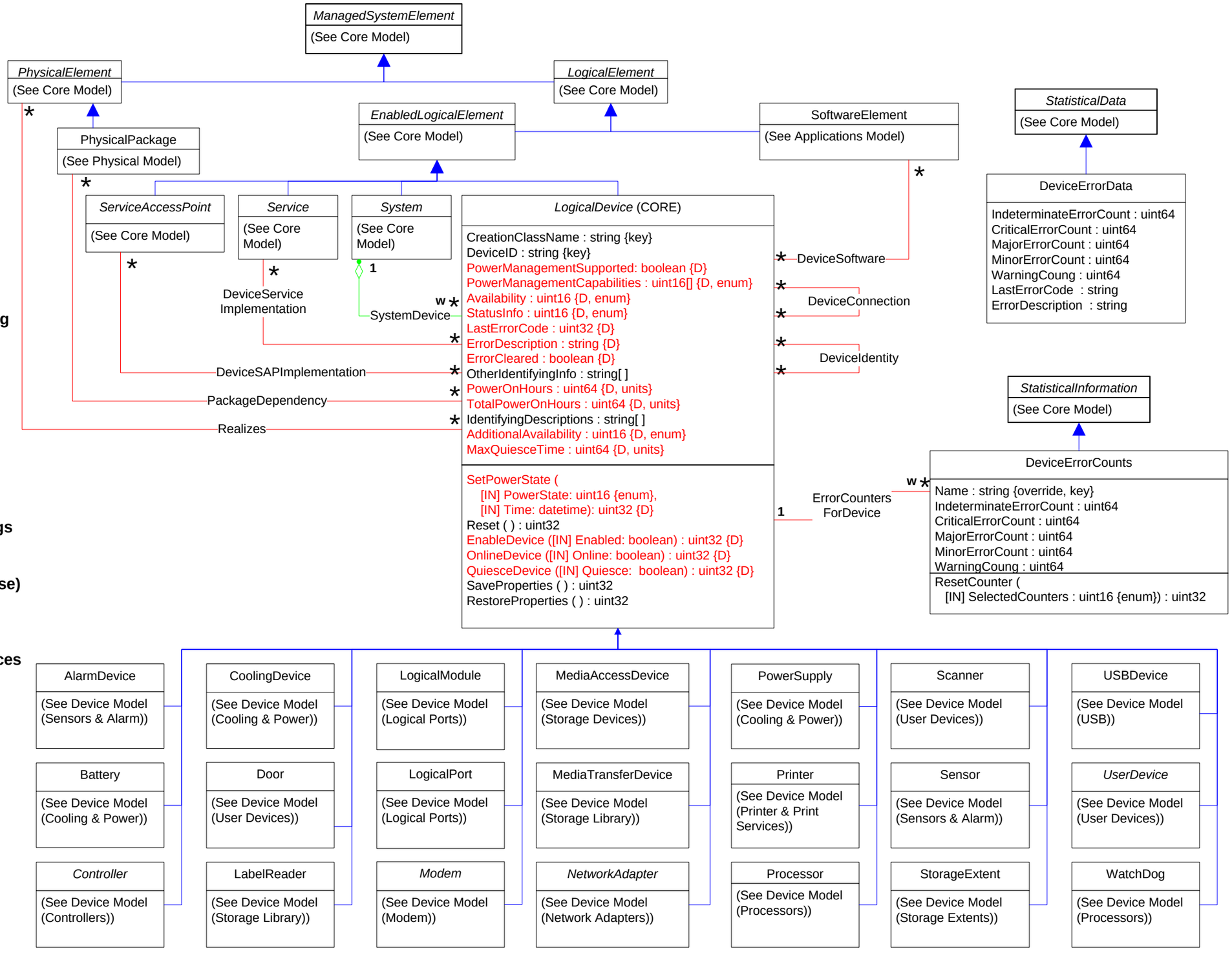
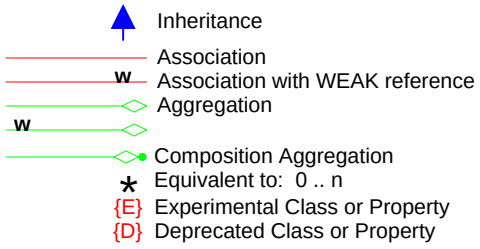
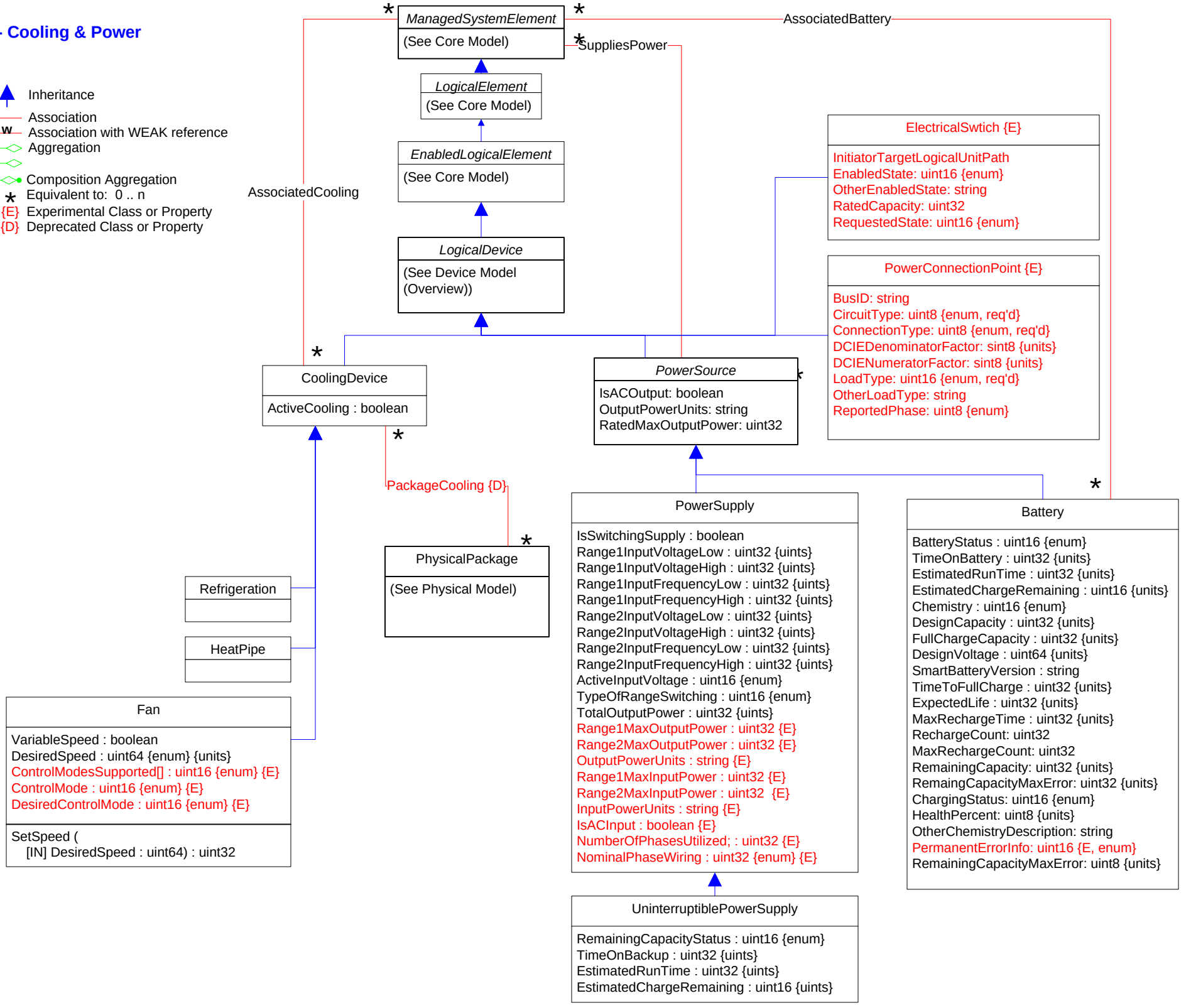
Title : Device Specification 2.27.0
Filename : CIM_Device.vsd
Author : DMTF Core Schema WG
Date : 6 October 2010

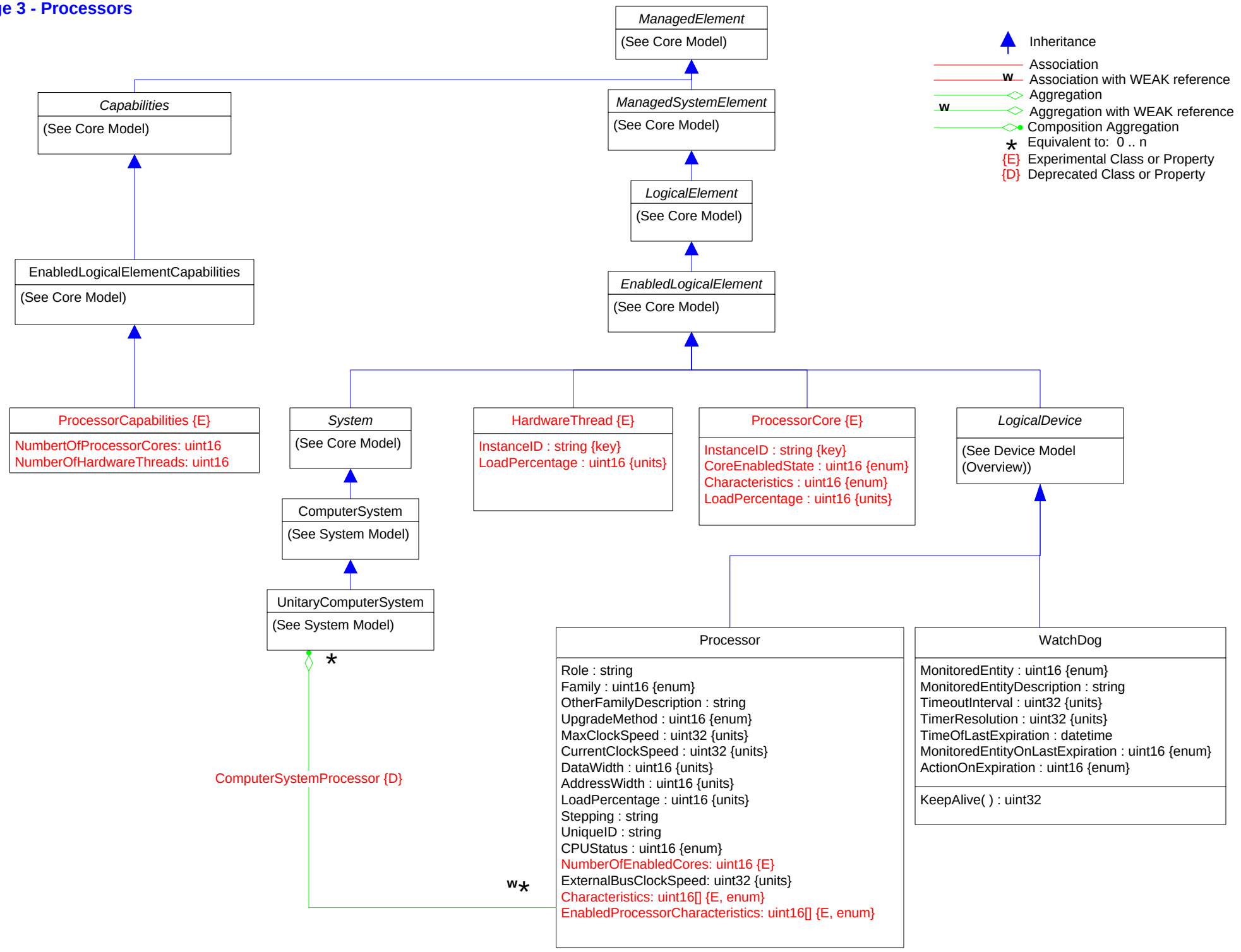


Page 2 - Cooling & Power



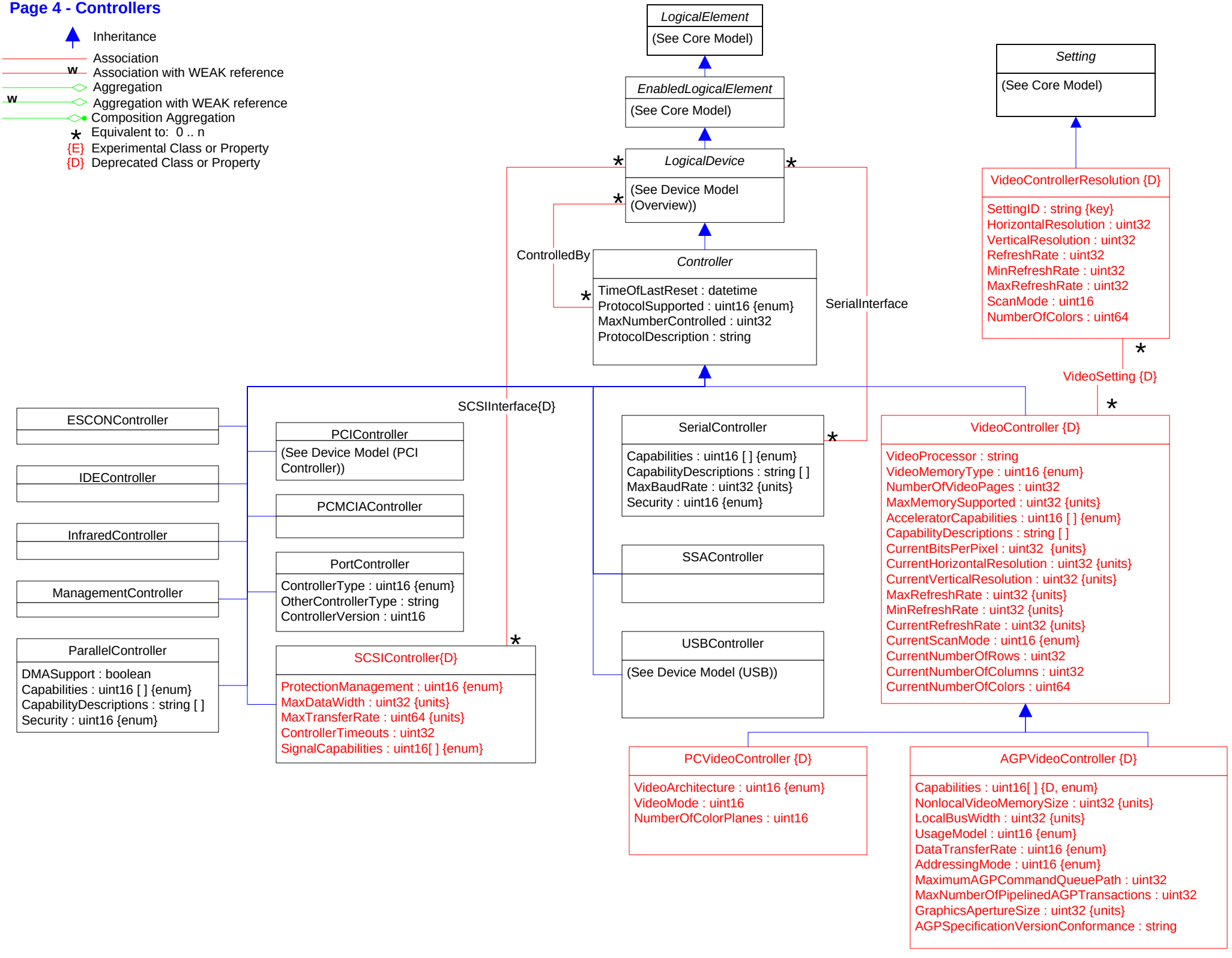


Page 3 - Processors



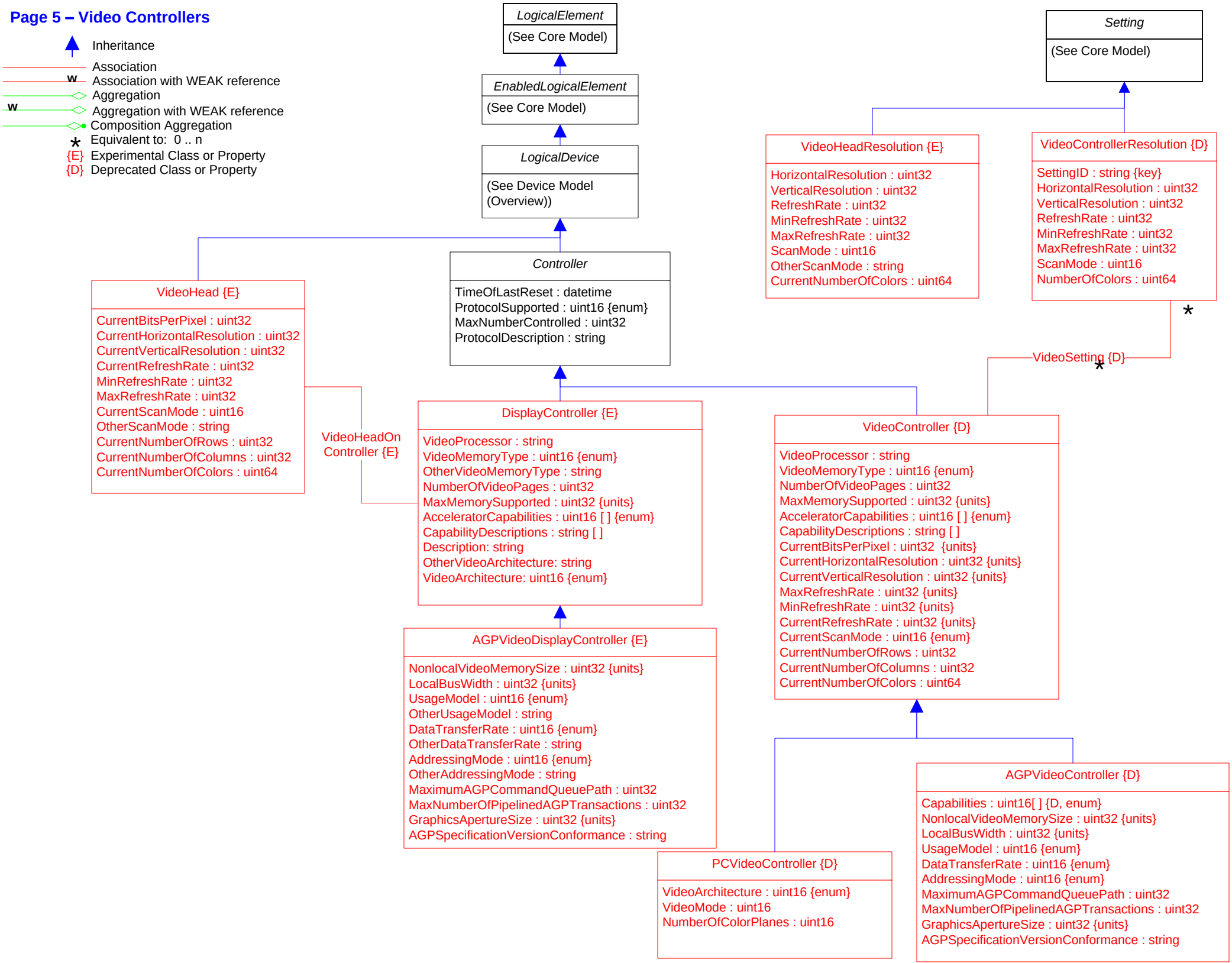
Page 4 - Controllers

Inheritance
Association
w Association with WEAK reference
Aggregation
w Aggregation with WEAK reference
Composition Aggregation
* Equivalent to: 0 .. n
{E} Experimental Class or Property
{D} Deprecated Class or Property

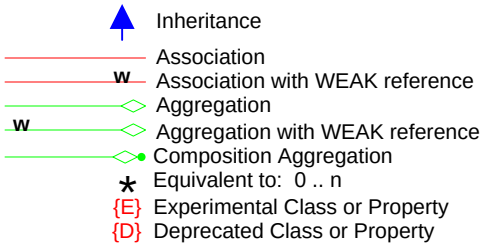


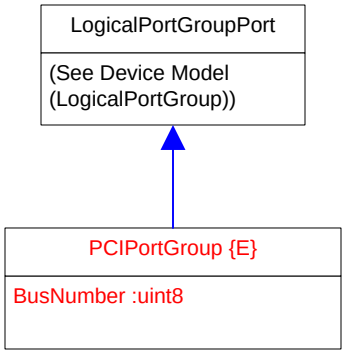
Page 5 – Video Controllers

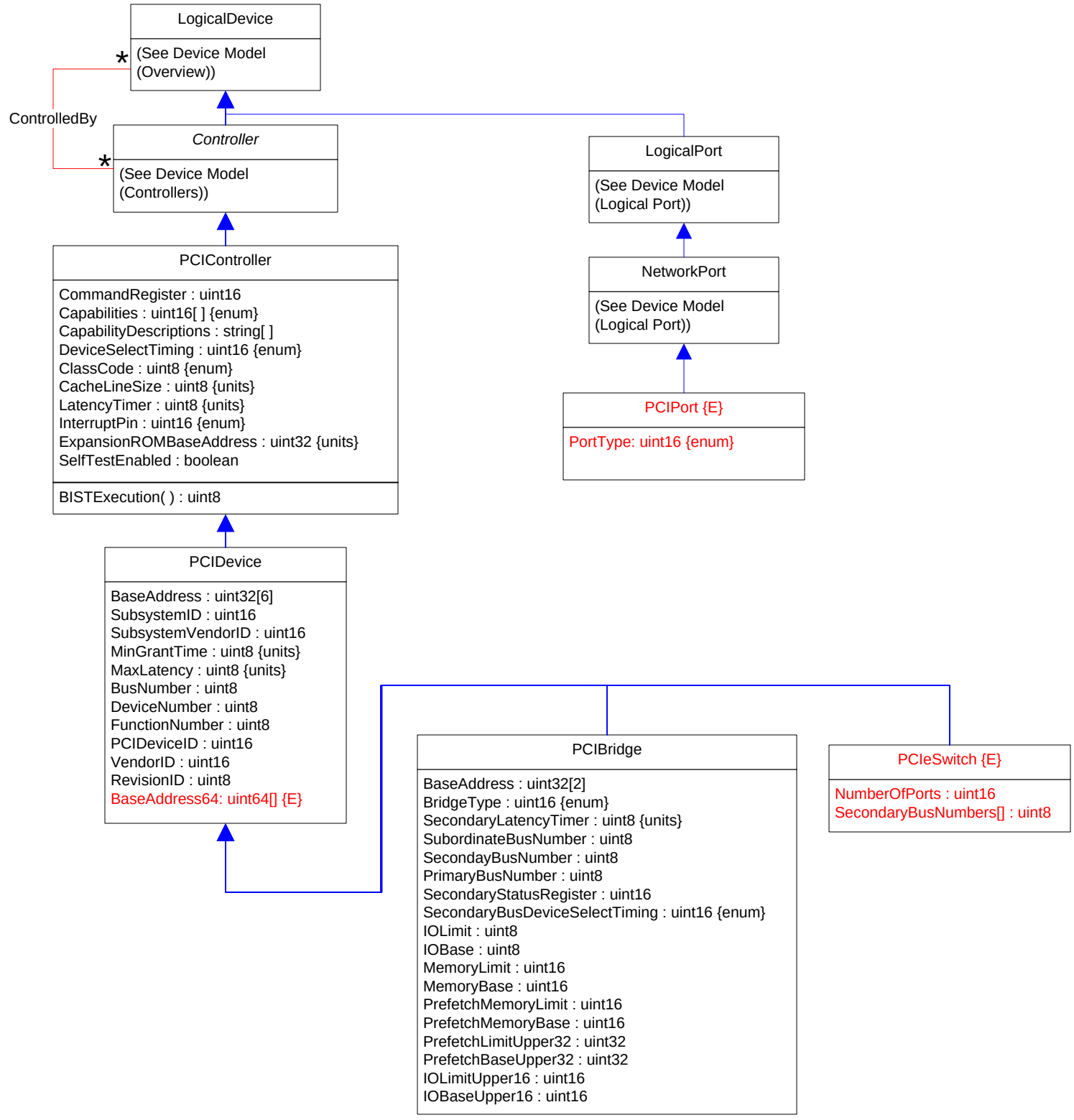
Inheritance
Association
w Association with WEAK reference
Aggregation
w Aggregation with WEAK reference
Composition Aggregation
* Equivalent to: 0 .. n
{E} Experimental Class or Property
{D} Deprecated Class or Property



