

IntelliBridge Enterprise release 3.0



Philips IntelliBridge Enterprise (IBE) is a single, standards-based (such as HL7 v2, FHIR and DICOM) point of interoperability for Philips systems, reducing interface complexity and maximizing the value of your IT investments. IBE serves as a centralized messaging service, connecting Philips systems with the various information systems within the hospital.

IBE supports healthcare organizations to streamline enterprise interoperability, enhance the efficiency of clinical workflows, and help care providers make informed clinical decisions by leveraging data from patient care devices, informatics systems and the EMR.

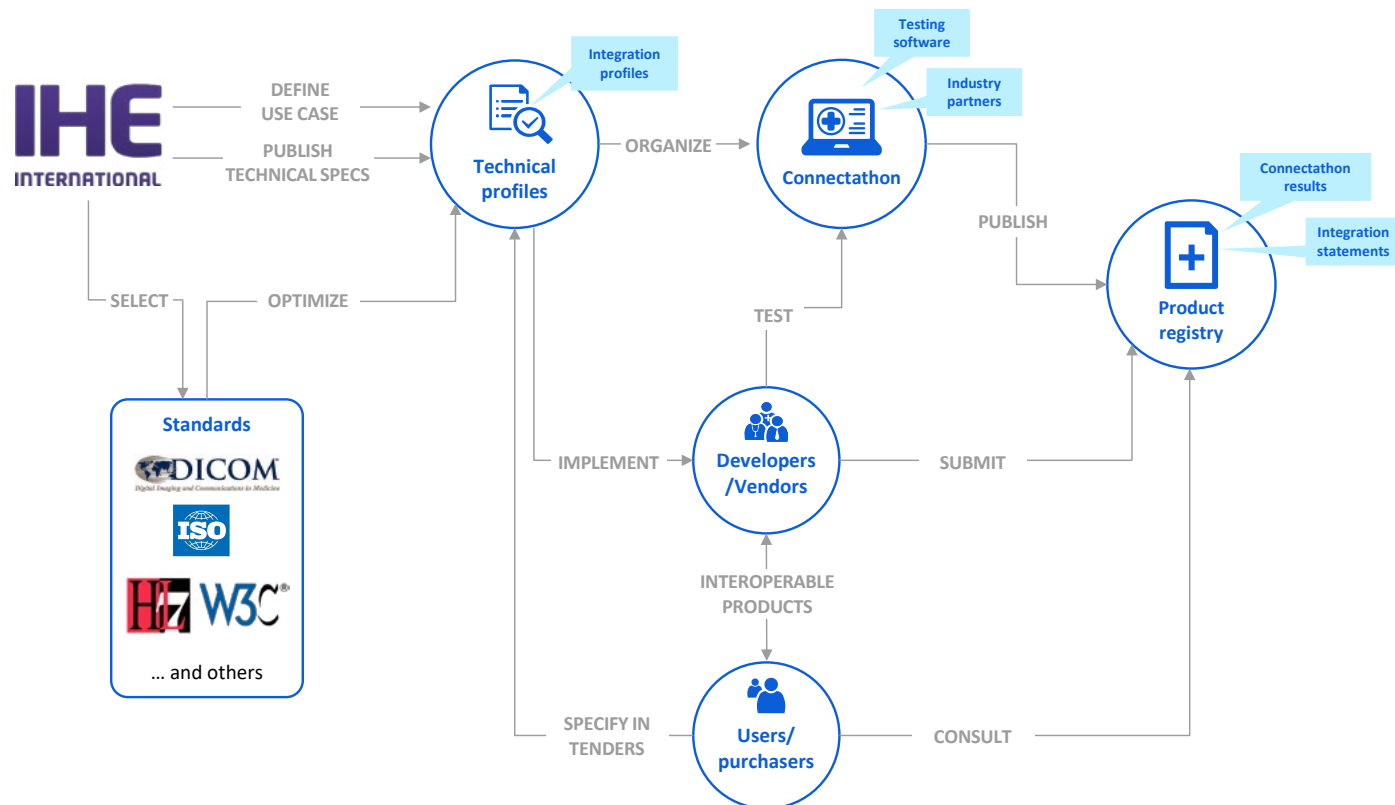
Connected care is about using interoperability to make data available at the right place, right time. It helps you collaborate wherever you are in the continuum, across inpatient and outpatient facilities, and even into patient homes. In an everchanging healthcare landscape, achieving this takes the transformative support of capable enterprise systems.

To interface Philips systems with the hospital's external systems, IntelliBridge Enterprise acts as centralized, HL7 messaging service. It implements the necessary communication protocols, the mapping and message delivery, and it performs the necessary data filtering, transformation and routing. By providing a single point of interoperability with Philips systems, IntelliBridge Enterprise simplifies interface complexity and enhances the value of IT investments.

