ITU-T V.92, V.90, V.34 enhanced, V.34, V.32bis, V.32, V.22bis, V.22; Bell 212A and 103/113; ITU-T V.21 & V.23; V.42, V.42bis, V.44.
Fax Compatibility	ITU-T "Super" Group 3; Class 1.0, 2.0, 2.1; T.4; T.30; V.21; V.27ter; V.29; V.34; V.17; and TIA/EIA Class 1, 2; TR29.2
Video Compatibility	ITU-T V.80 for H.324 video conferencing
Error Correction	ITU-T V.42
Data Compression	ITU-T V.44 (6:1 throughput)
Speed Conversion	Serial port data rates adjustable to 300, 1200, 2400, 4800, 9600, 19,200, 38,400, 57,600, 115,200, and 230,400 bps
Mode of Operation	Fax online modes; full duplex over dial-up lines;

MultiTech MT9234ZBA Modem (cont'd.)

Flow Control	XON/XOFF (software), RTS/CTS (hardware)
Intelligent Features	Plug and play; fully AT command compatible; dialing options, autoanswer; adaptive answer; EIA extended automode; adaptive line probing; automatic symbol and carrier frequency during start-up, retrain, and rate renegotiation; DTMF detection; call status display, auto-parity and data rate selections; keyboard-controlled modem options; non-volatile memory; remote configuration; DTR dialing; callback security; A-law support in 56K modes; 11-bit support; realtime fax compression conversion; U.S. Caller ID reporting; quick-connect startup (V.92).
Command Buffer	40 characters
Transmit Level	-12 dBm (Euro/NAM) – varies by country/region setting
Frequency Stability	±0.01%
Receiver Sensitivity	-43 dBm under worst-case conditions
AGC Dynamic Range	43 dB
Interface	TIA/EIA RS-232C/ITU-T V.24/V.28
Connectors	DB25F RS-232C connector; 2 RJ-11 telephone jacks; power jack
Cables	Country-specific telephone; power cables; serial cable NOTE: Any cables connected to the computer should be shielded to reduce interference.
Diagnostics	Power-on self test, local analog loop, local digital loop, remote digital loop.
Indicators	LEDs for Transmit Data, Receive Data, Carrier Detect, 56K bps, 33.6K bps, 14.4K bps, Off Hook, Terminal Ready, Error Correction, Fax.
Speaker	Internal speaker for call progress monitoring.
Manual Control	Power switch
Operating Temperature	-40° – 60° C (-40° –140° F) ambient under closed conditions; humidity range 20–90% (non-condensing)
Power Requirements	Global modems: 100–240 VAC, 50/60 Hz universal power supply Non-global modems: 115 VAC, 60 Hz or 230 VAC, 50 Hz power supply
Power Consumption	9 VDC, 300 mA maximum

MultiTech MT9234ZBA Modem (cont'd.)

Dimensions	10.8 cm wide x 14.8 cm long x 2.9 cm high (4.25 in x 5.8 in x 1.15 in)
Weight	224 g (8 oz)
Limited Warranty	10 years

Diskette Drive: HP DC361B

Can't confirm specs. Can't find spec sheet on HP website.

HP DC361B External USB Diskette Drive

Manufacturer/Model	HP USB External Diskette Drive (DC361B)
Connectors	One (1) USB v1.1 connection via cable
Dimensions (Width x Depth x Height)	101.6 mm x 139.7 mm x 17.8 mm 4.0 in x 5.5 in x 0.7 in
Weight	255 g (0.56 lb)

Barcode Reader: IT3800LR

Hand Held IT3800LR Barcode Reader

Illumination	630 NM Visible Red LED
Receiving Device	3648 element linear imager
Reading Distance	From 1 in. (2.5 cm) to 8 in. (20.3 cm) on medium density bar codes
Reading Width	5 in. (12.7 cm) code width at 7 in. (17.8 cm) distance
Resolution	5 mil. at 3.5 in. (8.8 cm) distance
Skew Angle	±30°
Pitch Angle	±15°
Horizontal Velocity	2 in. (5.1 cm) per second
Minimum Rectangle Difference	30%
Scan Rate	Programmable up to 270 scans per second
Decode Rate	270 decodes per second
Dimensions (L x H x W)	5.3 in. x 6 in. x 3.1 in. (13.5 cm x 15.2 cm . 7.9 cm)
Weight	6.3 oz. 179.2 g
Housing	Polycarbonate/ABS blend, UL 94V0
Power Requirements	5 Vdc ± 10% at scanner (-11 model: 5 —12 Vdc ±10%)
Current Draw:	Scanning / Standby / Low Power -10 only
@270 s/s	275 mA / 125 mA / 30 mA
@67 s/s	150 mA / 125 mA / 30 mA

Hand Held IT3800LR Barcode Reader (cont'd.)

Power Supply Noise Rejection	Maximum 100 mV peak to peak, 10 to 100 kHz
Operating Temperature	+32°F to +122°F (0°C to +50°C)
Storage Temperature	-4°F to 140°F (-40°C to +60°C)
Humidity	0 to 95%
Mechanical Shock	Operational after 25 drops from 5 ft. (1.5 m) to concrete
Ambient Illumination	0 - 70,000 lux
ESD Protection	Functional after 15 kV discharge
Vibration	Withstands 5G peak from 22 to 300 Hz
Agency	FCC Class B, CE EMC Class B, CE Low Voltage Directive, IEC60825-1 LED Safety: Class 1, UL, cUL listed, TÜV
MTBF (Mean Time Between Failures)	Per MIL-HDBK-217F Ground Benign exceeds 100,000 hours
Symbologies	Codabar, Code 3 of 9 including PARAF, Interleaved 2 of 5, Code 2 of 5, Matrix 2 of 5, Code 11, Code 128, UPC, EAN/JAN, China Postal Code. PDF417 in 3800 PDF-12 model.
Interfaces	All popular PCs and terminals via keyboard wedge, keyboard replacement/direct connect, Apple ADB, USB, TTL level RS-232, wand emulation mode, TTL level Serial Wedge, and includes (HHLC) non decoded laser compatible output. IBM 4683/93 and OCIA retail terminals in 3800 LR-11 model. True RS-232 in 3800LR-13 model.

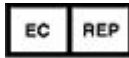
Ethernet Hub: Linksys EZXS55W

Linksys EXXS55W Ethernet Hub

Ports	5 auto-sensing 10/100 ports Advanced error detection and correction technology maintains accuracy and integrity
Ethernet Networking Speeds	Up to 100 Mbps
Standards	IEEE 802.3u 5 x 10/100



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GE Medical Systems *Information Technologies, Inc.*, a General Electric Company, going to market as GE Healthcare.

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