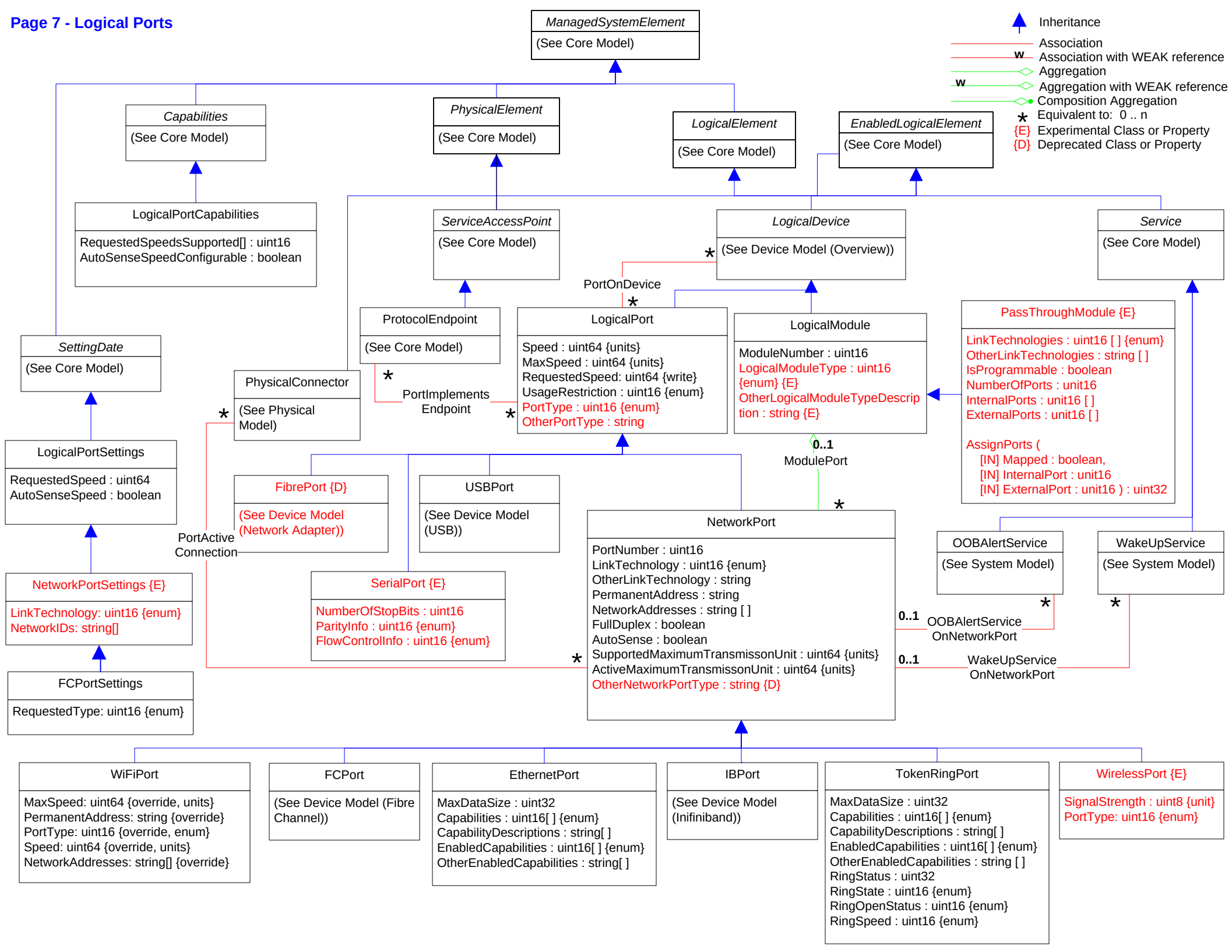
Page 6 - PCI Controllers



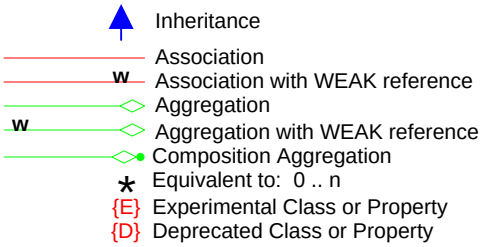


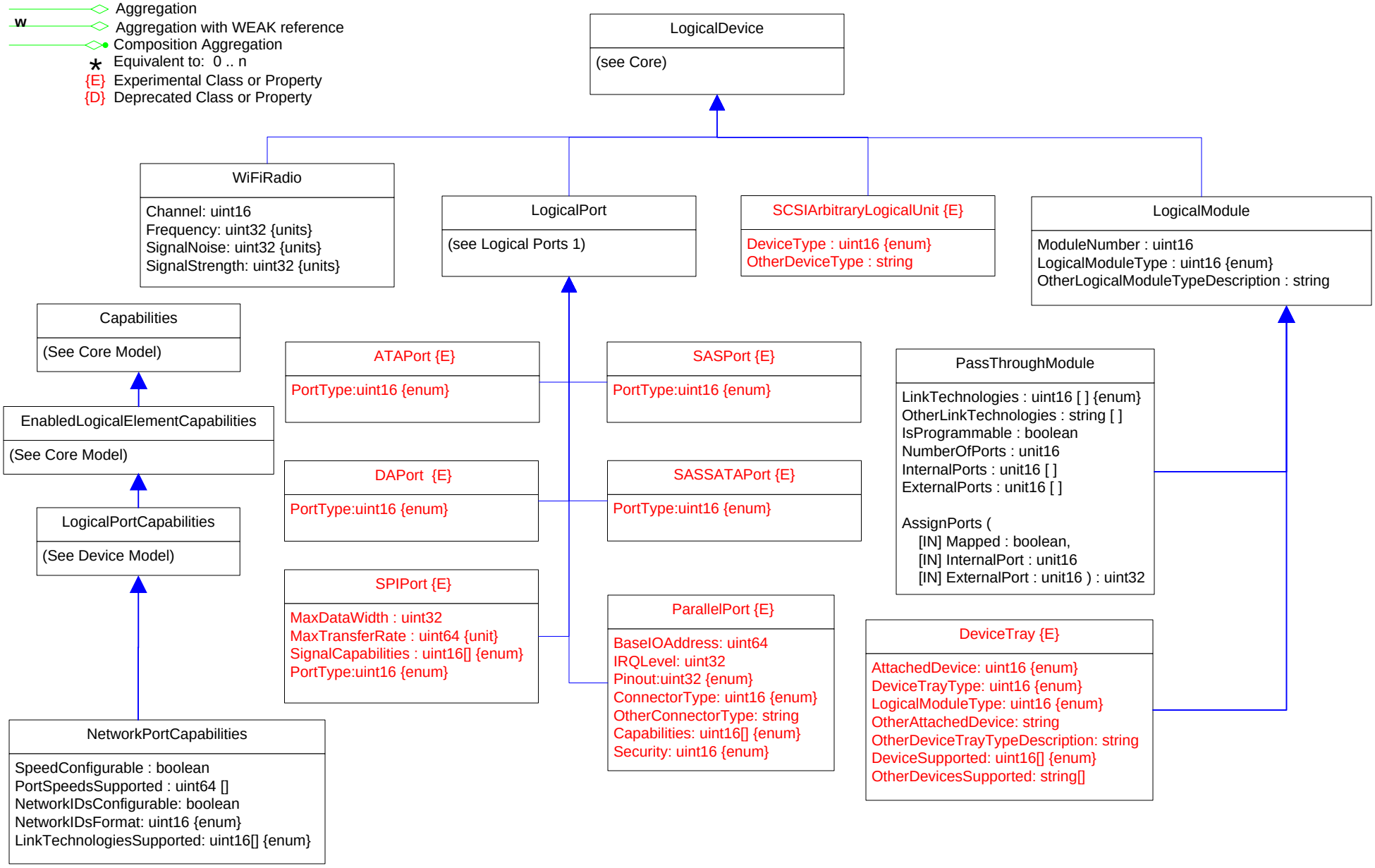


Page 7 - Logical Ports

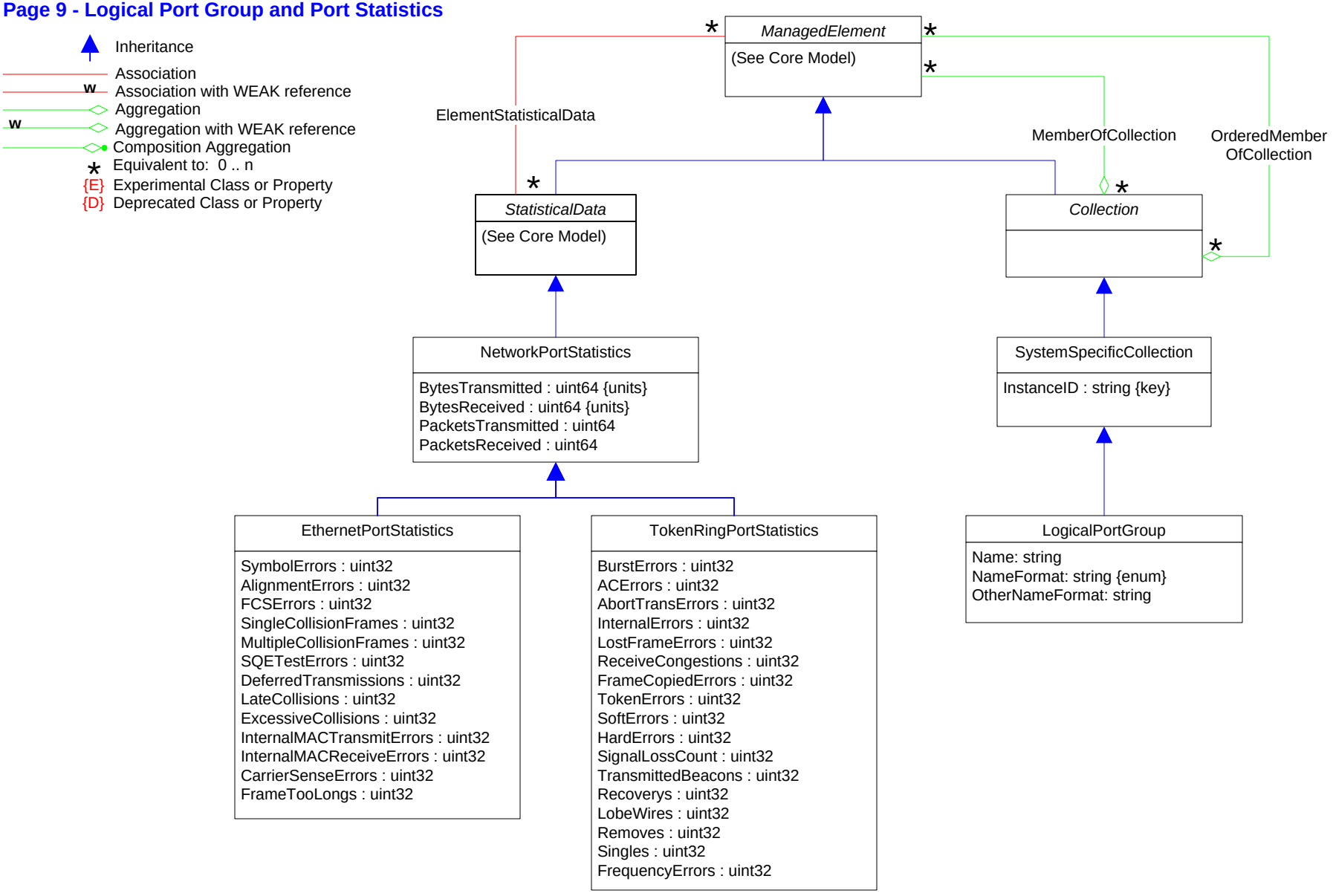


Page 8 – Ports 2

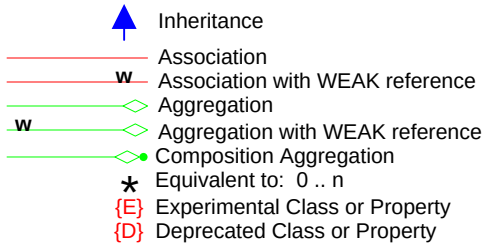


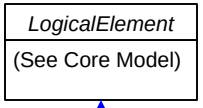


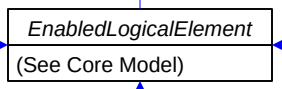
Page 9 - Logical Port Group and Port Statistics

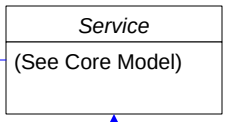


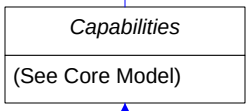
Page 10 - ProtocolController

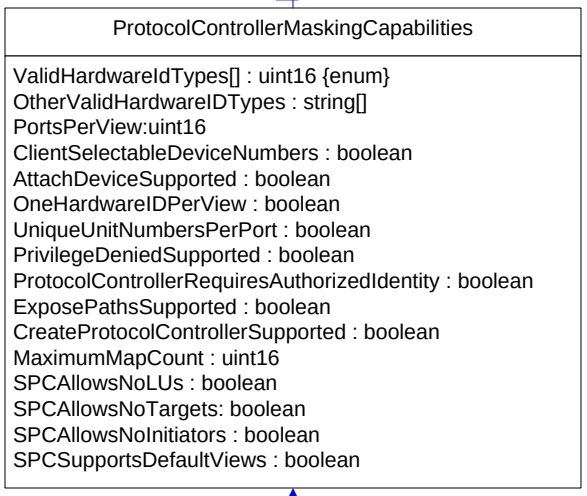


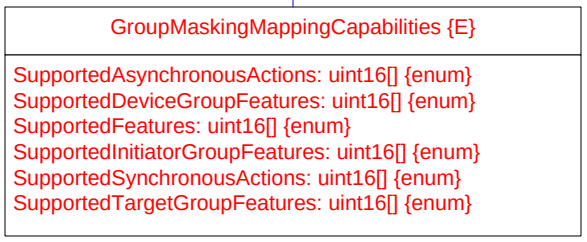


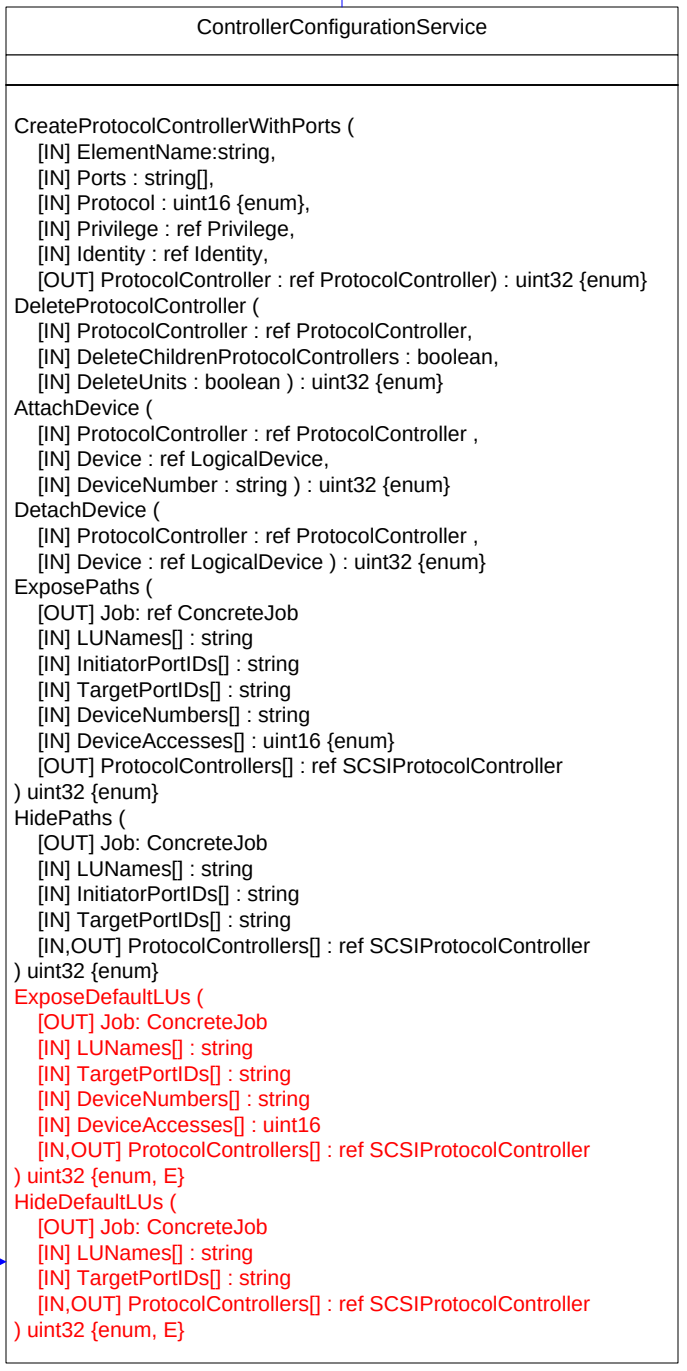


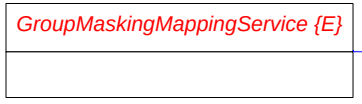


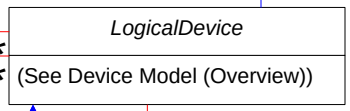


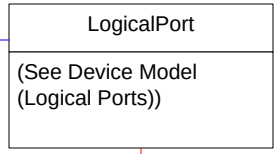


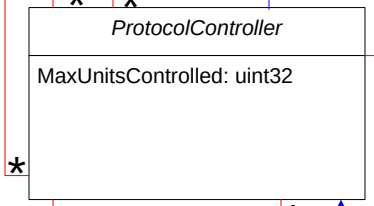


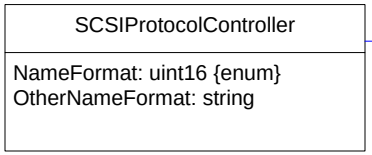












ProtocolController ForUnit

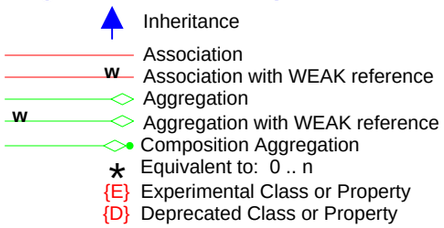
ProtocolController AccessUnit

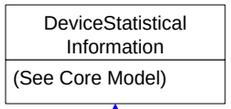
ProtocolController ForDevice

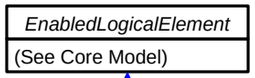
ProtocolController ForPort

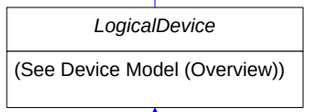
Associated Protocol Controller

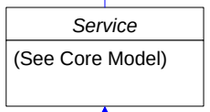
Page 11 - Network Adapters

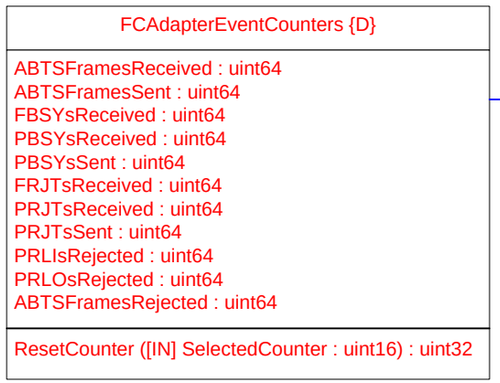


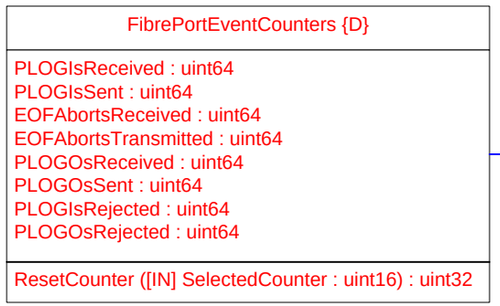


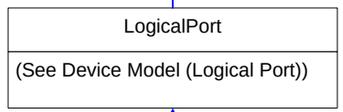


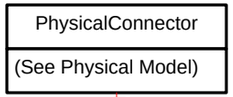


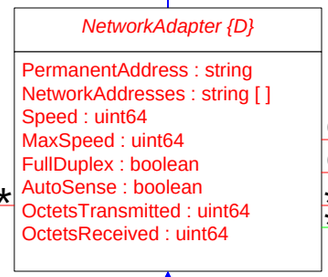


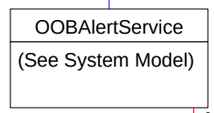


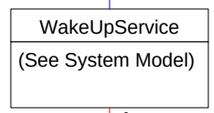


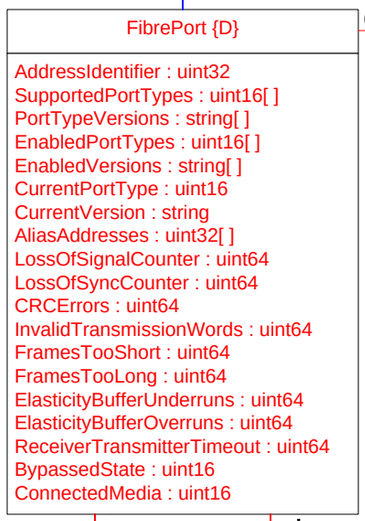


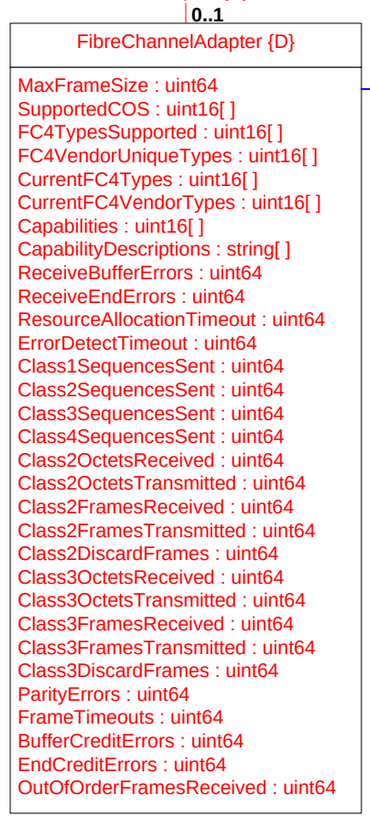


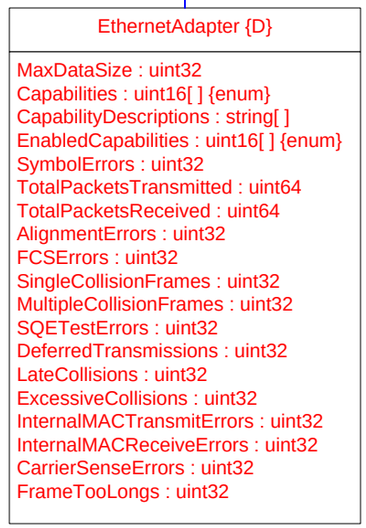


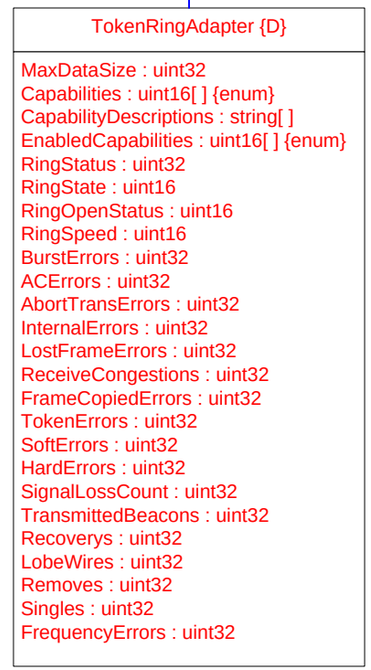


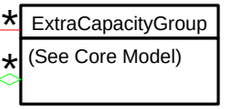












0..1 OOBAlertServiceOn NetworkAdapter {D}

*

0..1 WakeUpServiceOn NetworkAdapter {D}

*

0..1

AdapterActive Connection {D}

*

*

FibrePortOn FCAdapter {D}

0..1

*

Network VirtualAdapter {D}

*

NetworkAdapter RedundancyComponent {D}

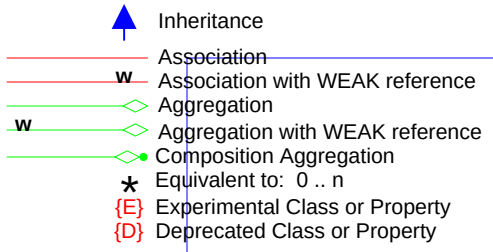
*

*

*

FibrePort ActiveLogin {D}

Page 12 - Fibre Channel



ManagedElement
(See Core Model)

SettingDate
(See Core Model)

Capabilities
(See Core Model)

ManagedSystemElement
(See Core Model)

StatisticalData
(See Core Model)

FCSwitchSettings
PreferredDomainID : uint8
DomainIDLocked : boolean
PrincipalPriority : uint16 {enum}

FCPortSettings
RequestedType[] : uint16 {enum}

LogicalElement
(See Core Model)

EnabledLogicalElement
(See Core Model)

ZoneCapabilities
ZoneNameMaxLen : uint32
ZoneNameFormat : uint16 {enum}
MaxNumZoneSets : uint32
MaxNumZone : uint32
MaxNumZoneMembers : uint32
MaxNumZonesPerZoneSet : uint32
MaxNumZoneAliases : uint32
OtherSupportedConnectivityMemberTypes: string[]
SupportedConnectivityMemberTypes: uint16[] {enum}

LogicalDevice
(See Device Model (Overview))

FCPortRateStatistics
TxFrameRate: uint64
RxFrameRate: uint64
MaxTxFrameRate: uint64
MaxRxFrameRate: uint64
TxRate: uint64
RxRate: uint64
PeakTxRate: uint64
PeakRxRate: uint64

NetworkPortStatistics
(See Device Model (Logical Port))

LogicalPort
(See Device Model (Logical Port))

Service
(See Core Model)

EnabledLogicalElementCapabilities
(See Core Model (Capabilities))

NetworkPort
(See Device Model (Logical Port))

FibreProtocolService
(See Device Model (FibreChannelService and Zoning))