IntelliBridge Enterprise provides the HL7/DICOM consumer and reporter function for Philips client systems to share patient data. IntelliBridge Enterprise has no clinical user interface, nor does it interpret, inspect, or provide additional analytical functionality for medical device data.

IHE profiles* supported by IntelliBridge Enterprise

Philips is an active member and key contributor to the Integrating the Healthcare Enterprise (IHE) with the common goal of establishing worldwide and industry-wide standards for healthcare interoperability.

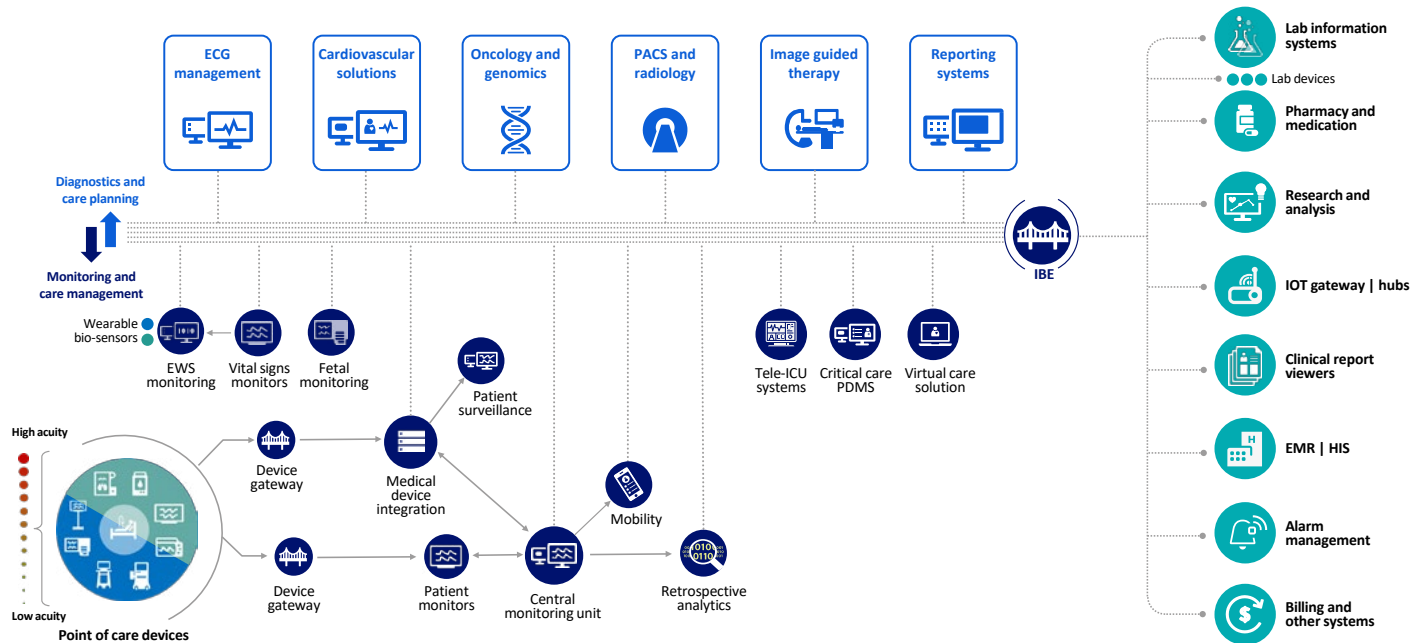


- Alert Communication Management (ACM)
- Audit Trail and Node Authentication (ATNA)
- Consistent Time (CT)
- Consolidated Clinical Document Architecture (C-CDA)
- Cross Enterprise Document Sharing (XDS.b)
- Device Enterprise Communication (DEC)
- Mobile access to Health Documents (MHD)
- Mobile Care Service Discovery(mCSD)
- Multi-Patient Queries (MPQ)
- Patient Administration Management Integration Profile (PAM)
- Patient Demographics Query (PDQ)
- Patient Demographics Query for mobile (PDQm)
- Patient Demographics Query HL7 V3 (PDQV3)
- Patient Identifier Cross-reference for Mobile (PIXm)
- Patient Identifier Cross-referencing Integration Profile (PIX)
- Patient Identifier Cross-referencing HL7 V3 (PIXV3)
- Patient Master Identity Registry (PMIR)
- Query for Existing Data for Mobile Profile (QEDm)
- Scheduled Workflow.b (SWF.b)

Features

Transforming healthcare interoperability

In today's rapidly evolving healthcare landscape, seamless data exchange between disparate systems is critical for supporting improved patient outcomes, operational efficiency, and regulatory compliance. IntelliBridge Enterprise (IBE) is a cutting-edge solution designed to simplify, secure, and accelerate data integration across healthcare IT environments.