FCPortStatistics

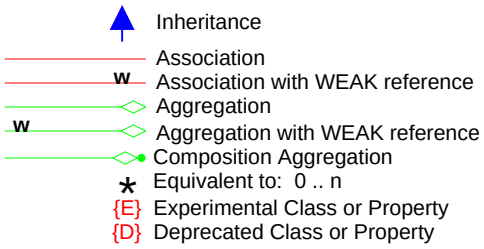
LIPCount :uint64	FBSYFrames: uint64
NOSCount : uint64	PBSYFrames: uint64
ErrorFrames : uint64	FRJTFrames: uint64
DumpedFrames : uint64	PRJTFrames: uint64
LinkFailures : uint64	RXClass1Frames: uint64
LossOfSignalCounter : uint64	TXClass1Frames: uint64
LossOfSyncCounter : uint64	Class1FBSY: uint64
PrimitiveSeqProtocolErrCount : uint64	Class1PBSY: uint64
CRCErrors : uint64	Class1FRJT: uint64
InvalidTransmissionWords : uint64	Class1PRJT: uint64
FramesTooShort : uint64	RXClass2Frames: uint64
FramesTooLong : uint64	TXClass2Frames: uint64
AddressErrors : uint64	Class2FBSY: uint64
BufferCreditNotProvided : uint64	Class2PBSY: uint64
BufferCreditNotReceived : uint64	Class2FRJT: uint64
DelimiterErrors : uint64	Class2PRJT: uint64
EncodingDisparityErrors : uint64	RXClass3Frames: uint64
LinkResetsReceived : uint64	TXClass3Frames: uint64
LinkResetsTransmitted : uint64	Class3FramesDiscarded: uint64
MulticastFramesReceived : uint64	RXBroadcastFrames: uint64
MulticastFramesTransmitted : uint64	TXBroadcastFrames: uint64

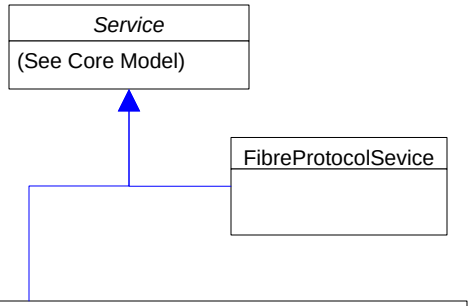
FCSwitchCapabilities
DomainIDConfigureable : boolean
MinDomainID : uint8
MaxDomainID : uint8
DomainIDLockedSupported : boolean
PrincipalPrioritiesSupported: uint16[] {enum}
NPIVSupported: boolean {E}

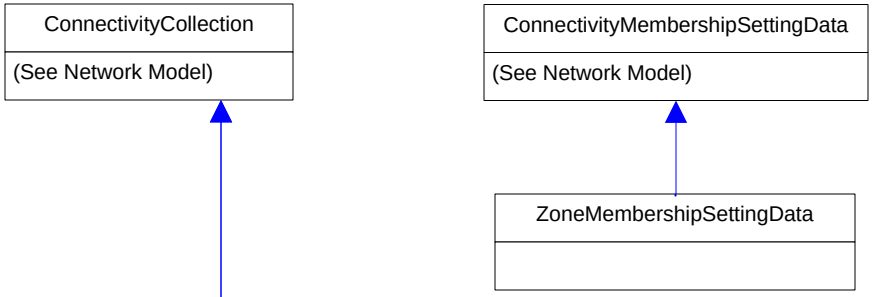
FCPort
SupportedCOS : uint16[ ] {enum}
ActiveCOS : uint16[ ] {enum}
SupportedFC4Types : uint16[ ] {enum}
ActiveFC4Types : uint16[ ] {enum}
DetailedPortState: uint16 {E, enum}
DomainPortNumber: uint16 {E}
LogicalModulePortNumber: uint16 {E}
PortAvailability: uint16 {E, enum}
PortNumber: uint16
PortType: uint16 {enum}
PortDiscriminator: uint16[] {enum}

FCPortCapabilities
RequestedTypesSupported[] : uint16 {enum}
MaxNPIVLogins: uint16 {E}
NPIVSupported: boolean {E}

Page 13 - Fibre Channel Services and Zoning







ZoneService

SessionState: uint16 {enum}
RequestedSessionState : uint16 {enum}
DefaultZoningState : uint16 {enum}
ConfigurationID: string {E}

CreateZoneSet(
[IN] ZoneSetName: string {req'd},
[IN, OUT] ZoneSet: ref CIM_ZoneSet): uint32 enum

CreateZone(
[IN] ZoneName : string {req'd},
[IN] ZoneType : uint16 {enum},
[IN] ZoneSubType : uint16 {enum},
[IN, OUT] Zone : ref CIM_Zone) : uint32 {enum}

CreateZoneAlias(
[IN] CollectionAlias : string {req'd},
[IN, OUT] ZoneAlias : ref CIM_NamedAddressCollection) : uint32 {enum}

CreateZoneMembershipSettingData(
[IN] ConnectivityMemberType: uint16 {enum, req'd},
[IN] ConnectivityMemberID: string {req'd},
[IN] SystemSpecificCollection: ref CIM_SystemSpecificCollection {req'd},
[IN, OUT] ZoneMembershipSettingData : ref CIM_ZoneMembershipSettingData) : uint32 {enum}

AddZone(
[IN, OUT] ZoneSet : ref CIM_ZoneSet {req'd},
[IN] Zone : ref CIM_Zone) : uint32 {enum}

AddZoneAlias(
[IN] Zone : ref CIM_Zone {req'd},
[IN] ZoneAlias: ref CIM_NamedAddressCollection) : uint32 {enum}

ActivateZoneSetWithJob(
[IN] Activate: boolean,
[IN, OUT] ConfigurationID: string,
[OUT] Job: ref CIM_ConcreteJob,
[IN] ZoneSet: ref CIM_ZoneSet): uint32 {E, enum}

SessionControlWithJob (
[IN, OUT] ConfigurationID: string,
[IN] RequestedSessionState: uint16 {enum},
[OUT] Job: ref CIM_ConcreteJob): uint32 {E, enum}

ZoneSet

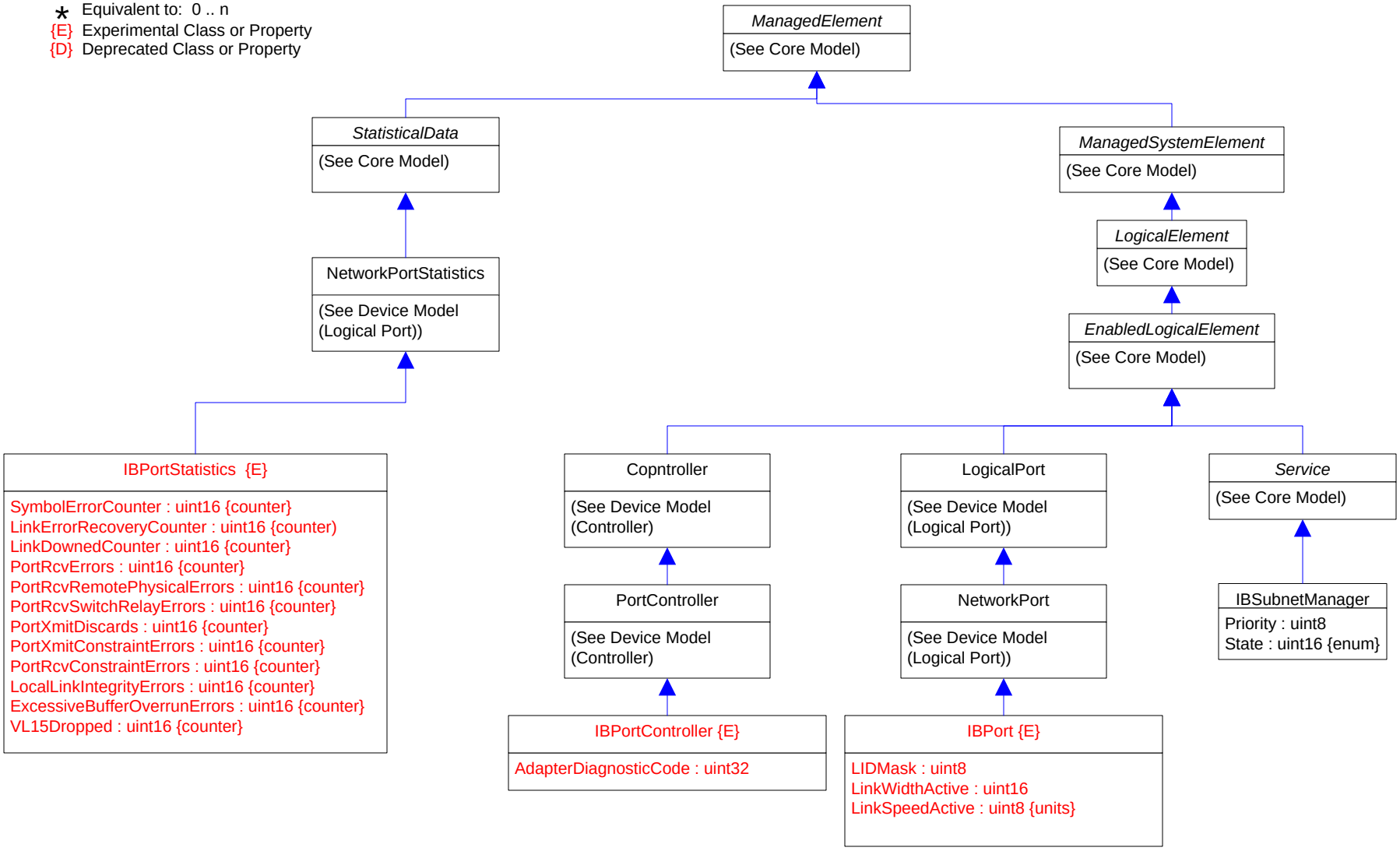
ElementName : string {override, req'd}
Active : boolean {req'd}

Zone

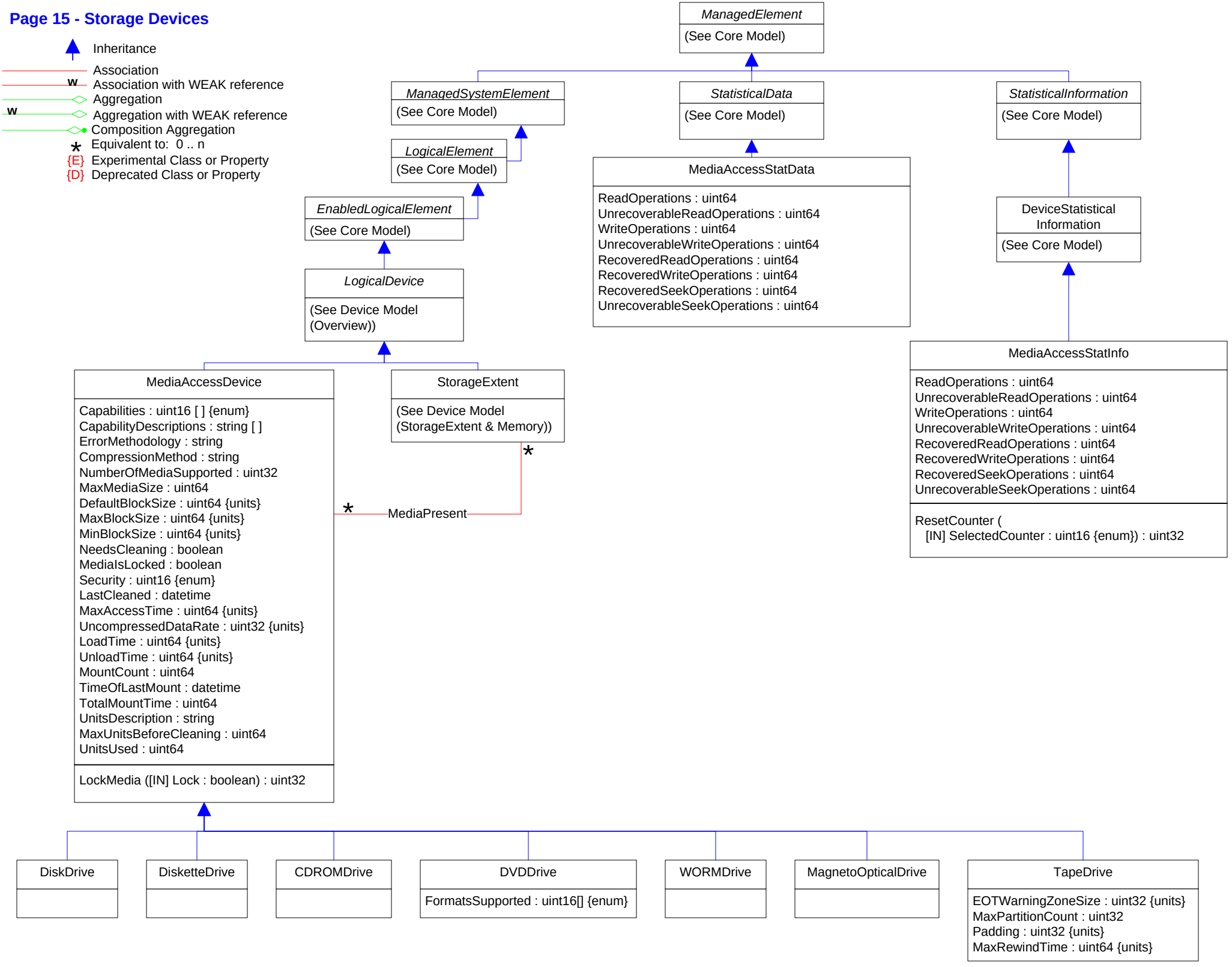
ElementName : string {override, req'd}
Active : boolean {req'd}
ZoneType : uint16 {enum, req'd}
OtherZoneTypeDescription : string
ZoneSubType : uint16 {enum}
OtherZoneSubTypeDescription : string

Page 14 - Infiniband

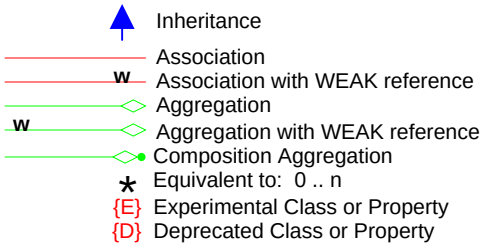
Inheritance
Association
w Association with WEAK reference
Aggregation
w Aggregation with WEAK reference
Composition Aggregation
* Equivalent to: 0 .. n
{E} Experimental Class or Property
{D} Deprecated Class or Property



Page 15 - Storage Devices



Page 16 - Storage Mutipath



SystemSpecificCollection
(See Core Model)

Service
(See Core Model)

Capabilities
(See Core Model)

SCSITargetPortGroup {E}

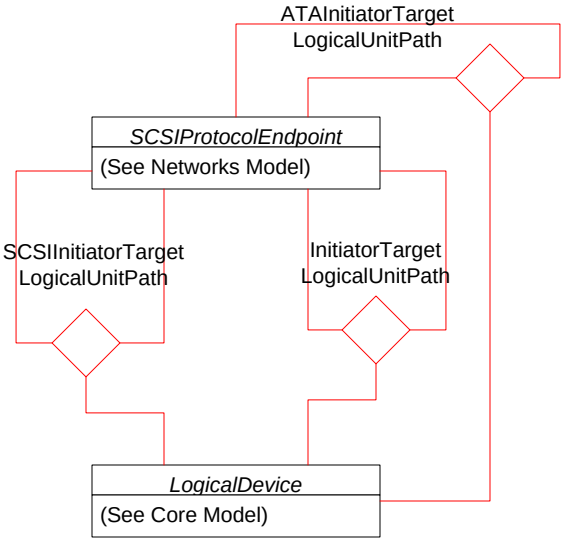
AccessState : uint16 {enum}
SupportsLuAssignment : boolean
ExplicitFailover : boolean
Preferred : boolean
Identifier : uint16

SCSIPathConfigurationService {E}

SetTPGAccess (
  [IN] LogicalUnit : ref LogicalDevice
  [IN] TargetPortGroups : ref SCSITargetPortGroup []
  [IN] AccessStates
) : uint32 {enum}
SetLoadBalanceAlgorithm (
  [IN] LogicaDevice : ref LogicalDevice
  [IN] LoadBalanceAlgorithm : uint16 {enum}
  [IN] OtherLoadBalanceAlgorithmDescription : string
) : uint32 {enum}
AssignLogicalUnitToPortGroup (
  [IN] LogicalUnit : ref LogicalDevice
  [IN] TargetPortGroup : ref TargetPortGroup
) : uint32 {enum}
SetOverridePath (
  [IN] path : ref SCSIInitiatorTargetLogicalUnitPath
) : uint32 {enum}
CancelOverridePath (
  [IN] CancelOverridePath : ref LogicalDevice
) : uint32 {enum}

SCSIMultipathConfigurationCapabilities {E}

SupportedLoadBalanceTypes : uint16 {enum}
OtherSupportedLoadBalanceAlgorithmNames : string []
OtherSupportedLoadBalanceVendorNames : string[]
CanSetTPGAccess : boolean
CanOverridePaths : boolean
ExposesPathDeviceFiles : boolean
DeviceNameFilespace : string
OnlySupportsSpecifidProducts : boolean
MaximumWeight : uint32
PollingRateMax : uint32
PollingRateMin : uint32
AutoFailbackSupported : boolean
AutoFailbackEnabled : boolean
BadPathPollingRate : uint32
InactivePathPollingRate : uint32
DefaultLoadBalanceType : uint16 {enum}

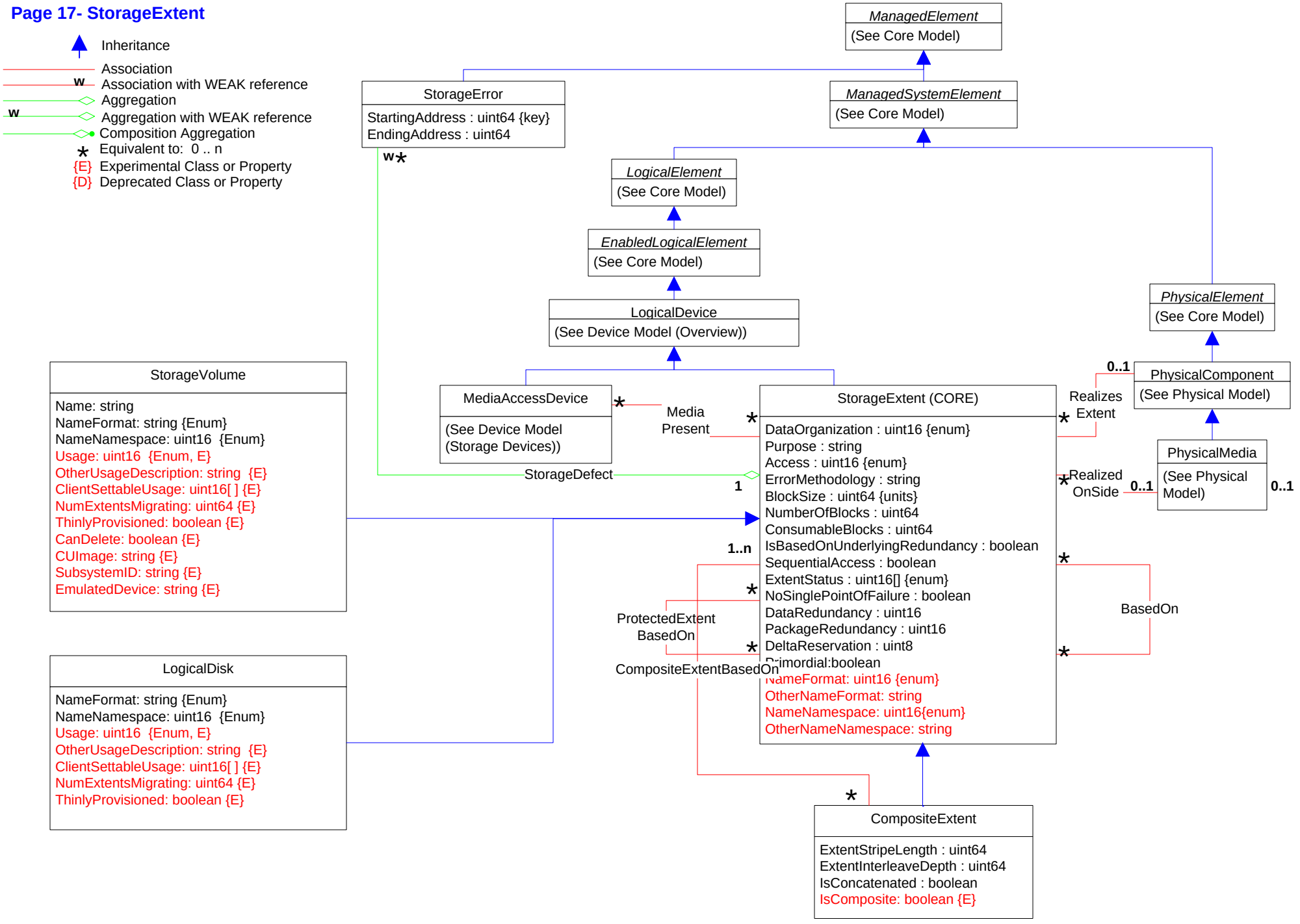


SettingData
(See Core Model)

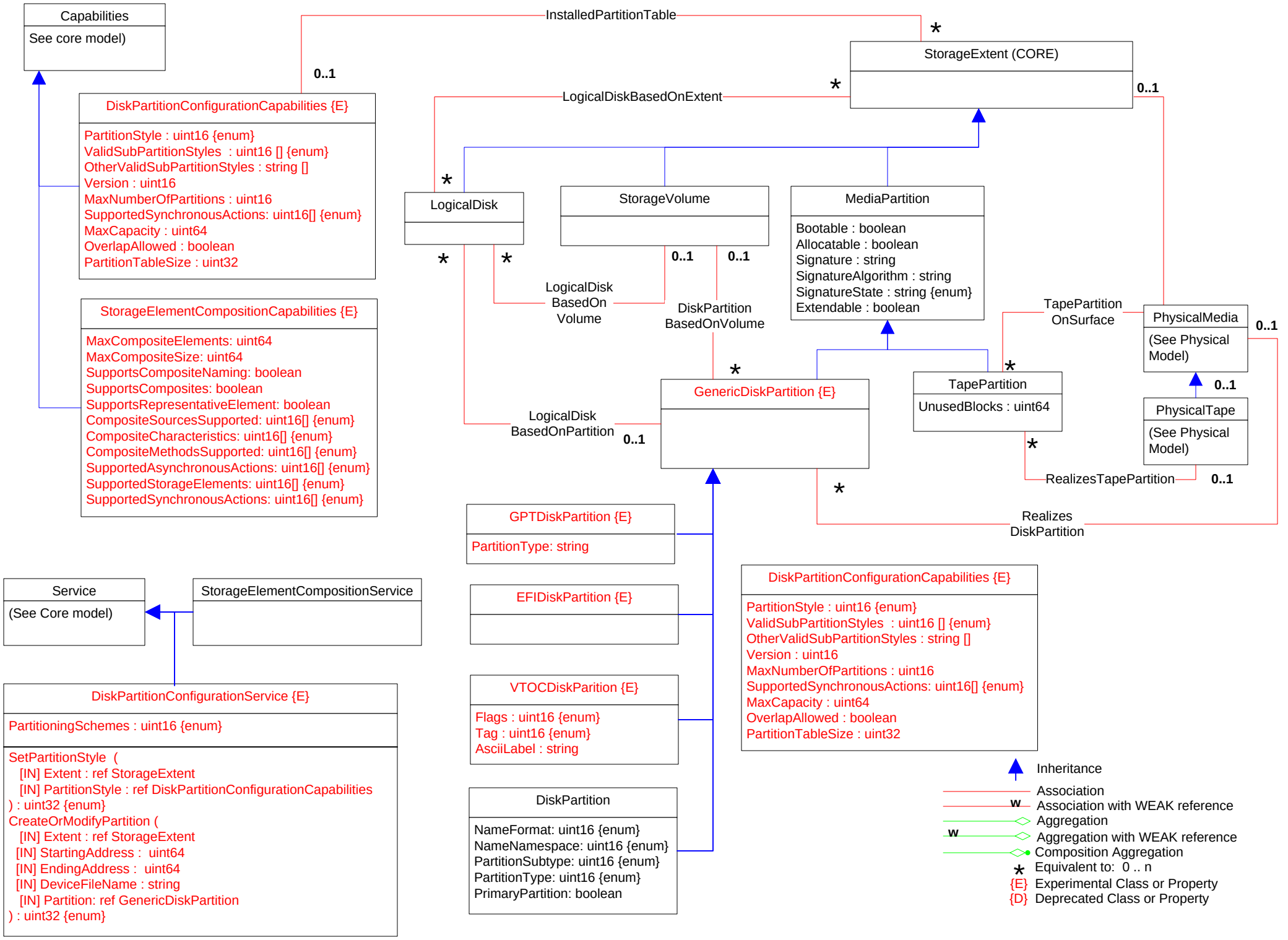
SCSIMultipathSettings {E}

Asymmetric: boolean
AutoFailbackEnabled: uint16 {enum}
CurrentLoadBalanceType: uint16 {enum}
CurrentPollingRate: uint32
OtherCurrentLoadBalanceType: string
PollingRateMax: uint32

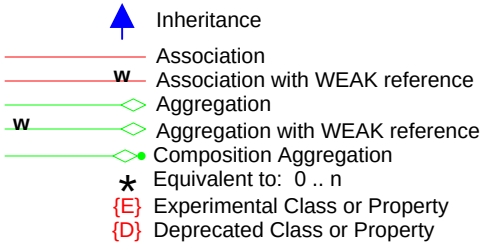
Page 17- StorageExtent

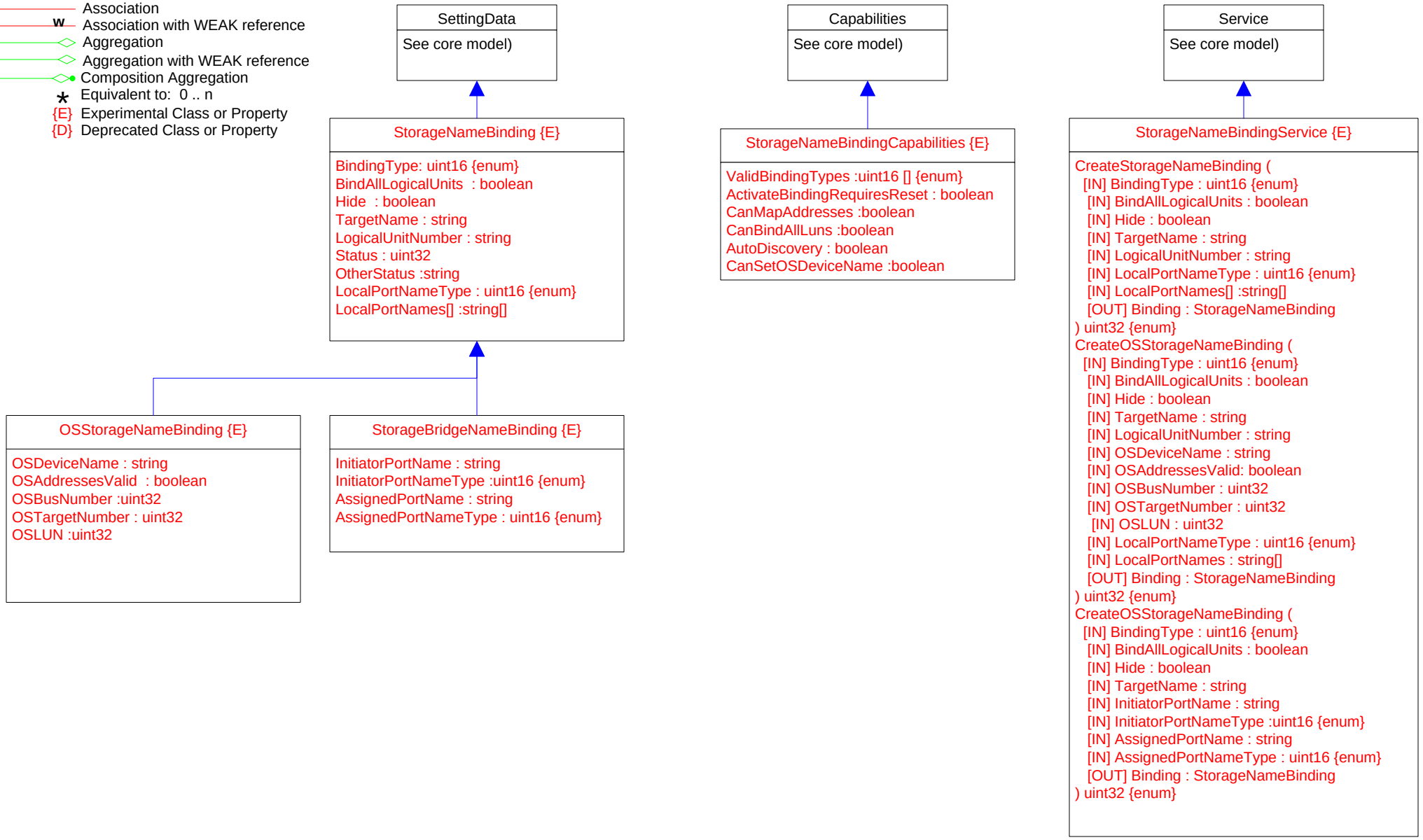


Page 18- StorageExtent 2

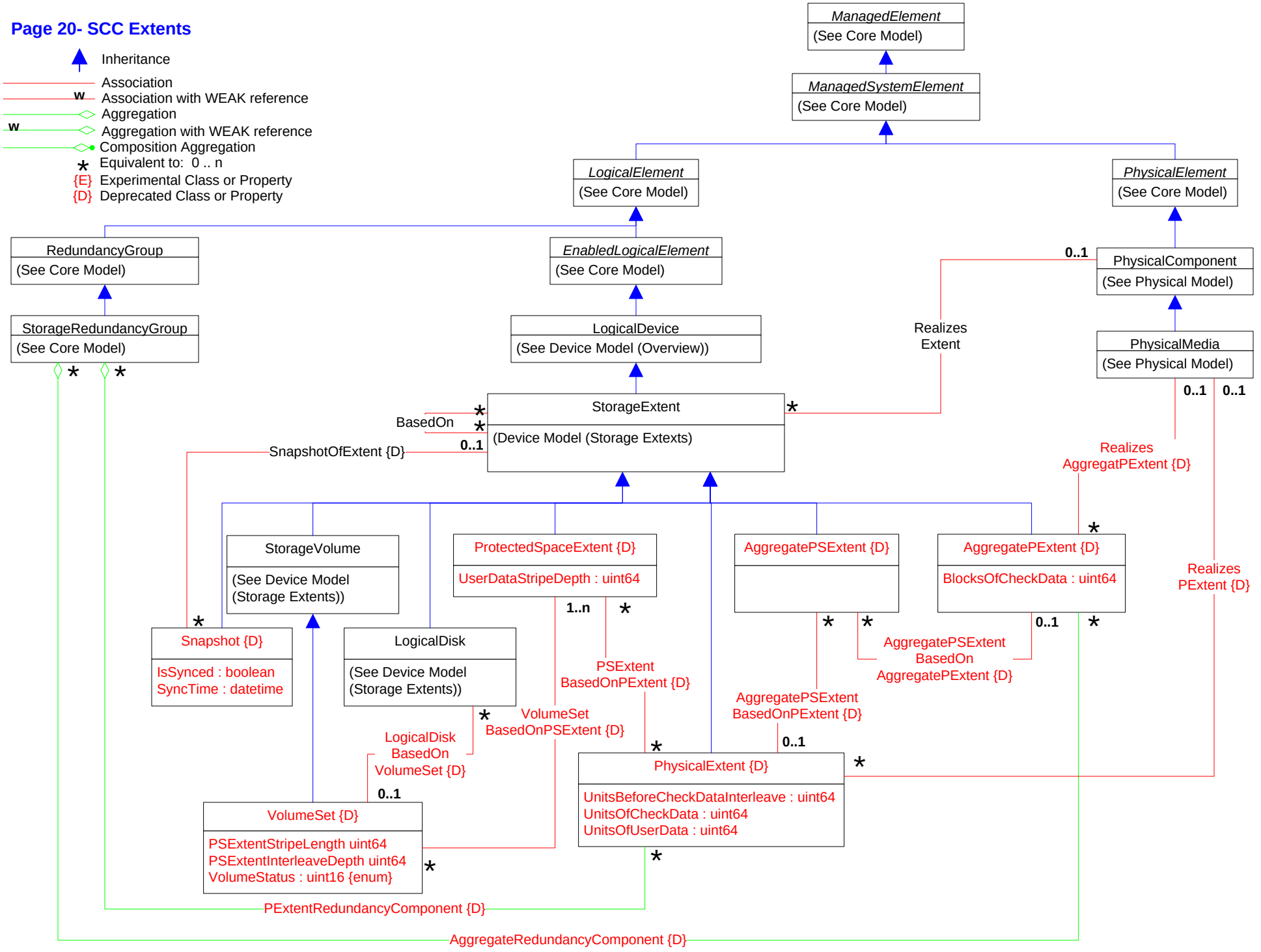


Page 19 - Storage Name Binding





Page 20- SCC Extents



Inheritance
Association
Association with WEAK reference
Aggregation
Aggregation with WEAK reference
Composition Aggregation
* Equivalent to: 0 .. n
{E} Experimental Class or Property
{D} Deprecated Class or Property

ManagedElement
(See Core Model)

Capabilities
(See Core Model)

Collection
(See Core Model)

*

StorageProcessor Affinity {E}

ManagedSystemElement
(See Core Model)

SystemSpecificCollection
(See Core Model)

LogicalElement
(See Core Model)

EnabledLogicalElement
(See Core Model)

Capabilities
(See Core Model)

SpareConfigurationCapabilities

AutomaticFailOver: boolean
MaximumSpareStorageExtents: uint32
SystemConfiguredSpares: boolean
SupportedAsynchronousActions: uint16[] {enum}
SupportedStorageElementCheck: uint16[] {enum}
SupportedSynchronousActions: uint16[] {enum}

StorageServerAsymmetryCapabilities {E}

StorageResourceSymmetryCapability: uint16[{enum}
StorageResourceType: uint16[{enum}
StorageResourceAffinityAssignable: boolean
PortGroupFailoverBehavior: uint16[{enum}
TargetPortSymmetryCapability: uint16[{enum}

StorageResourceLoadGroup {E}

*

AsymmetricAccessibility {E}

*

TargetPortGroup {E}

ReplicationEntity {e}

EntityID: string
InstanceID: string {key, override}
OtherTypeDescription: string
Persistent: boolean
Type: uint16 {enum}

System
(See System Model)

Service
(See Core Model)

*

ComputerSystem
(See System Model)

MaskingGroup {E}

DeleteOnEmpty: boolean
DeleteWhenBecomesUnassociated: boolean

DeviceMaskingGroup {E}

ElementName: string {override}

InitiatorMaskingGroup {E}

ConsistentLogicalUnitNumber: boolean
ElementName: string

TargetMaskingGroup {E}

ElementName: string {override}

StorageReplicationCapabilities

SupportedSynchronizationType : uint16[] {enum}
SupportedAsynchronousActions[] : uint16[] {enum}
SupportedSynchronousActions : uint16[] {enum}
InitialReplicationState : uint16 {enum}
SupportedSpecializedElements[] : uint16 {enum}
SupportedModifyOperations[] : uint16 {enum}
ReplicationHostAccessibility : uint16 {enum}
HostAccessibleState[] : uint16 {enum}
SpaceLimitSupported : boolean
SpaceReservationSupported : boolean
LocalMirrorSnapshotSupported : boolean
RemoteMirrorSnapshotSupported : boolean
IncrementalDeltasSupported: boolean
PersistentReplicasSupported: boolean
BidirectionalConnectionsSupported: boolean
MaximumReplicasPerSource: uint16
MaximumPortsPerConnection: uint16
MaximumConnectionsPerPort: uint16
MaximumPeerConnections: uint16
MaximumLocalReplicationDepth: uint16
InitialSynchronizationDefault: uint16 {enum}
ReplicationPriorityDefault: uint16 {enum}
LowSpaceWarningThresholdDefault : uint8
SpaceLimitWarningThresholdDefault : uint8
RemoteReplicationServicePointAccess : uint16 {enum}
AlternateRemoteReplicationServicePointAccess : uint16 {enum}
DeltaReplicaPoolAccess : uint16 {enum}
RemoteBufferElementType : uint16 {enum}
RemoteBufferHost : uint16 {enum}
RemoteBufferLocation : uint16 {enum}
RemoteBufferSupported : uint16 {enum}
UseReplicationBufferDefault : uint16 {enum}
PeerConnectionProtocol : string

ConfigurationReportingService

GetClassTypes ([IN] InquiryType : uint16 {enum},
[IN] Recursive : boolean,
[IN] Target : ref ManagedElement,
[OUT] ClassTypes : string[ ]) : uint32 {enum}
GetUnitTypes ([IN] InquiryType : uint16 {enum},
[IN] Recursive : boolean,
[IN] Target : ref ManagedElement,
[IN] ClassType : string,
[OUT] UnitTypes : uint16[ ] {enum}) : uint32 {enum}
ReportCapacity ([IN] InquireType : uint16 {enum},
[IN] Recursive : boolean,
[IN] Target : ref ManagedElement,
[IN] ClassType : string,
[IN] UnitTypes : uint16 {enum},
[OUT] NumberOfUnits : uint64) : uint32 {enum}

ConfigurationReportingService {E}

AssignSpares(
[IN] InExtents: ref CIM_StorageExtent[],
[IN] InPool: ref CIM_StoragePool,
[OUT] Job: ref CIM_ConcreteJob,
[IN] RedundancySet: ref CIM_StorageRedundancySet
): uint32 enum

UnassignSpares(
[IN] InExtents: ref CIM_StorageExtent[],
[IN] InPool: ref CIM_StoragePool,
[OUT] Job: ref CIM_ConcreteJob
): uint32 enum

RebuildStorageExtent(
[OUT] Job: ref CIM_ConcreteJob,
[IN] Target: ref CIM_StorageExtent
): uint32 enum

CheckParityConsistency(
[OUT] Job: ref CIM_ConcreteJob,
[IN] Target: ref CIM_StorageExtent
): uint32 enum

RepairParity(
[OUT] Job: ref CIM_ConcreteJob,
[IN] Target: ref CIM_StorageExtent
): uint32 enum

GetAvailableSpareExtents(
[OUT] AvailableExtents: ref CIM_StorageExtent[],
[IN] InPool: ref CIM_StoragePool,
[IN] RedundancySet: ref CIM_StorageRedundancySet
): uint32 enum

CheckStorageElement(
[IN] CheckMode: uint16 {enum},
[IN] CheckType: uint16 {enum},
[OUT] Job: ref CIM_ConcreteJob,
[IN] TargetElement: ref CIM_LogicalElement
): uint32 enum

StorageConfigurationService

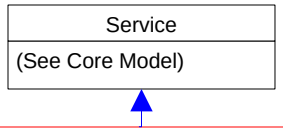
ProtocolControllerRequiresAuthorizedIdentity:boolean=false
Privileges[]:string
Identities[]: string

CreateOrModifyStoragePool (
[IN] ElementName : string,
[OUT] Job : ref ConcreteJob,
[IN] Goal : ref StorageSetting,
[IN, OUT] Size : uint64 {units},
[IN] InPools : string[ ],
[IN] InExtents : string [ ],
[IN, OUT] Pool : ref StoragePool) : uint32 {enum}
CreateOrModifyElementFromStoragePool (
[IN] ElementName : string,
[IN] ElementType : uint16 {enum,E},
[OUT] Job : ref ConcreteJob,
[IN] Goal : ref ManagedElement,
[IN, OUT] Size : uint64 {units},
[IN] InPool : ref StoragePool,
[IN, OUT] TheElement : ref LogicalElement) : uint32 {enum}
DeleteStoragePool (
[OUT] Job : ref ConcreteJob,
[IN] Pool : ref StoragePool) : uint32 {enum}
ReturnToStoragePool (
[OUT] Job : ref ConcreteJob,
[IN] TheElement : LogicalElement) : uint32 {enum}
CreateReplica (
[IN] ElementName : string,
[OUT] Job : ref ConcreteJob,
[IN] SourceElement : ref LogicalElement, {req'd}
[OUT] TargetElement : ref LogicalElement,
[IN] TargetSettingGoal : ref StorageSetting,
[IN] TargetPool : ref StoragePool,
[IN] CopyType : uint16 {enum}) : uint32 {enum}
ModifySynchronization (
[IN] Operation : uint16 {enum},
[OUT] Job : ref ConcreteJob,
[IN] Synchronization : ref StorageSynchronized) : uint32 {enum}
AttachReplica(
[OUT] Job: ref ConcreteJob,
[IN] SourceElement : ref ManagedElment {req'd},
[IN] TargetElement : ref ManagedElement,
[IN] CopyType : uint16 {enum}) : uint32 {enum}

StorageConfigurationService (cont)

CreateOrModifyElementFromElements (
[IN] ElementName : string,
[IN] ElementType : uint16 {enum, E},
[OUT] Job : ref ConcreteJob,
[IN] Goal : ref ManagedElement,
[IN, OUT] Size : uint64 {units},
[IN] InElements : ref StorageExtent []
[IN, OUT] TheElement : ref LogicalElement
) : uint32 {enum}

ScsiScan (
[OUT] Job : ref ConcreteJob,
[IN] ConnectionType : uint16 {enum}
[IN] OtherConnectionType : string
[IN] Initiators : ref SCSIProtocolEndpoint[]
[IN] Targets : string []
[IN] LogicalUints : string []
) : uint32 {enum, E}
AttachOrModifyReplica (
[IN] Job : ref ConcreteJob
[IN] SourceElement : ref ManagedElement
[IN] TargetElement : ref ManagedElement
[IN] CopyType : uint16 {enum}
[IN] Goal : string
[IN] ReplicationPipe : NetworkPipe) : uint32 {enum} {E}
CreateOrModifyReplicationPipe (
[IN] PipeElementName : string
[IN] PipeElementName : string
[IN] TargetSystem : ref ComputerSystem
[IN] SourceEndpoint[] : ref ProtocolEndpoint
[IN] TargetEndpoint[] : ref ProtocolEndpoint
[IN] Goal : string
[IN,OUT] ReplicationPipe : NetworkPipe) : uint32 {enum} {E}
CreateReplicationBuffer (
[IN] Job : ref ConcreteJob
[IN] Host : ref ManagedElement
[IN] TargetElement : ref StorageExtent
[IN] TargetPool : ref StoragePool
[OUT] ReplicaBuffer : ref Memory) : uint32 {enum} {E}
AssignStorageResourceAffinity (
[IN] ResourceType: uint16 {enum}
[OUT] Job: ref ConcreteJob,
[IN] StorageProcessor: ref ComputerSystem,
[IN] StorageResources: ref LogicalElement
) : uint32 {enum} {E}



ReplicationService {E}

CreateGroup([IN] GroupName: string, [IN] Members[]: ref CIM_LogicalElement, [IN] Persistent: boolean, [IN] DeleteOnEmptyElement: boolean, [IN] DeleteOnUnassociated: boolean, [IN] ServiceAccessPoint: ref CIM_ServiceAccessPoint, [OUT] ReplicationGroup: ref CIM_ReplicationGroup): uint32 {enum}

DeleteGroup([IN] ReplicationGroup: ref CIM_ReplicationGroup, [IN] ServiceAccessPoint: ref CIM_ServiceAccessPoint, [IN] RemoveElements:boolean): uint32 {enum}

AddMembers([IN] Members[]: ref CIM_LogicalElement, [IN] ReplicationGroup: ref CIM_ReplicationGroup, [IN] ServiceAccessPoint: ref CIM_ServiceAccessPoint): uint32 {enum}

RemoveMembers([IN] Members[]: ref CIM_LogicalElement, [IN] DeleteOnEmptyElement: boolean, [IN] ReplicationGroup: ref CIM_ReplicationGroup, [IN] ServiceAccessPoint: ref CIM_ServiceAccessPoint): uint32 {enum}

CreateElementReplica([IN] ElementName: string, [IN] SyncType: uint16,[IN] Mode: uint16, [IN] SourceElement: CIM_LogicalElement, [IN] SourceAccessPoint: ref CIM_ServiceAccessPoint, [IN,OUT] TargetElement: ref CIM_LogicalElement, [IN] TargetAccessPoint: ref CIM_ServiceAccessPoint, [IN] ReplicationSettingData: string , [OUT] Job: ref CIM_ConcreteJob, [OUT] Synchronization: ref CIM_Synchronized, [IN] TargetSettingGoal: ref CIM_SettingData, [IN] TargetPool: ref CIM_ResourcePool, [IN] WaitForCopyState: uint16): uint32 {enum}

CreateGroupReplica([IN] RelationshipName: string, [IN] SyncType: uint16, [IN] Mode: uint16, [IN] SourceGroup: CIM_ReplicationGroup, [IN] SourceElement: ref CIM_LogicalElement, [IN] SourceAccessPoint: ref CIM_ServiceAccessPoint, [IN,OUT] TargetGroup: CIM_ReplicationGroup, [IN] TargetElementCount: uint64, [IN] TargetAccessPoint: ref CIM_ServiceAccessPoint, [IN Consistency: uint16, [IN] ReplicationSettingData: string, [OUT] Job:ref CIM_ConcreteJob , [OUT] Synchronization: ref CIM_Synchronized, [IN] TargetSettingGoal: ref CIM_SettingData, [IN] TargetPool: ref CIM_ResourcePool, [IN] WaitForCopyState: uint16): uint32 {enum}

CreateSynchronizationAspect([IN] Name: string, [IN] SyncType: uint16, [IN] Mode: [IN] SyncType: uint16, [IN] SourceGroup: ref CIM_ReplicationGroup, [IN] SourceElement: ref CIM_LogicalElement, [IN] SourceAccessPoint: ref CIM_ServiceAccessPoint, [IN] Consistency: uint16 , [IN] ReplicationSettingData: string, [OUT] Job: CIM_ConcreteJob, [OUT] SettingsState: ref CIM_SettingsDefineState): uint32 {enum}

ModifyReplicaSynchronization([IN] Operation: uint16, [IN] Synchronization: ref CIM_Synchronized, [IN] ReplicationSettingData: string, [] SyncPair[]: CIM_StorageSynchronized, [OUT] Job: ref CIM_ConcreteJob, [OUT] SettingsState: CIM_SettingsDefineState, [IN] Force: boolean, [IN] WaitForCopyState: uint16): uint32 {enum}

ModifyListSynchronization([IN] Operation: uint16, [IN] Synchronization[IN]: ref CIM_Synchronized, [IN] ReplicationSettingData: string, [OUT] Job: ref CIM_ConcreteJob, [OUT] SettingsState: CIM_SettingsDefineState, [IN] Force: boolean, [IN] WaitForCopyState: uint16): uint32 {enum}

ModifySettingsDefineState([IN] Operation: uint16, [IN] SettingsState: ref CIM_SettingsDefineState, [IN,OUT] TargetElement: ref CIM_LogicalElement, [IN,OUT] TargetGroup: ref CIM_ReplicationGroup, [IN] TargetElementCount: uint64, [IN] TargetAccessPoint: ref CIM_ServiceAccessPoint, [OUT] Synchronization: CIM_Synchronized, [IN] ReplicationSettingData: string, [OUT] Job: ref CIM_ConcreteJob, [] TargetSettingGoal: ref CIM_SettingData, [IN] TargetPool: ref CIM_ResourcePool, [IN] WaitForCopyState: uint16): uint32 {enum}

GetAvailableTargetElements([IN] SourceElement: ref CIM_LogicalElement, [IN] SyncType: uint16, [IN] Mode: uint16, [IN] ReplicationSettingData: string, [IN TargetAccessPoint: ref CIM_ServiceAccessPoint, [IN] TargetSettingGoal: ref CIM_SettingData, [IN] TargetPools[]: ref CIM_ResourcePool, [OUT] Job: ref CIM_ConcreteJob, [OUT] Candidates[]: ref CIM_LogicalElement): uint32 {enum}

GetPeerSystems([IN] Options: uint16, [OUT] Job: ref CIM_ConcreteJob, [OUT] Systems[]: ref CIM_ComputerSystem): uint32 {enum}

GetReplicationRelationships([IN] Type: uint16, [IN] SyncType: uint16, [IN] Mode: uint16,[IN] Locality: uint16, [IN] CopyState: uint16, [OUT] Job: ref CIM_ConcreteJob, [OUT] Synchronizations[]: ref CIM_Synchronized): uint32 {enum}

GetServiceAccessPoints([IN] System: ref CIM_ComputerSystem, [OUT] Job: ref CIM_ConcreteJob, [OUT] ServiceAccessPoints[]: ref CIM_ServiceAccessPoint): uint32 {enum}

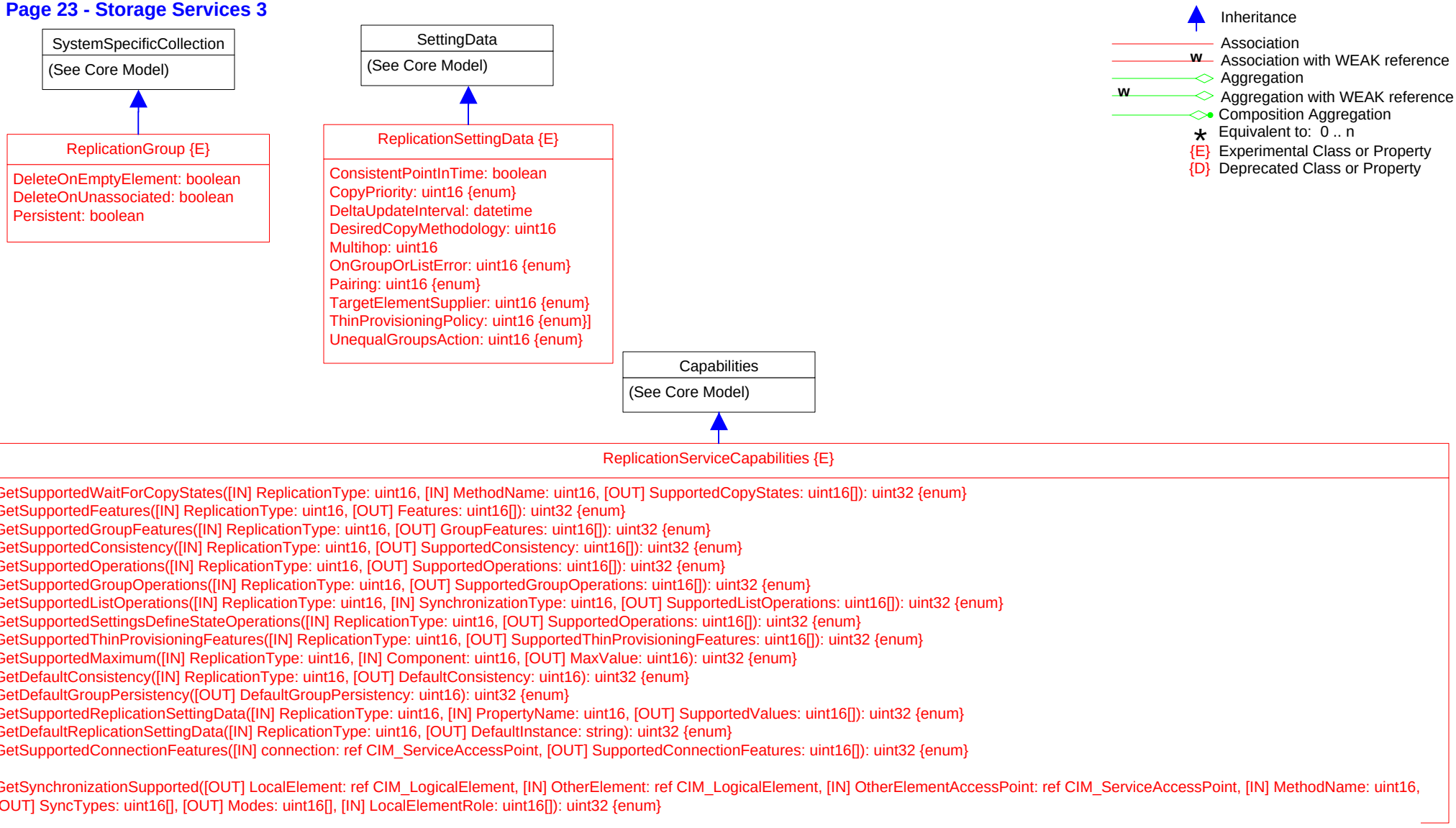
AddReplicationEntity([IN] ReplicationEntity: string, [IN] Persistent: boolean, [IN] InstanceNamespace: string, [OUT] ReplicationEntityPath: ref CIM_ReplicationEntity): uint32 {enum}

AddServiceAccessPoint([IN] ServiceAccessPoint: string, [IN] InstanceNamespace: string, [OUT] ServiceAccessPointPath: ref CIM_ServiceAccessPoint): uint32 {enum}

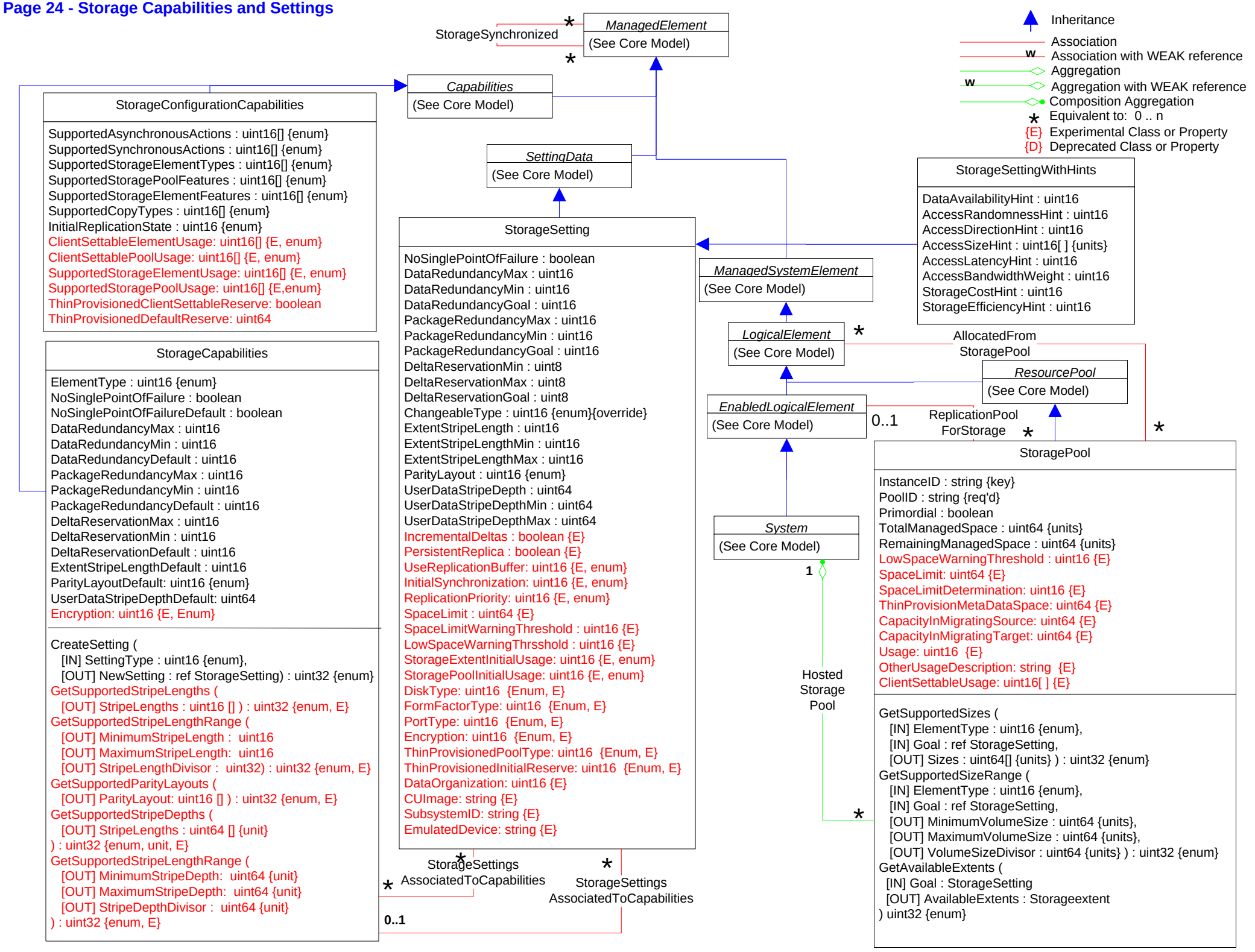
AddSharedSecret([IN] SharedSecret: string, [IN] ServiceAccessPoint: CIM_ServiceAccessPoint, [IN] InstanceNamespace: string, [OUT] SharedSecretPath: ref CIM_SharedSecret): uint32 {enum}

CreateListReplica([IN] ElementNames: string[], [IN] SyncType: uint16, [IN] Mode: uint16, [IN] SourceElements[]: ref CIM_LogicalElement, [IN] SourceAccessPoint: ref CIM_ServiceAccessPoint, [IN,OUT] TargetElements[]: ref CIM_LogicalElement, [] TargetAccessPoint: ref CIM_ServiceAccessPoint, [] ReplicationSettingData: string, [OUT] Job: ref CIM_ConcreteJob,[OUT] Synchronizations[]: CIM_Synchronized, [IN] TargetSettingGoal: ref CIM_SettingData, [IN] TargetPool: CIM_ResourcePool, [IN] WaitForCopyState: uint16): uint32 {enum}

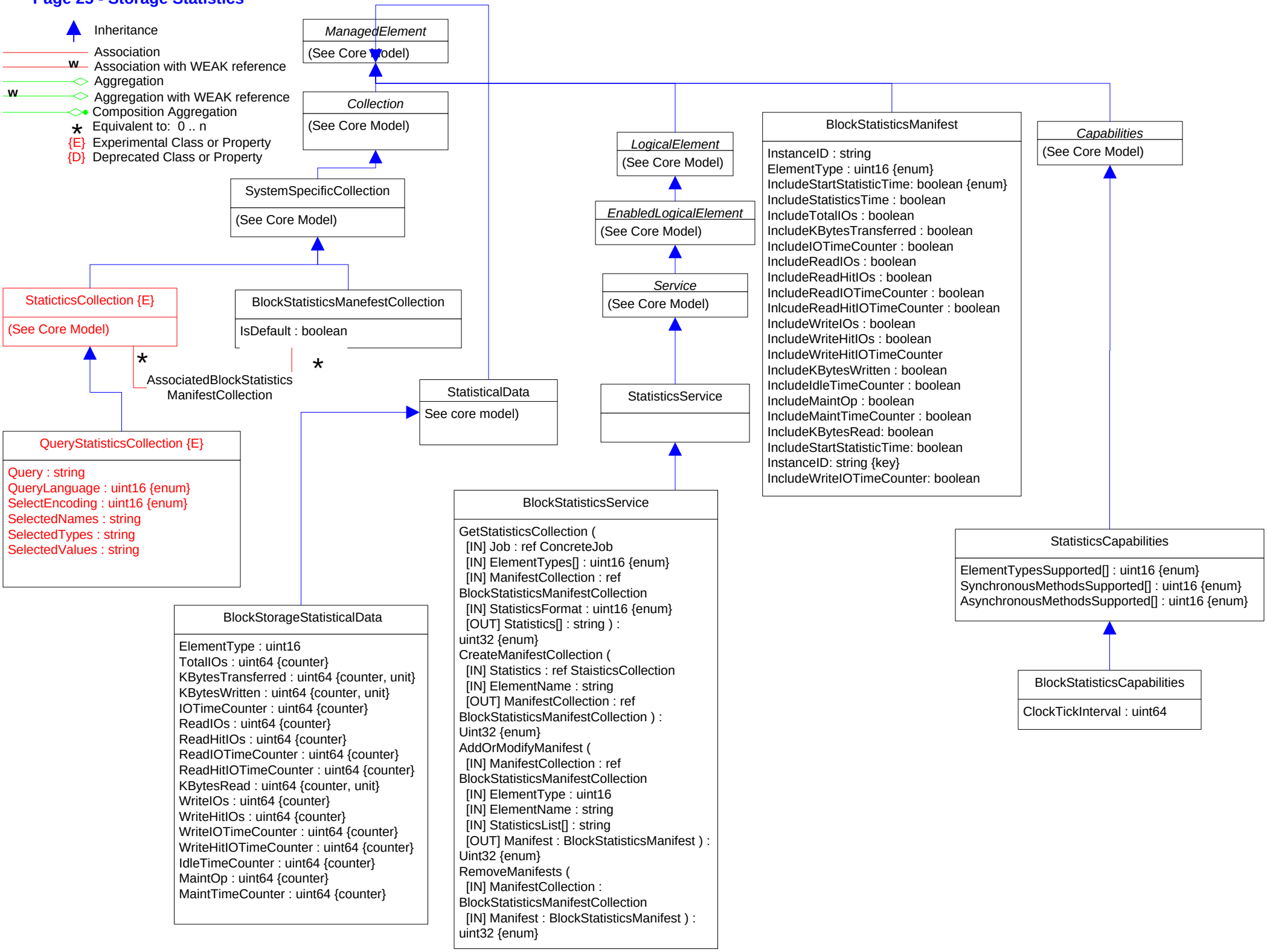
Page 23 - Storage Services 3



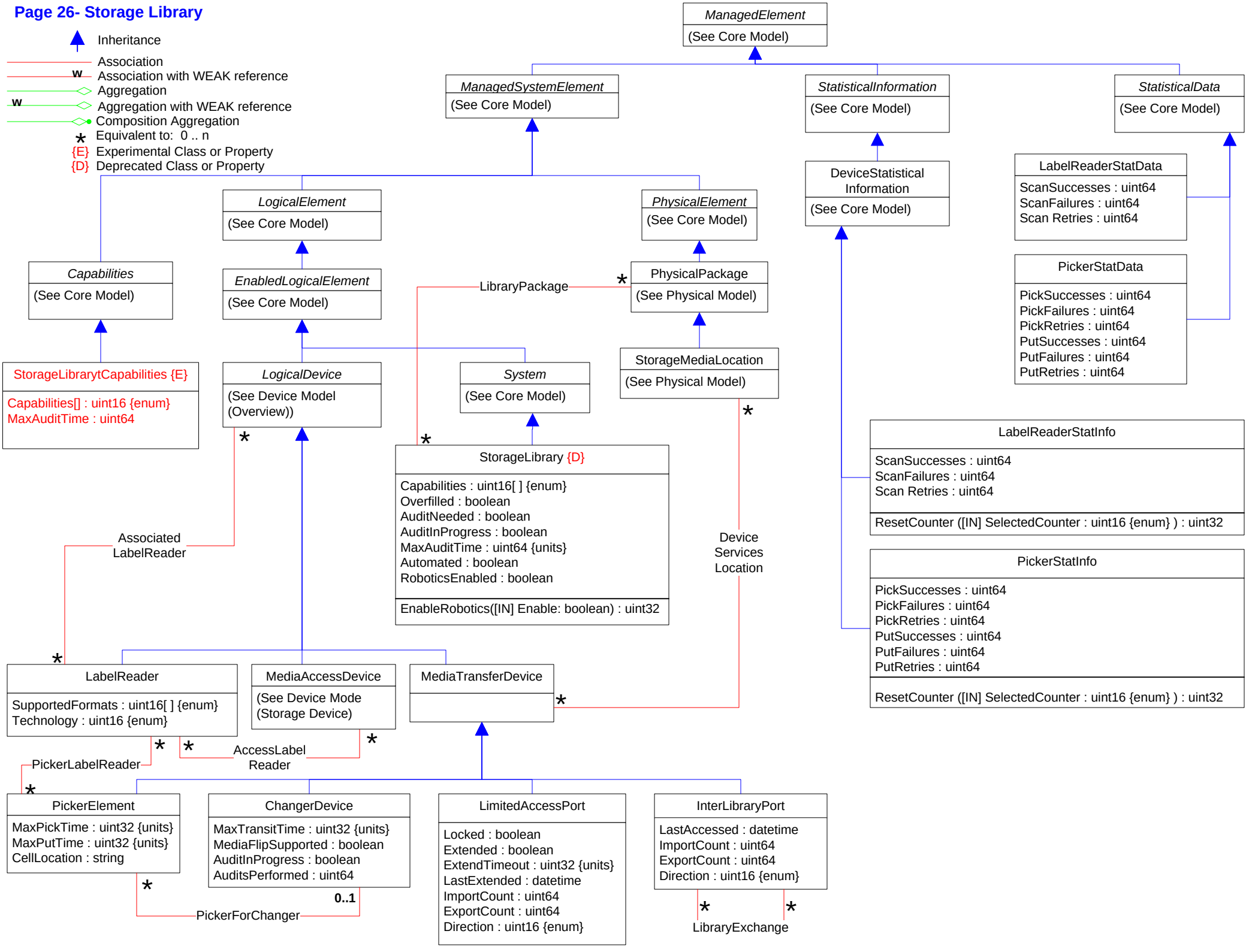
Page 24 - Storage Capabilities and Settings



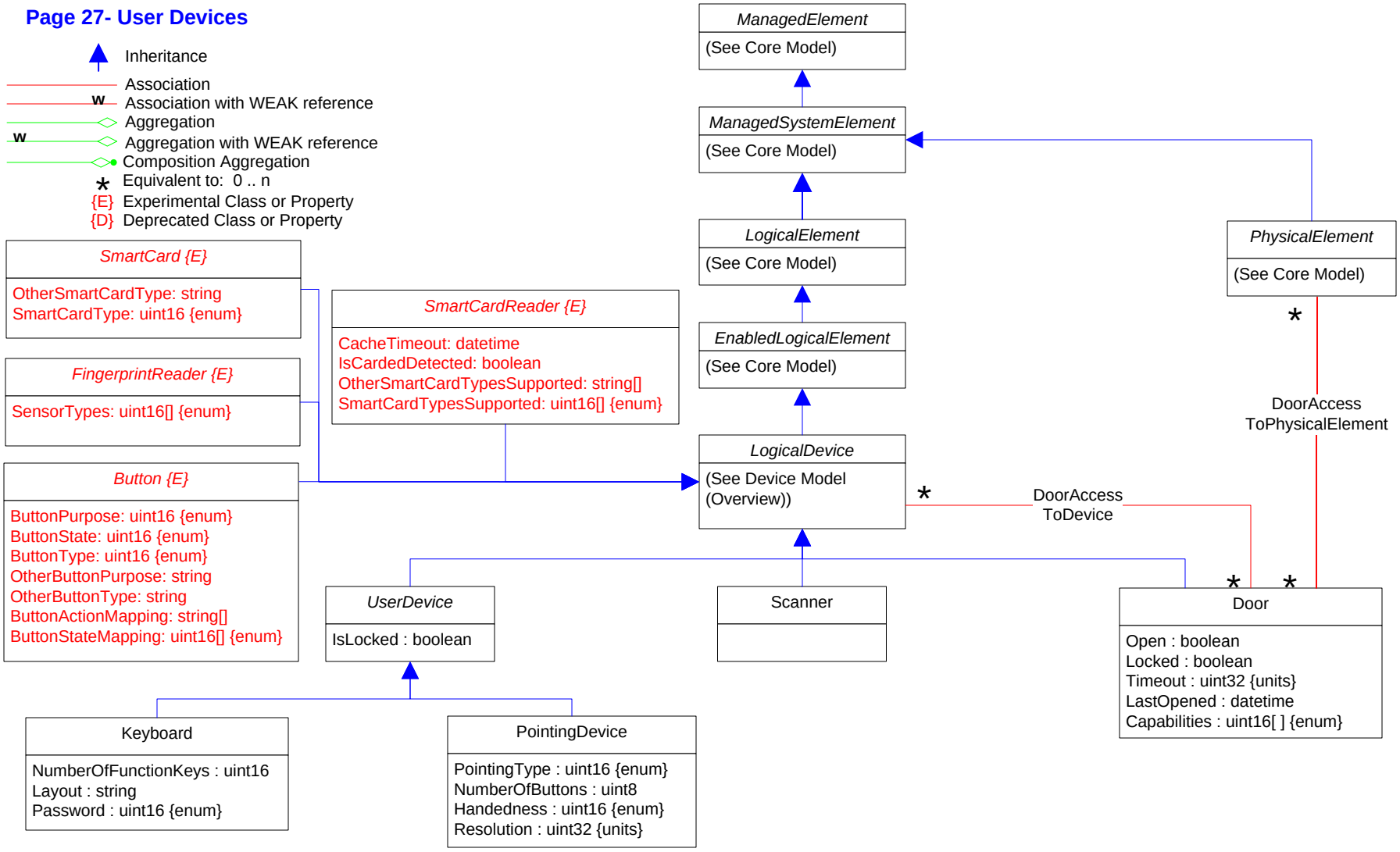
Page 25 - Storage Statistics



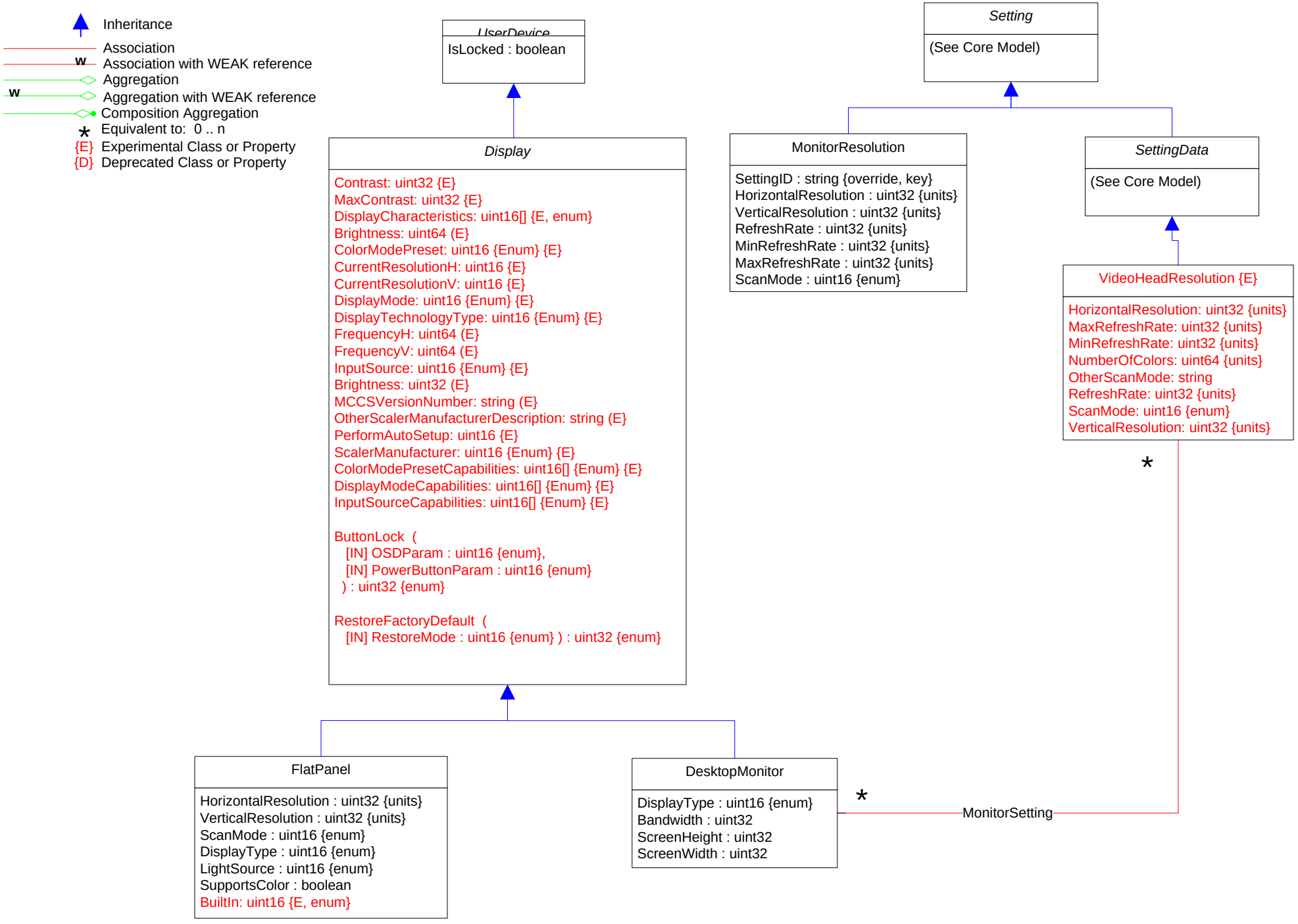
Page 26- Storage Library



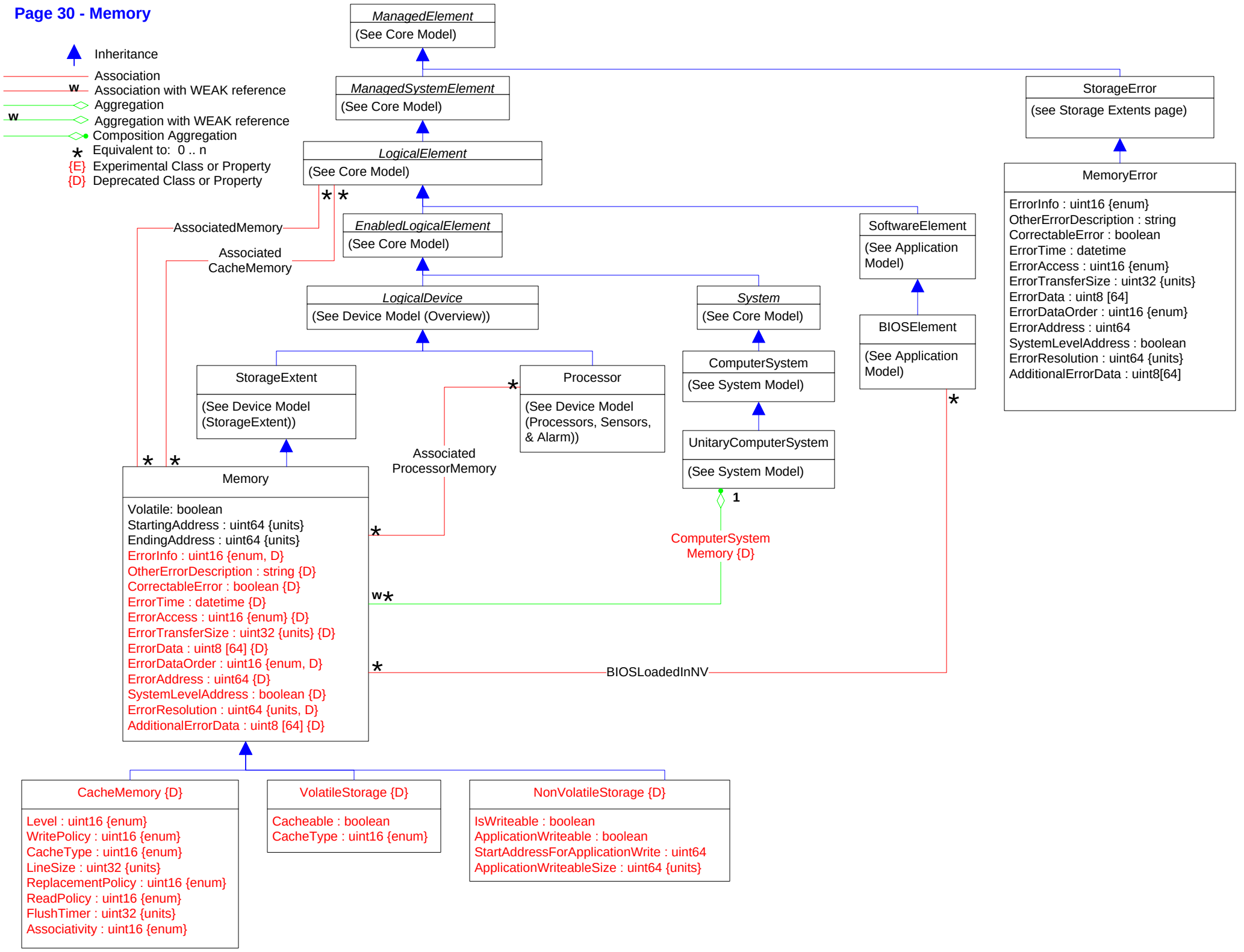
Page 27- User Devices



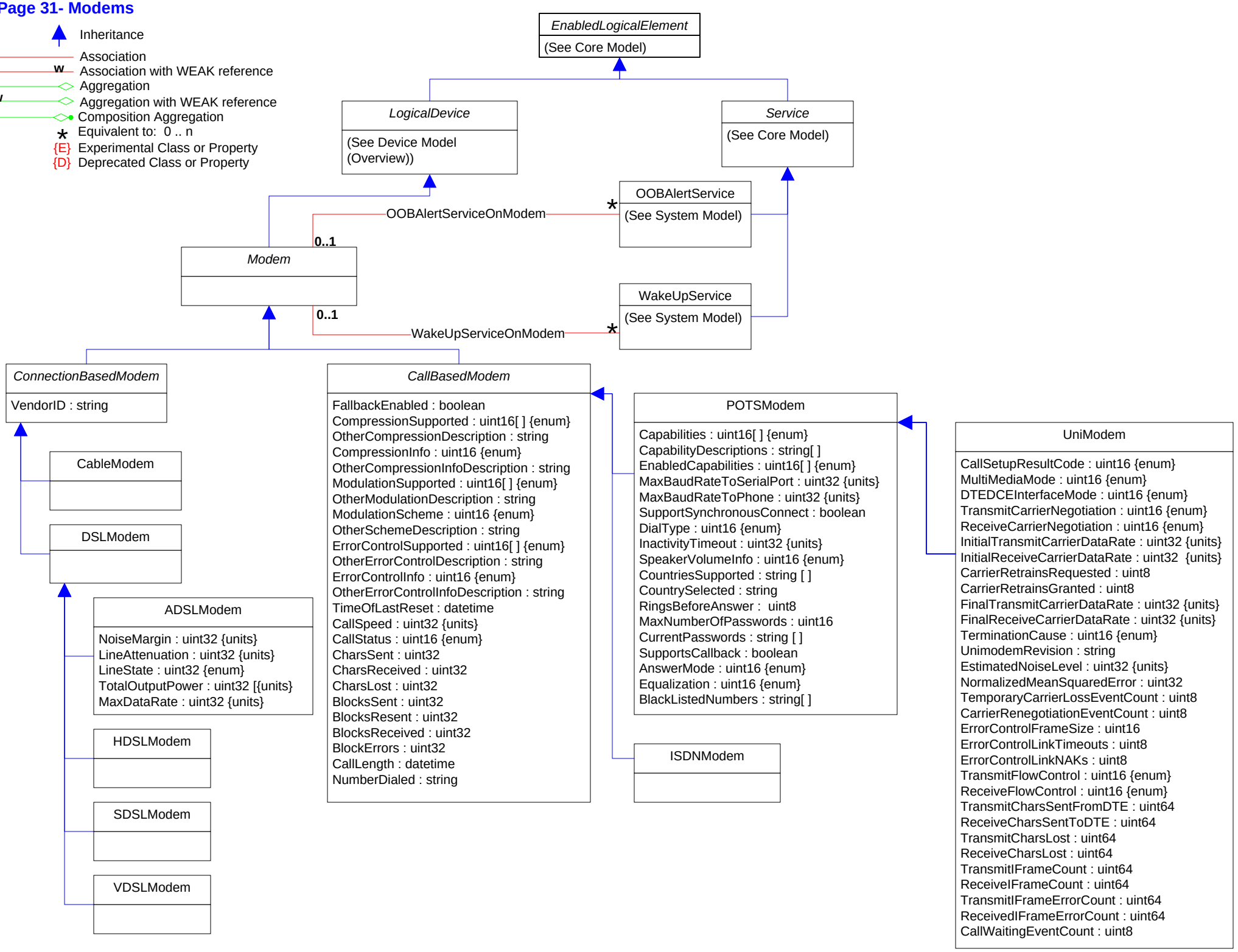
Page 29- Displays



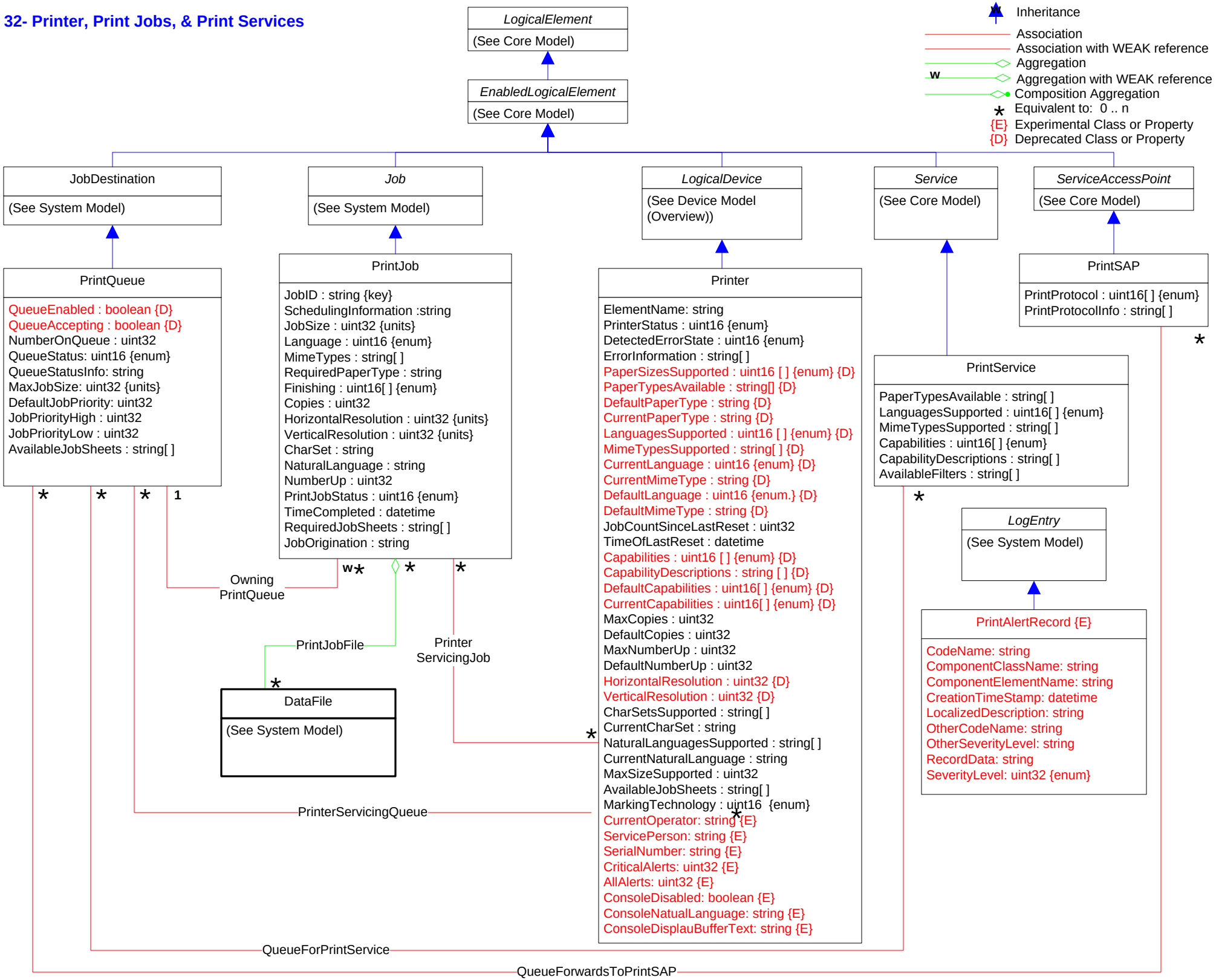
Page 30 - Memory



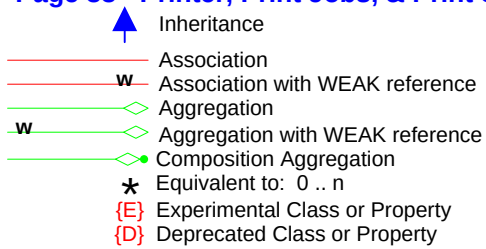
Page 31- Modems



Page 32- Printer, Print Jobs, & Print Services



Page 33 - Printer, Print Jobs, & Print Services (2)



LogicalElement
(See Core Model)

PrinterElement {E}
InstanceID: string {key, override}
SNMPRowID : uint32

Printer
(See Device Printer)

PrintOutputTray {E}
InstanceID: string {key, override}
SNMPRowID : uint32
LocalizedDescription: string
Type: uint32 {enum
OtherTypeDescription : string
CapacityUnit: uint32 {enum}
OtherCapacityUnit : string
MaxCapacityBasis: uint16 {enum}
MaxCapacity : uint32
RemainingCapacityBasis: uint16 {enum}
RemainingCapacity : uint32
AvailabilityStatus: uint32 {enum}
OfflineStatus : boolean
CriticalAlertsPresent: boolean
ElementName: string {override, req'd}
IsDefault: boolean
NonCriticalAlertsPresent: boolean
OtherAvailabilityStatus: string

PrintInputTray {E}
InstanceID: string {key, override}
ElementName: string {override, req'd}
IsDefault : boolean
LocalizedDescription: string
Type: uint32 {enum}
OtherTypeDescription : string
CapacityUnit: uint32 {enum}
OtherCapacityUnit : string
MaxCapacityBasis: uint16 {enum}
MaxCapacity : uint32
CurrentLevelBasis : uint16 {enum}
CurrentLevel : uint32
AvailabilityStatus: uint32 {enum}
OtherAvailabilityStatus : string
NonCriticalAlertsPresent : boolean
CriticalAlertsPresent : boolean
MediaSizeName : string
MediaName : string
MediaWeightBasis : uint16 {enum}
MediaWeight : uint32
MediaType : string
MediaColor : string

1 — 1 PrinterComponent
1 — 1
ConcreteComponent
*

PrintChannel {E}
Type : uint32
OtherTypeDescription : string
ProtocolVersion : string
AvailabilityStatus : uint32 {enum}
NonCriticalAlertsStatus : boolean
CriticalAlertsStatus : boolean

Associated PrintSupply

PrintInterlock {E}
LocalizedDescription : string
InterlockStatus : uint32 {enum}
OtherInterlockStatus : string

*
AssociatedPrintInterpreter
*
*

PrintSupply {E}
LocalizedDescription : string
Classification : uint32 {enum}
OtherClassification : string
Type: uint32 {enum}
OtherTypeDescription : string
SupplyUnit : uint32 {enum}
OtherSupplyUnit : string
MaxCapacityBasis : uint16 {enum}
MaxCapacity : uint32
RemainingCapacityBasis : uint16 {enum}
RemainingCapacity : uint32
ColorantRole : uint32 {enum}
OtherColorantRole : string
ColorantName : uint16 {enum}
OtherColorantName : string
ColorantTonality : uint32

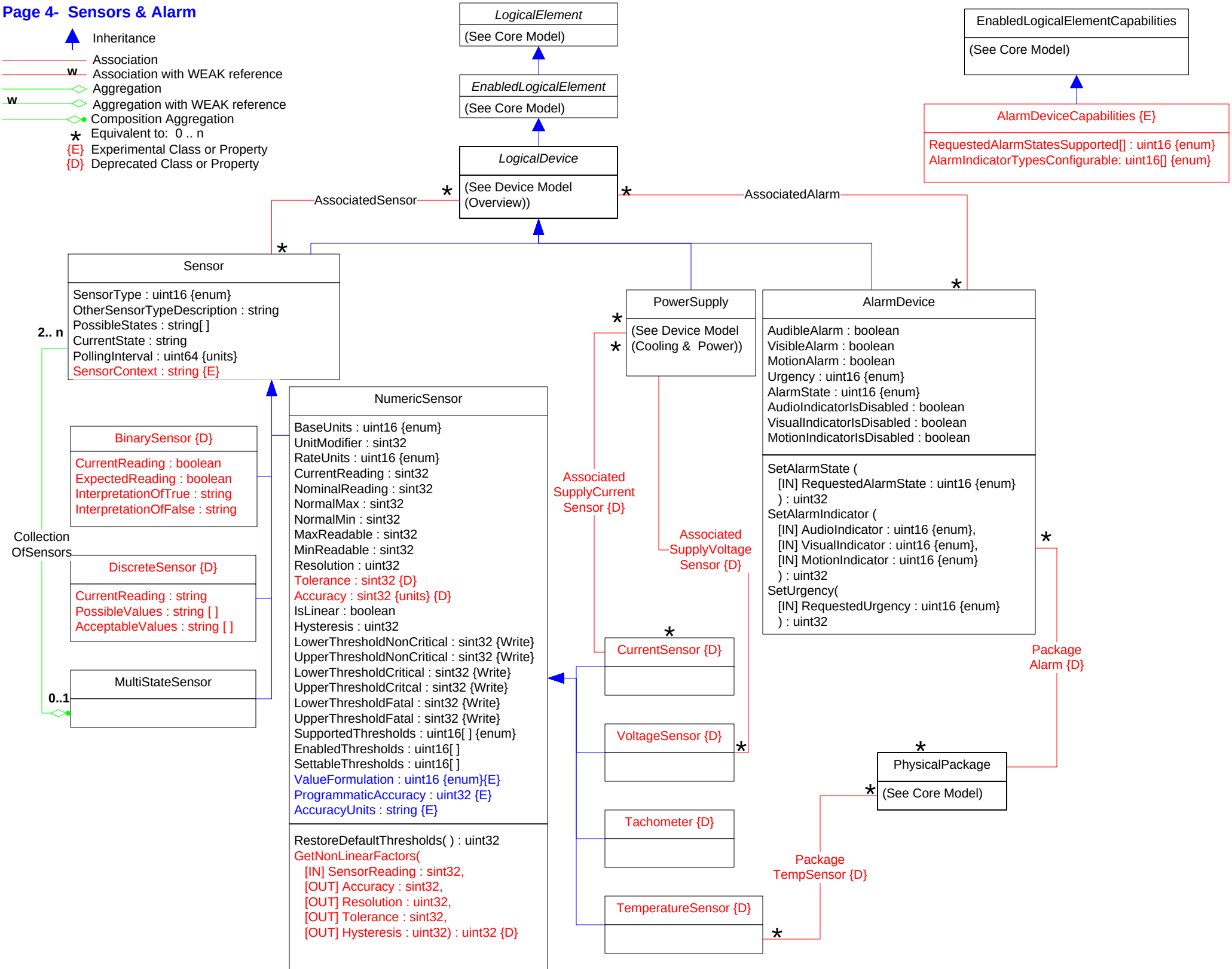
PrintMediaPath {E}
IsDefault : boolean
LocalizedDescription : string
Type : uint32
OtherTypeDescription : string
MaxSpeedUnit : uint32 {enum}
MaxSpeedBasis : uint16 {enum}
MaxSpeed : uint32
MaxMediaSizeNameBasis : uint16
MaxMediaSizeName : string
MinMediaSizeNameBasis : uint16
MinMediaSizeName : string
AvailabilityStatus : uint32 {enum}
OtherAvailabilityStatus : string
NonCriticalAlertsStatus : boolean
CriticalAlertsStatus : boolean

PrintMarker {E}
IsDefault : boolean
MarkTech : uint32 {enum}
OtherMarkTechDescription : string
CounterUnit : uint32
OtherCounterUnit : string
LifeCount : uint32
OtherLifeCount : string
PowerOnCount : uint32
ProcessColorants : uint32
SpotColorants : uint32
AvailabilityStatus : uint32 {enum}
OtherAvailabilityStatus : string
NonCriticalAlertsStatus : boolean
CriticalAlertsStatus : boolean
AddressabilityBasis: uint16
FeedAddressability: uint32
XFeedAddressability: uint32

PrintFinisher{E}
LocalizedDescription : string
Type : uint32 {enum}
OtherTypeDescription : string
PresentOnOff : uint32 {enum}
CapacityUnit : uint32 {enum}
OtherCapacityUnit : string
MaxCapacityBasis : uint16 {enum}
MaxCapacity : uint32
CurrentCapacityBasis : uint16 {enum}
CurrentCapacity : uint32
AvailabilityStatus : uint32 {enum}
OtherAvailabilityStatus : string
CriticalAlertsStatus : boolean
NonCriticalAlertsPresent: boolean

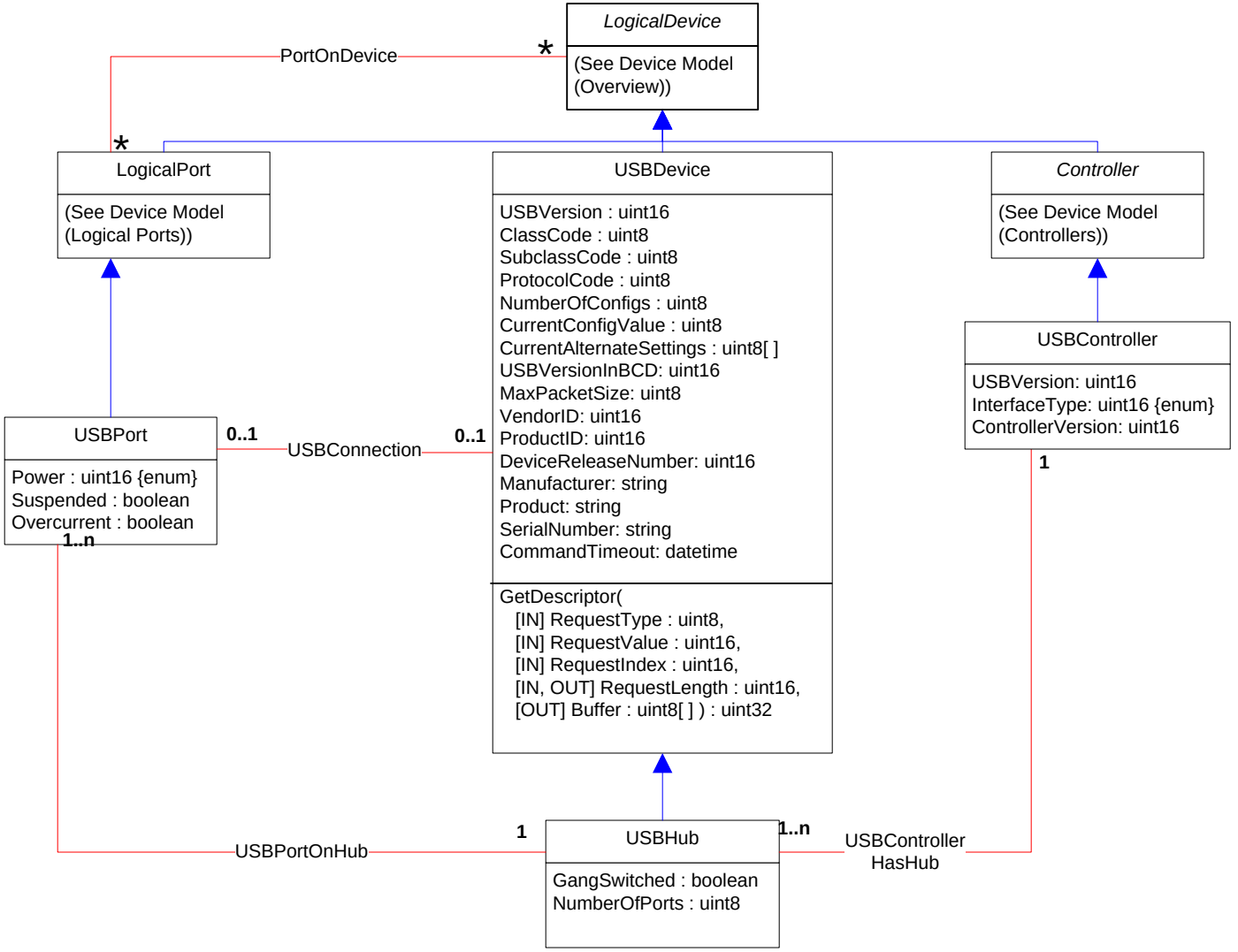
PrintInterpreter {E}
LocalizedDescription : string
LangType : uint32 {enum]
OtherLangTypeDescription : string
LangLevel : string
AddressabilityBasis : uint16 {enum]
FeedAddressability : uint32
XFeedAddressability : uint32
DefaultCharSetIn : string
AvailabilityStatus : uint32 {enum}
OtherAvailabilityStatus : string
NonCriticalAlertsStatus : boolean
CriticalAlertsStatus : boolean

Page 4- Sensors & Alarm

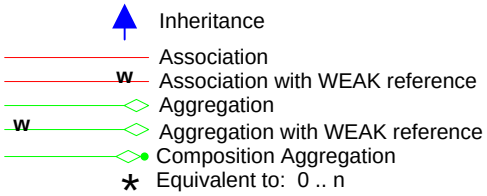


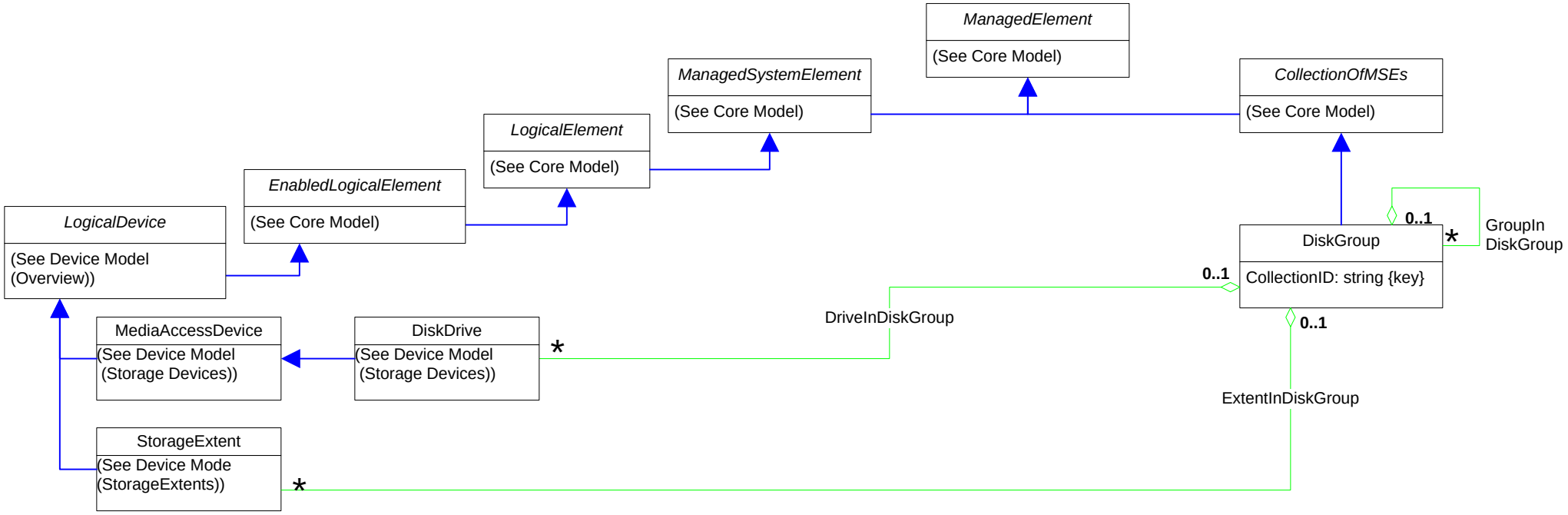
Page 35- USB

Inheritance
Association
w Association with WEAK reference
Aggregation
w Aggregation with WEAK reference
Composition Aggregation
* Equivalent to: 0 .. n

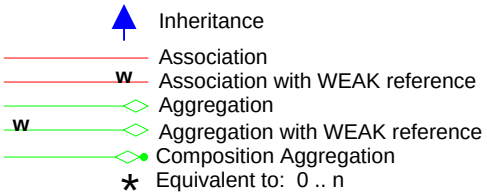


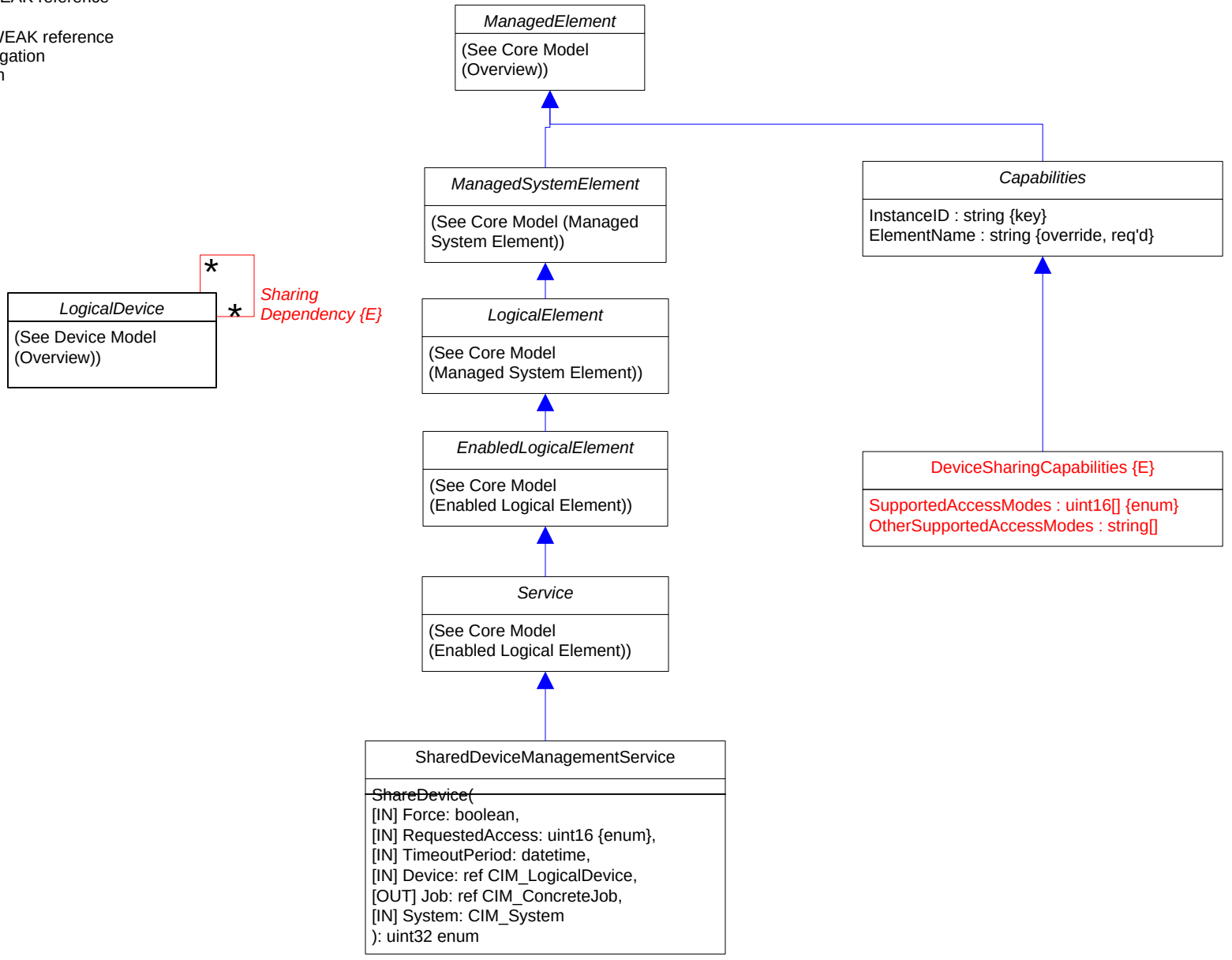
Page 36 - Disk Group



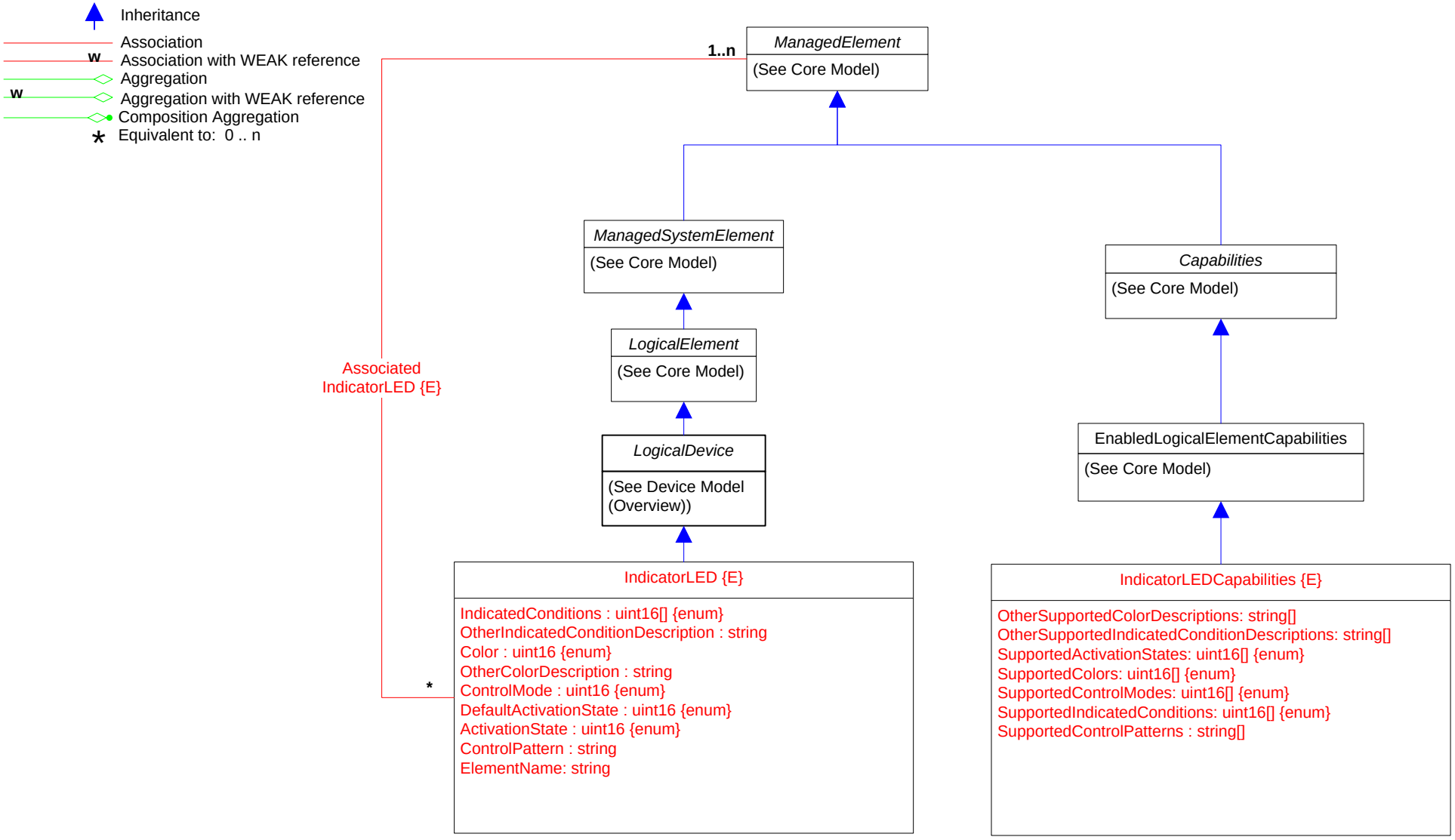


Page 37- Device Sharing



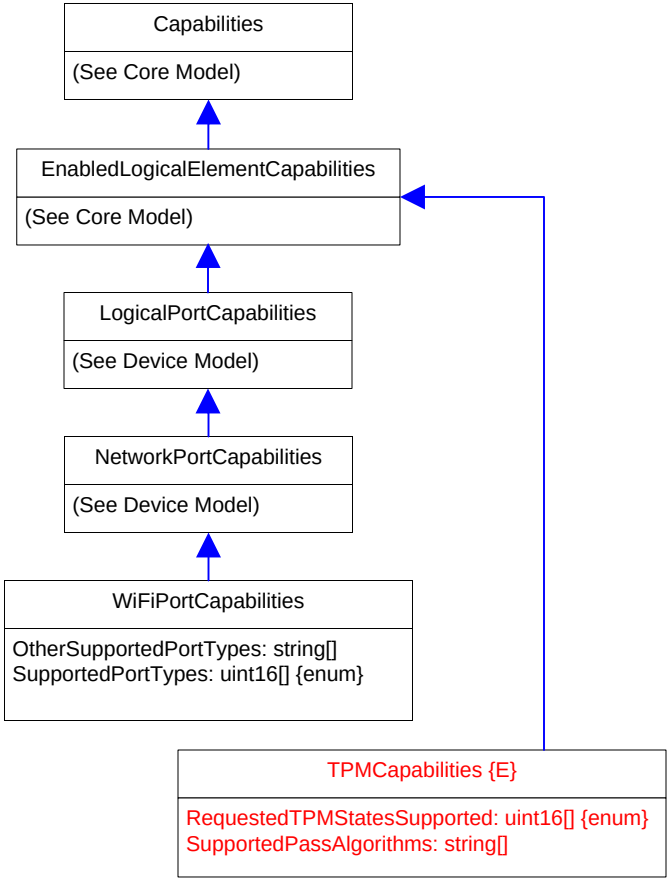


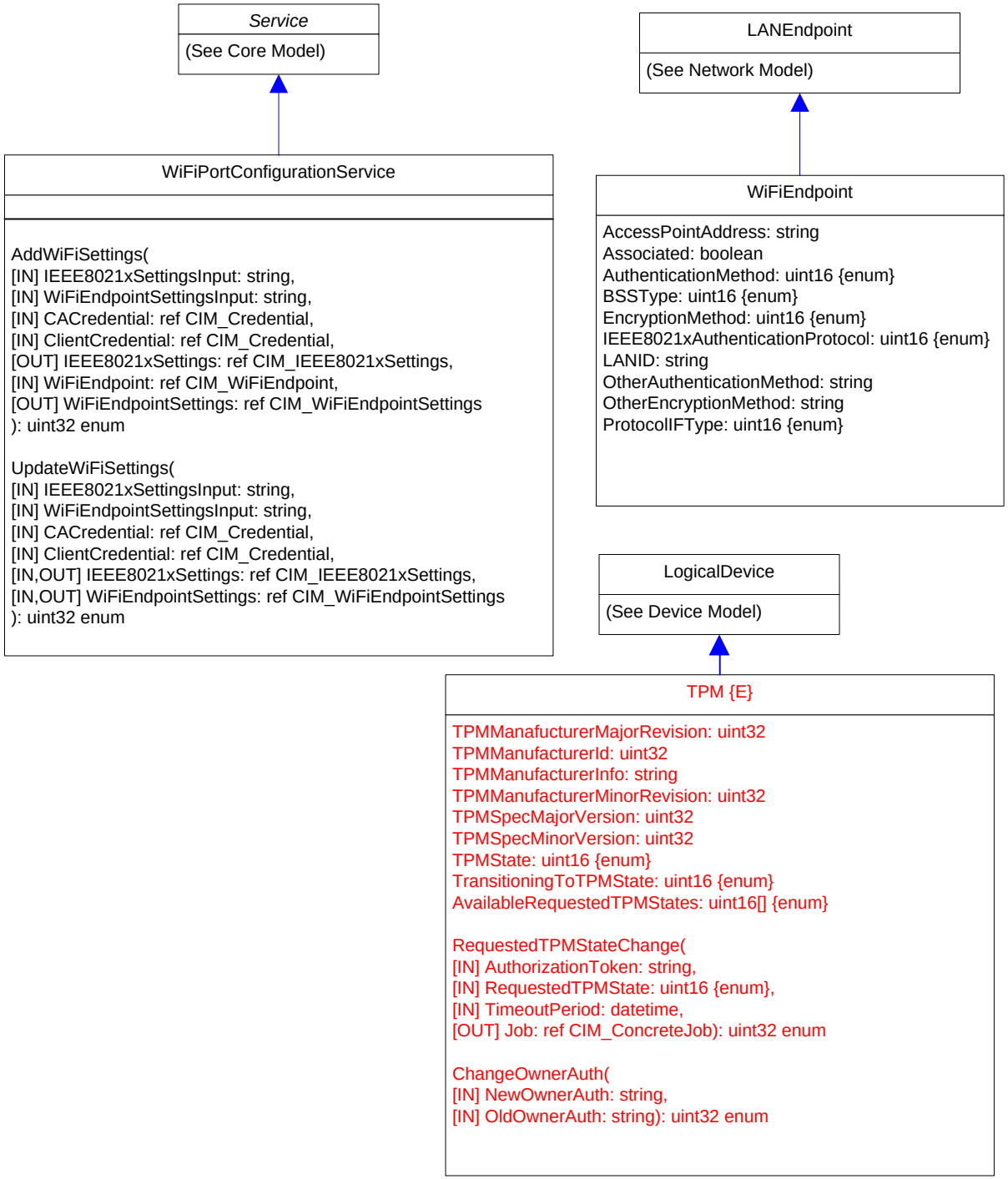
Page 38- LED

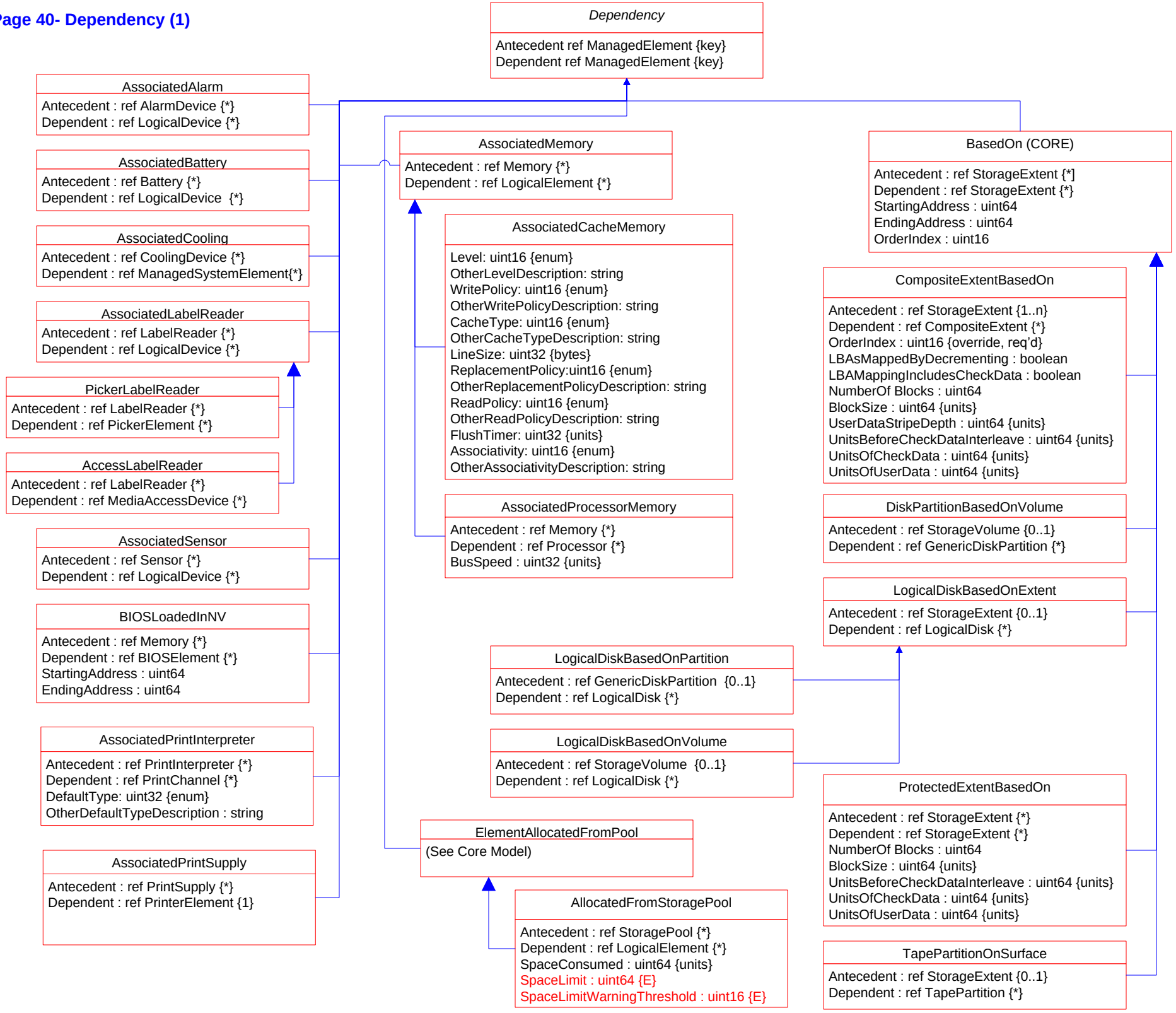

Inheritance
Association
w
Association with WEAK reference
Aggregation
w
Aggregation with WEAK reference
Composition Aggregation
*
Equivalent to: 0 .. n
1..n
ManagedElement
(See Core Model)
ManagedSystemElement
(See Core Model)
LogicalElement
(See Core Model)
LogicalDevice
(See Device Model (Overview))
Capabilities
(See Core Model)
EnabledLogicalElementCapabilities
(See Core Model)
Associated IndicatorLED {E}
*
IndicatorLED {E}
IndicatedConditions : uint16[] {enum}
OtherIndicatedConditionDescription : string
Color : uint16 {enum}
OtherColorDescription : string
ControlMode : uint16 {enum}
DefaultActivationState : uint16 {enum}
ActivationState : uint16 {enum}
ControlPattern : string
ElementName: string
IndicatorLEDCapabilities {E}
OtherSupportedColorDescriptions: string[]
OtherSupportedIndicatedConditionDescriptions: string[]
SupportedActivationStates: uint16[] {enum}
SupportedColors: uint16[] {enum}
SupportedControlModes: uint16[] {enum}
SupportedIndicatedConditions: uint16[] {enum}
SupportedControlPatterns : string[]

Page 39 - WiFi Services

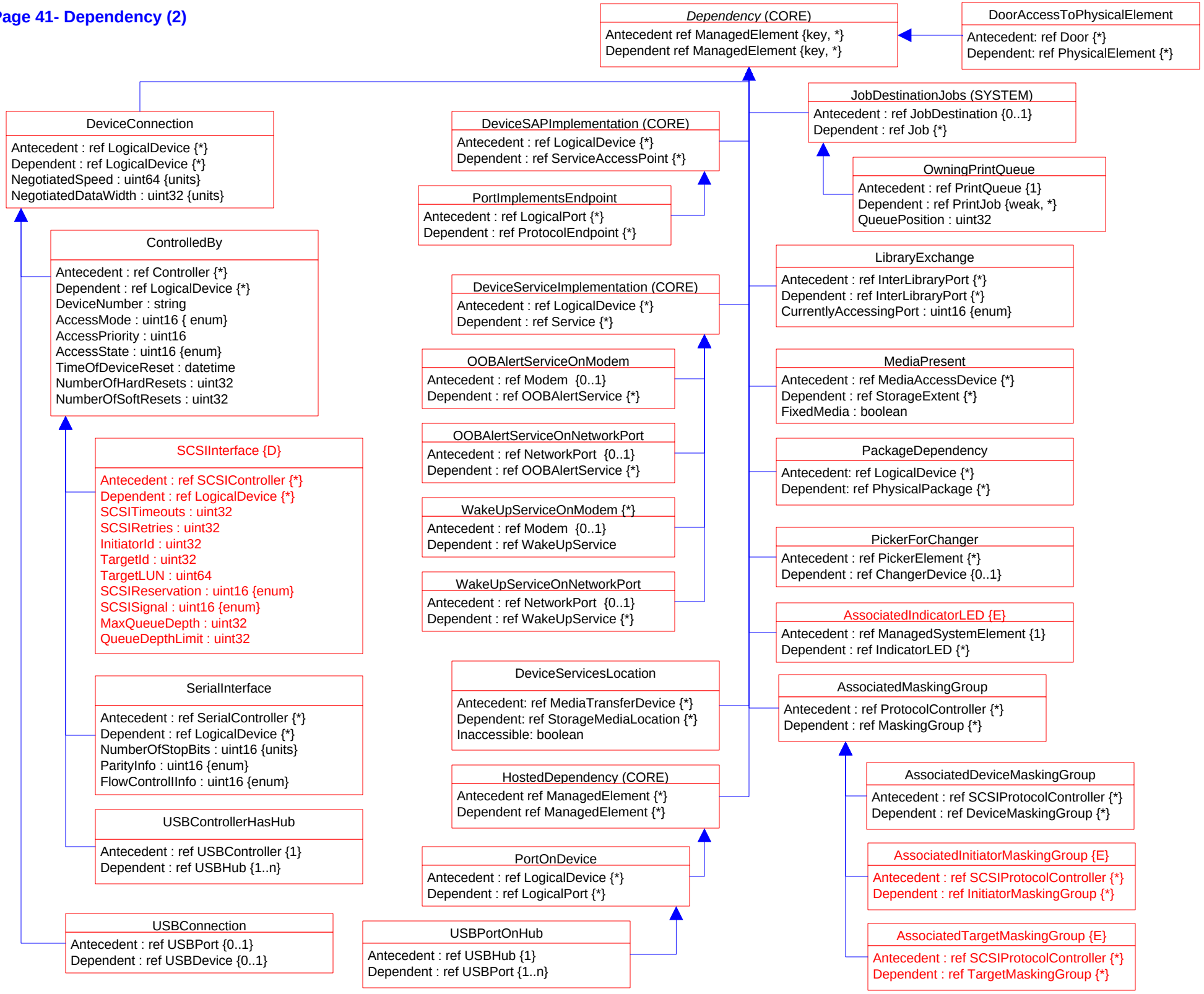
Inheritance
Association
w Association with WEAK reference
Aggregation
w Aggregation with WEAK reference
Composition Aggregation
* Equivalent to: 0 .. n
{E} Experimental Class or Property
{D} Deprecated Class or Property



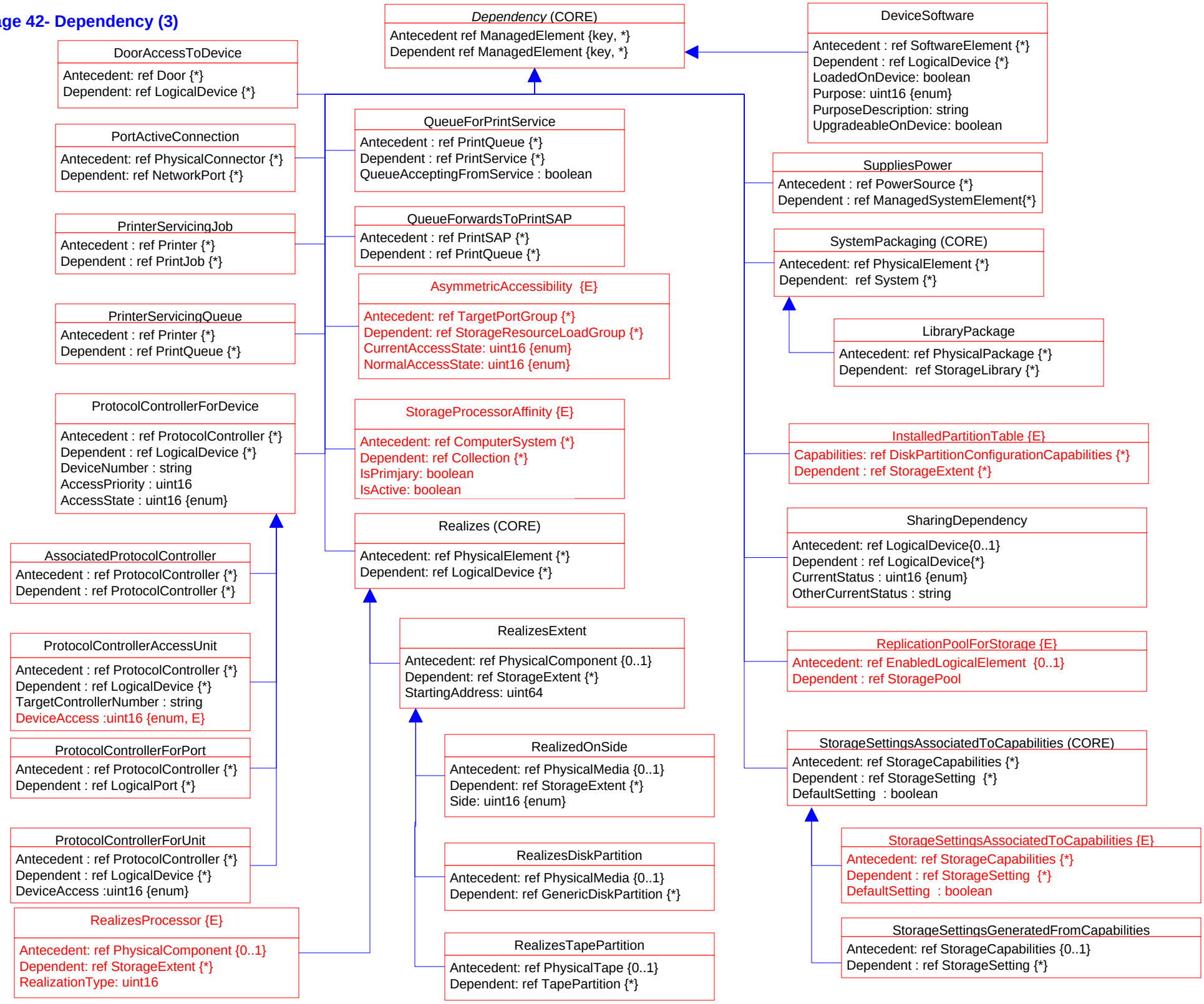



Dependency
Antecedent ref ManagedElement {key}
Dependent ref ManagedElement {key}
AssociatedAlarm
Antecedent : ref AlarmDevice {*}
Dependent : ref LogicalDevice {*}
AssociatedBattery
Antecedent : ref Battery {*}
Dependent : ref LogicalDevice {*}
AssociatedCooling
Antecedent : ref CoolingDevice {*}
Dependent : ref ManagedSystemElement{*}
AssociatedLabelReader
Antecedent : ref LabelReader {*}
Dependent : ref LogicalDevice {*}
PickerLabelReader
Antecedent : ref LabelReader {*}
Dependent : ref PickerElement {*}
AccessLabelReader
Antecedent : ref LabelReader {*}
Dependent : ref MediaAccessDevice {*}
AssociatedSensor
Antecedent : ref Sensor {*}
Dependent : ref LogicalDevice {*}
BIOSLoadedInNV
Antecedent : ref Memory {*}
Dependent : ref BIOSElement {*}
StartingAddress : uint64
EndingAddress : uint64
AssociatedPrintInterpreter
Antecedent : ref PrintInterpreter {*}
Dependent : ref PrintChannel {*}
DefaultType: uint32 {enum}
OtherDefaultTypeDescription : string
AssociatedPrintSupply
Antecedent : ref PrintSupply {*}
Dependent : ref PrinterElement {1}
AssociatedMemory
Antecedent : ref Memory {*}
Dependent : ref LogicalElement {*}
AssociatedCacheMemory
Level: uint16 {enum}
OtherLevelDescription: string
WritePolicy: uint16 {enum}
OtherWritePolicyDescription: string
CacheType: uint16 {enum}
OtherCacheTypeDescription: string
LineSize: uint32 {bytes}
ReplacementPolicy:uint16 {enum}
OtherReplacementPolicyDescription: string
ReadPolicy: uint16 {enum}
OtherReadPolicyDescription: string
FlushTimer: uint32 {units}
Associativity: uint16 {enum}
OtherAssociativityDescription: string
AssociatedProcessorMemory
Antecedent : ref Memory {*}
Dependent : ref Processor {*}
BusSpeed : uint32 {units}
LogicalDiskBasedOnPartition
Antecedent : ref GenericDiskPartition {0..1}
Dependent : ref LogicalDisk {*}
LogicalDiskBasedOnVolume
Antecedent : ref StorageVolume {0..1}
Dependent : ref LogicalDisk {*}
ElementAllocatedFromPool
(See Core Model)
AllocatedFromStoragePool
Antecedent : ref StoragePool {*}
Dependent : ref LogicalElement {*}
SpaceConsumed : uint64 {units}
SpaceLimit : uint64 {E}
SpaceLimitWarningThreshold : uint16 {E}
BasedOn (CORE)
Antecedent : ref StorageExtent {*]
Dependent : ref StorageExtent {*}
StartingAddress : uint64
EndingAddress : uint64
OrderIndex : uint16
CompositeExtentBasedOn
Antecedent : ref StorageExtent {1..n}
Dependent : ref CompositeExtent {*}
OrderIndex : uint16 {override, req'd}
LBAsMappedByDecrementing : boolean
LBAMappingIncludesCheckData : boolean
NumberOf Blocks : uint64
BlockSize : uint64 {units}
UserDataStripeDepth : uint64 {units}
UnitsBeforeCheckDataInterleave : uint64 {units}
UnitsOfCheckData : uint64 {units}
UnitsOfUserData : uint64 {units}
DiskPartitionBasedOnVolume
Antecedent : ref StorageVolume {0..1}
Dependent : ref GenericDiskPartition {*}
LogicalDiskBasedOnExtent
Antecedent : ref StorageExtent {0..1}
Dependent : ref LogicalDisk {*}
ProtectedExtentBasedOn
Antecedent : ref StorageExtent {*}
Dependent : ref StorageExtent {*}
NumberOf Blocks : uint64
BlockSize : uint64 {units}
UnitsBeforeCheckDataInterleave : uint64 {units}
UnitsOfCheckData : uint64 {units}
UnitsOfUserData : uint64 {units}
TapePartitionOnSurface
Antecedent : ref StorageExtent {0..1}
Dependent : ref TapePartition {*}

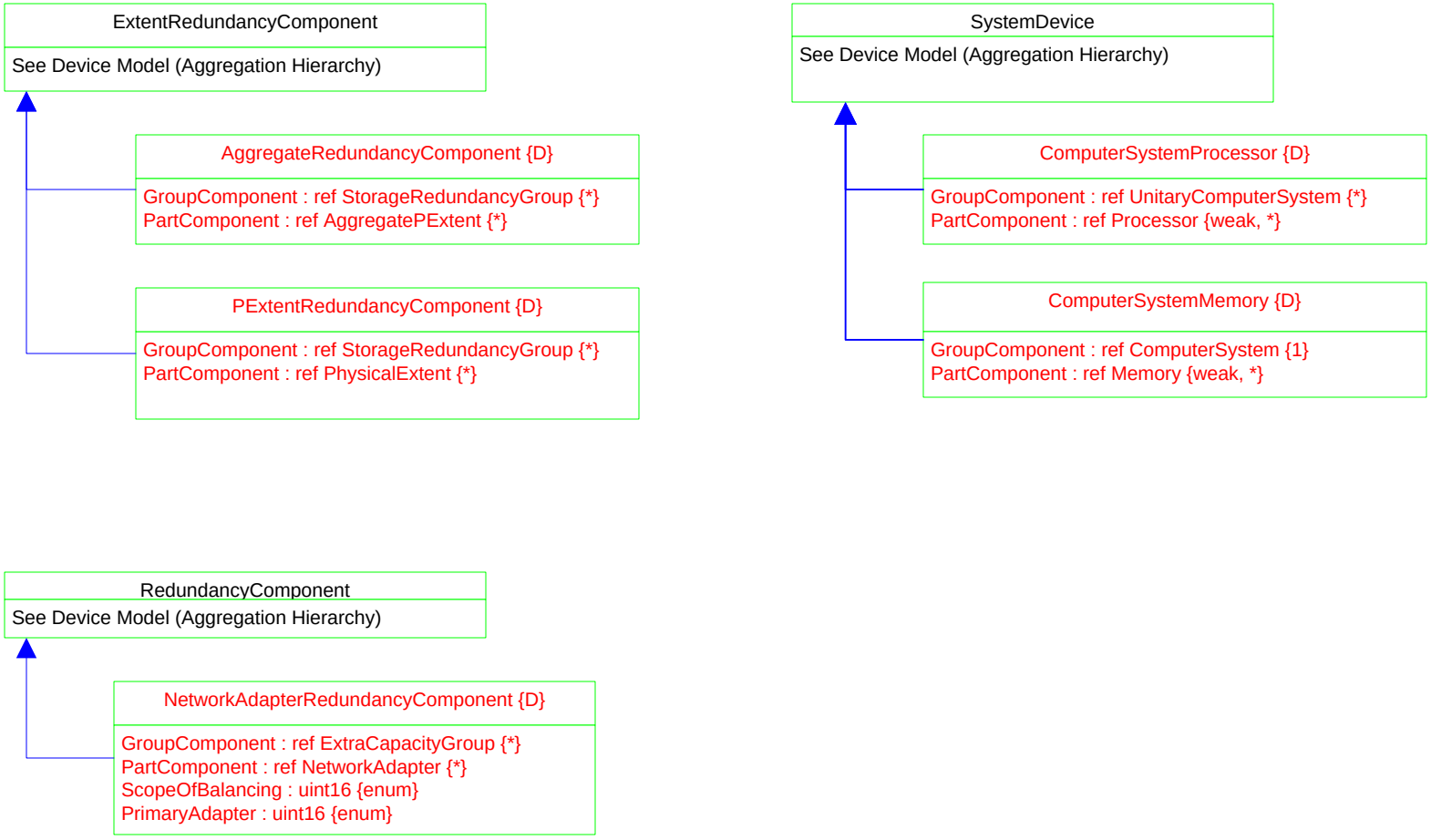
Page 41- Dependency (2)



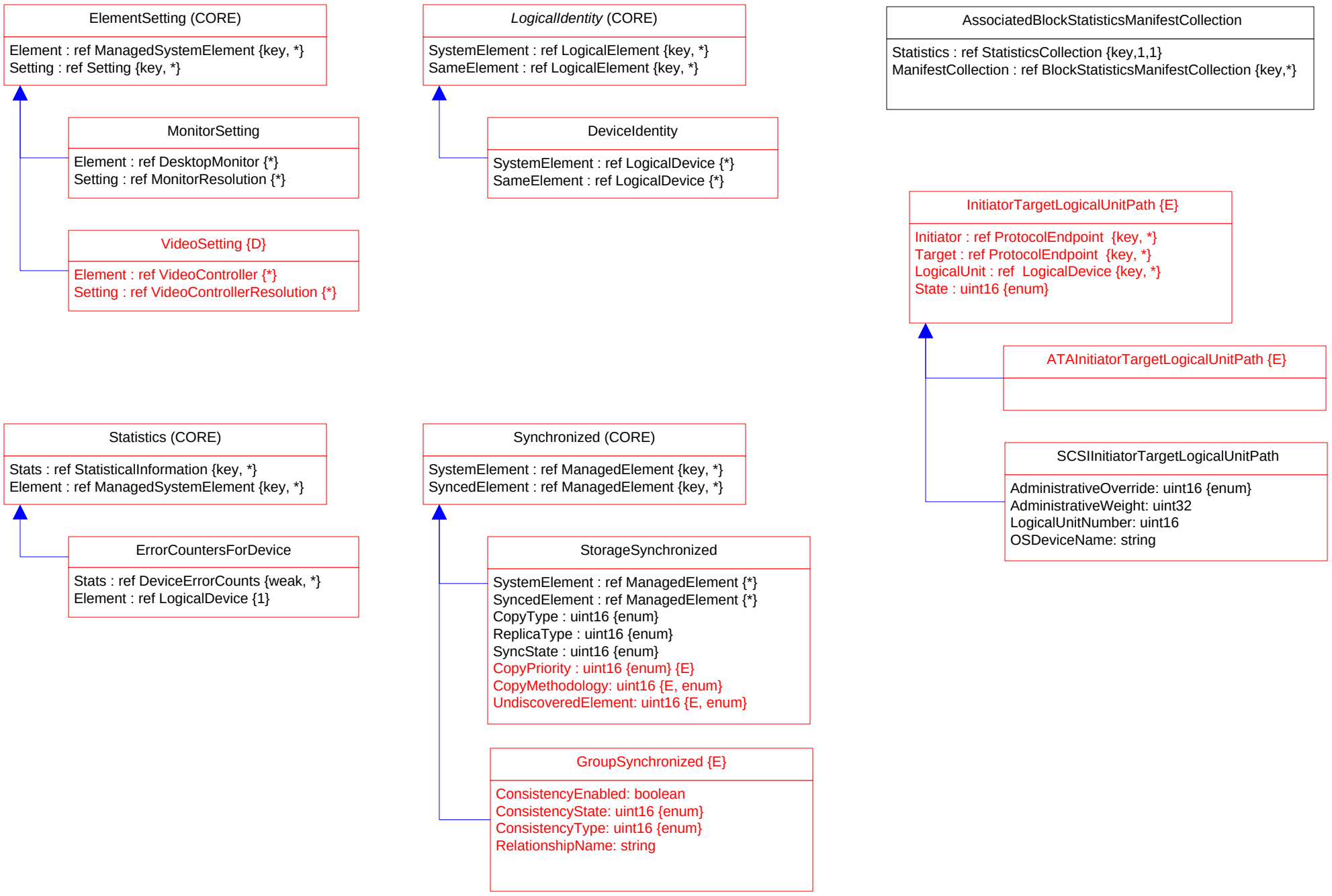
Page 42- Dependency (3)

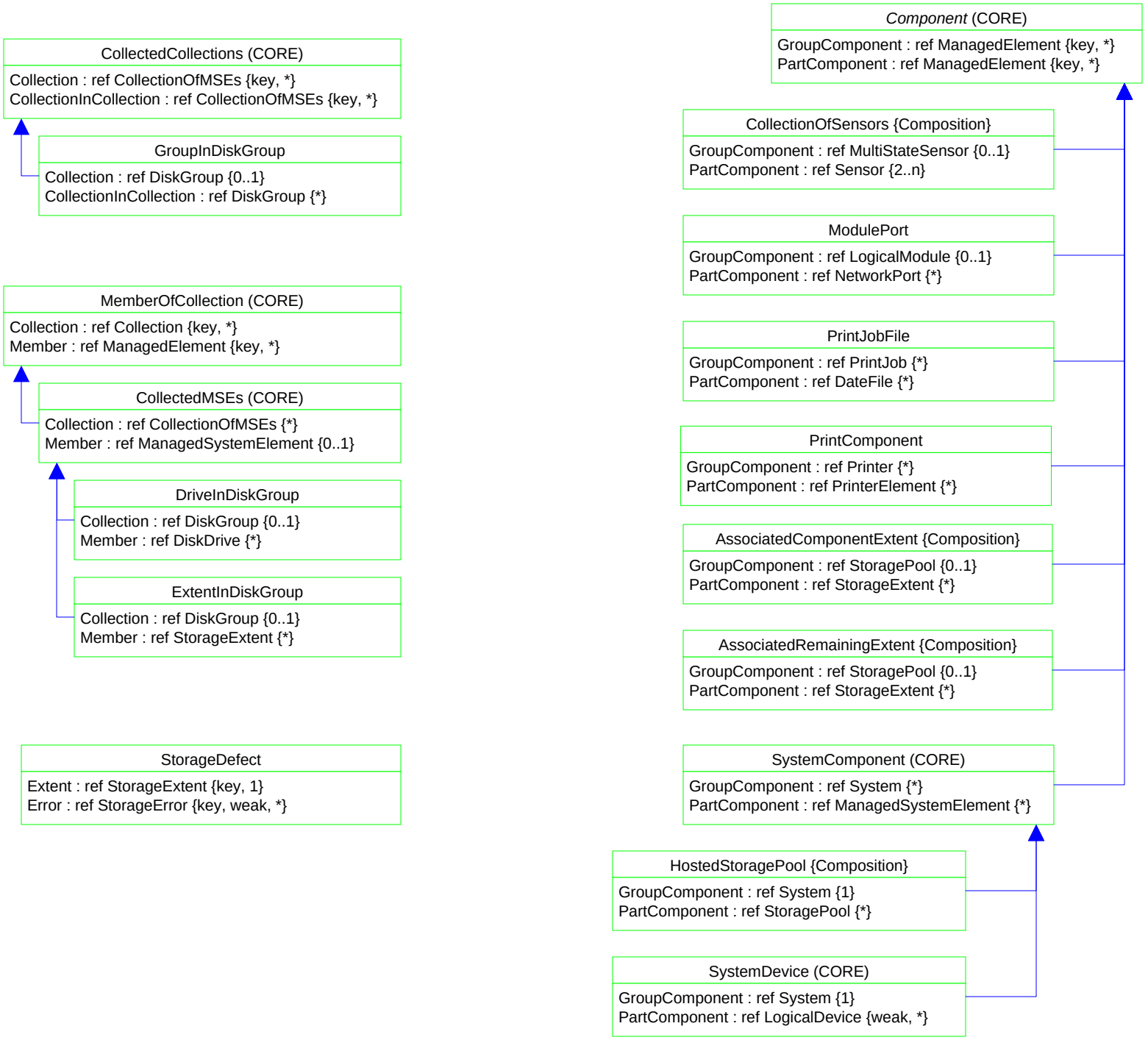


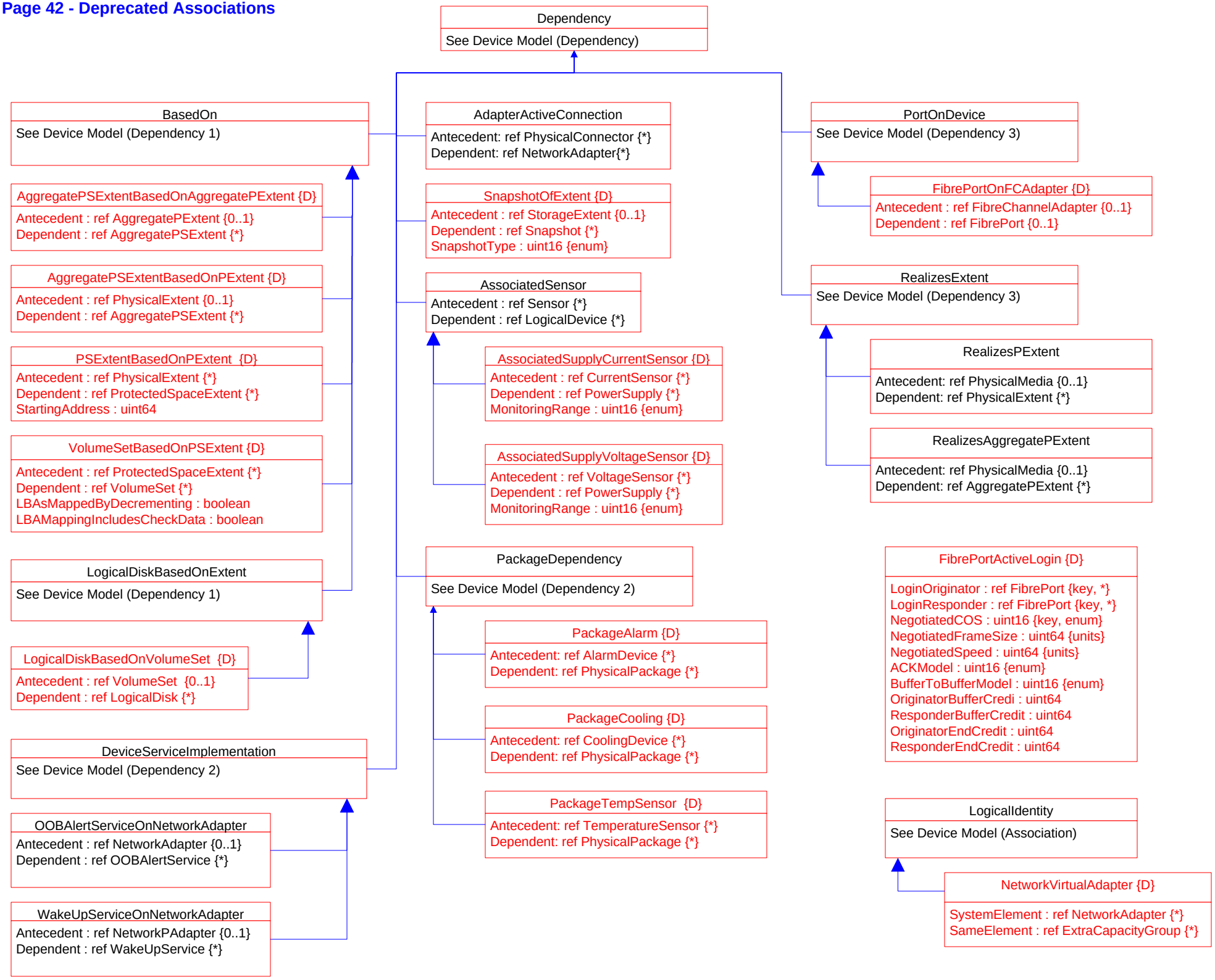
Page 43 - Deprecated Aggregations



Page 44- Association Hierarchy




CollectedCollections (CORE)
Collection : ref CollectionOfMSEs {key, *}
CollectionInCollection : ref CollectionOfMSEs {key, *}
GroupInDiskGroup
Collection : ref DiskGroup {0..1}
CollectionInCollection : ref DiskGroup {*}
MemberOfCollection (CORE)
Collection : ref Collection {key, *}
Member : ref ManagedElement {key, *}
CollectedMSEs (CORE)
Collection : ref CollectionOfMSEs {*}
Member : ref ManagedSystemElement {0..1}
DriveInDiskGroup
Collection : ref DiskGroup {0..1}
Member : ref DiskDrive {*}
ExtentInDiskGroup
Collection : ref DiskGroup {0..1}
Member : ref StorageExtent {*}
StorageDefect
Extent : ref StorageExtent {key, 1}
Error : ref StorageError {key, weak, *}
Component (CORE)
GroupComponent : ref ManagedElement {key, *}
PartComponent : ref ManagedElement {key, *}
CollectionOfSensors {Composition}
GroupComponent : ref MultiStateSensor {0..1}
PartComponent : ref Sensor {2..n}
ModulePort
GroupComponent : ref LogicalModule {0..1}
PartComponent : ref NetworkPort {*}
PrintJobFile
GroupComponent : ref PrintJob {*}
PartComponent : ref DateFile {*}
PrintComponent
GroupComponent : ref Printer {*}
PartComponent : ref PrinterElement {*}
AssociatedComponentExtent {Composition}
GroupComponent : ref StoragePool {0..1}
PartComponent : ref StorageExtent {*}
AssociatedRemainingExtent {Composition}
GroupComponent : ref StoragePool {0..1}
PartComponent : ref StorageExtent {*}
SystemComponent (CORE)
GroupComponent : ref System {*}
PartComponent : ref ManagedSystemElement {*}
HostedStoragePool {Composition}
GroupComponent : ref System {1}
PartComponent : ref StoragePool {*}
SystemDevice (CORE)
GroupComponent : ref System {1}
PartComponent : ref LogicalDevice {weak, *}


Dependency
See Device Model (Dependency)
BasedOn
See Device Model (Dependency 1)
AdapterActiveConnection
Antecedent: ref PhysicalConnector {*}
Dependent: ref NetworkAdapter{*}
PortOnDevice
See Device Model (Dependency 3)
AggregatePSExtentBasedOnAggregatePExtent {D}
Antecedent : ref AggregatePExtent {0..1}
Dependent : ref AggregatePSExtent {*}
SnapshotOfExtent {D}
Antecedent : ref StorageExtent {0..1}
Dependent : ref Snapshot {*}
SnapshotType : uint16 {enum}
FibrePortOnFCAdapter {D}
Antecedent : ref FibreChannelAdapter {0..1}
Dependent : ref FibrePort {0..1}
AggregatePSExtentBasedOnPExtent {D}
Antecedent : ref PhysicalExtent {0..1}
Dependent : ref AggregatePSExtent {*}
AssociatedSensor
Antecedent : ref Sensor {*}
Dependent : ref LogicalDevice {*}
RealizesExtent
See Device Model (Dependency 3)
PSExtentBasedOnPExtent {D}
Antecedent : ref PhysicalExtent {*}
Dependent : ref ProtectedSpaceExtent {*}
StartingAddress : uint64
AssociatedSupplyCurrentSensor {D}
Antecedent : ref CurrentSensor {*}
Dependent : ref PowerSupply {*}
MonitoringRange : uint16 {enum}
RealizesPExtent
Antecedent: ref PhysicalMedia {0..1}
Dependent: ref PhysicalExtent {*}
VolumeSetBasedOnPSExtent {D}
Antecedent : ref ProtectedSpaceExtent {*}
Dependent : ref VolumeSet {*}
LBAsMappedByDecrementing : boolean
LBAMappingIncludesCheckData : boolean
AssociatedSupplyVoltageSensor {D}
Antecedent : ref VoltageSensor {*}
Dependent : ref PowerSupply {*}
MonitoringRange : uint16 {enum}
RealizesAggregatePExtent
Antecedent: ref PhysicalMedia {0..1}
Dependent: ref AggregatePExtent {*}
LogicalDiskBasedOnExtent
See Device Model (Dependency 1)
PackageDependency
See Device Model (Dependency 2)
FibrePortActiveLogin {D}
LoginOriginator : ref FibrePort {key, *}
LoginResponder : ref FibrePort {key, *}
NegotiatedCOS : uint16 {key, enum}
NegotiatedFrameSize : uint64 {units}
NegotiatedSpeed : uint64 {units}
ACKModel : uint16 {enum}
BufferToBufferModel : uint16 {enum}
OriginatorBufferCredi : uint64
ResponderBufferCredit : uint64
OriginatorEndCredit : uint64
ResponderEndCredit : uint64
PackageAlarm {D}
Antecedent: ref AlarmDevice {*}
Dependent: ref PhysicalPackage {*}
LogicalDiskBasedOnVolumeSet {D}
Antecedent : ref VolumeSet {0..1}
Dependent : ref LogicalDisk {*}
PackageCooling {D}
Antecedent: ref CoolingDevice {*}
Dependent: ref PhysicalPackage {*}
DeviceServiceImplementation
See Device Model (Dependency 2)
PackageTempSensor {D}
Antecedent: ref TemperatureSensor {*}
Dependent: ref PhysicalPackage {*}
LogicalIdentity
See Device Model (Association)
OOBAlertServiceOnNetworkAdapter
Antecedent : ref NetworkAdapter {0..1}
Dependent : ref OOBAlertService {*}
NetworkVirtualAdapter {D}
SystemElement : ref NetworkAdapter {*}
SameElement : ref ExtraCapacityGroup {*}
WakeUpServiceOnNetworkAdapter
Antecedent : ref NetworkPAdapter {0..1}
Dependent : ref WakeUpService {*}