Patient demographics

- Patient query/lookup
- Admission, visit notification, transfer, merge, and discharge
- Discharge notes
- Patient identity matching
- Patient allergies, diagnosis
- Bed location assignment
- Staff and shared care provider assignments
- Patient information reconciliation

Orders and scheduling

- Orders inbound from CPOE
- Orders and schedules for 12 lead ECG
- Worklist query HL7
- DICOM modality worklist query (C-Find)
- Modality performed procedure step (N-Create and N-Set)
- Patient and study appointments, reconciliation

Lab results

- Blood gas, hematology, biochemistry
- Molecular and microbiology

Report export

- WaveStrip export
- PDF encapsulated reports
- Study completion notification
- Study registration and retrieval
- DICOM study locator
- Formatted text reports
- Structured and unstructured reports

Alarms

- Alarms from device gateways
- IHE ACM alarms export
- INOP's and non-clinical alarms

Vitals and observations

- Operates in both solicited and unsolicited mode.
- Patient vitals outbound
- Hemodynamics
- Clinical notes
- Clinical discrete results
- Single sign-on and Imprivata based user-device authentication

Features

Medication

- Medication orders
- Medication administration
- Drug-drug interactions

Others

- Billing with Detail Financial Transaction (DFT)
- Inventory management
- Utilization

Wearables and IOT gateway

- Patient Administration Toolkit for positive patient identification, supported on workstation as well as handheld devices
- Physiological parameters (RR, SpO₂, HR, Skin Temp, Activity)
- Sensor inactivity, Wear detection and Battery status

FHIR Gateway

- User authentication and authorization module
- Application context launch
- FHIR Transformation Service
- FHIR Profile Analyzer
- USCDI, ILS, ISiK , PoCD and other IGs
- FHIR Façade

DICOM Manager

- MWL and MPPS as SCP
- Store SCP
- IAN SCP
- Store SCU
- C-Find and C-Move SCU
- DICOM Conversion and Migration Toolkit

Data APIs

- Patient Search
- Patient Demographics and Visit information
- Orders Query — Tele, Medication, Procedure, etc.
- Care Team
- Patient Device Association

Technology characteristics

Seamless interoperability

- Supports HL7 v2/v3, FHIR, DICOM, X12, CCD, CDA, IHE and other industry standards
- Supports near real-time data exchange across EHRs, labs, imaging systems, and billing systems
- Compatible with cloud, on-premise, and hybrid healthcare environments

Scalable and high-performance architecture

- Designed to handle high-volume data transactions
- Supports a clustered setup for enterprise-scale integration
- Supports high availability for mission-critical healthcare operations

Advanced security and compliance

- Compliant with HIPAA, GDPR, and HITECH regulations
- Implements end-to-end encryption for secure data transmission
- Offers audit logging and role-based access control (RBAC) for data integrity

Intuitive dashboard and monitoring

- Provides real-time analytics and monitoring of data flows
- Alerts and notifications for potential integration issues
- Role based access controls for easy tracking and reporting

Rapid integration and low-code development

- Drag-and-drop workflow design for fast deployment
- Supports scripting (JavaScript, Java, etc.) for advanced business logic and provisions to accommodate site specific configurations
- Configurable connectors for major EHRs (Epic, Cerner, Allscripts, Meditech, etc.)

Data normalization and API gateway

- Normalized Data APIs for data sharing, predictive analytics for proactive decision-making
- De-identification of PHI data with consent management

Serviceability

- Mechanism to visually compare configuration changes.
- Automates repetitive workflow tests to reduce manual effort and enhance efficiency during UAT

Technical specifications

System variants

IntelliBridge Enterprise can be configured in the following variants:

- Standalone
- Enterprise (multi-modality)
- Philips HSP AWS Cloud (multi-tenant)
- Hybrid

Hardware specification

IBE is provided as a software solution and as such, recommended hardware options for the IBE solution, listed below:

- With DB server: Dual Core Xeon 4 @4.3 GHz processor or higher, 16 GB RAM, 900 GB DiskSize
- With remote DB server: Dual Xeon 4 @4.3 GHz processor or higher, 8 GB RAM, 500 GB DiskSize
- Disk space should be adjusted for high volume/heavy traffic sites

Virtualization

IBE supports the following virtual server environments:

- VMware® vSphere ESXi Server version 6.5 and higher
- With DB Server: 4vCPUs @4.3 GHz processor or higher, 12-16 GB RAM, 900 GB DiskSize
- With Remote DB Server: 4vCPUs @4.3 GHz processor or higher, 8 GB RAM, 900 GB DiskSize

Operating system

Microsoft® Windows Operating System:

- Windows Server 2022 (recommended)
- Windows Server 2019

Database

Microsoft® SQL Server Database:

- SQL Server 2022, Std and Enterprise (recommended)
- SQL Server 2019, Std and Enterprise
- High Availability supported with Enterprise edition (recommended configuration)

Terminal client

IBE Monitoring can be launched from a workstation running on Microsoft operating system using:

- Microsoft Edge (browser)
- Google Chrome (browser)

Remote support

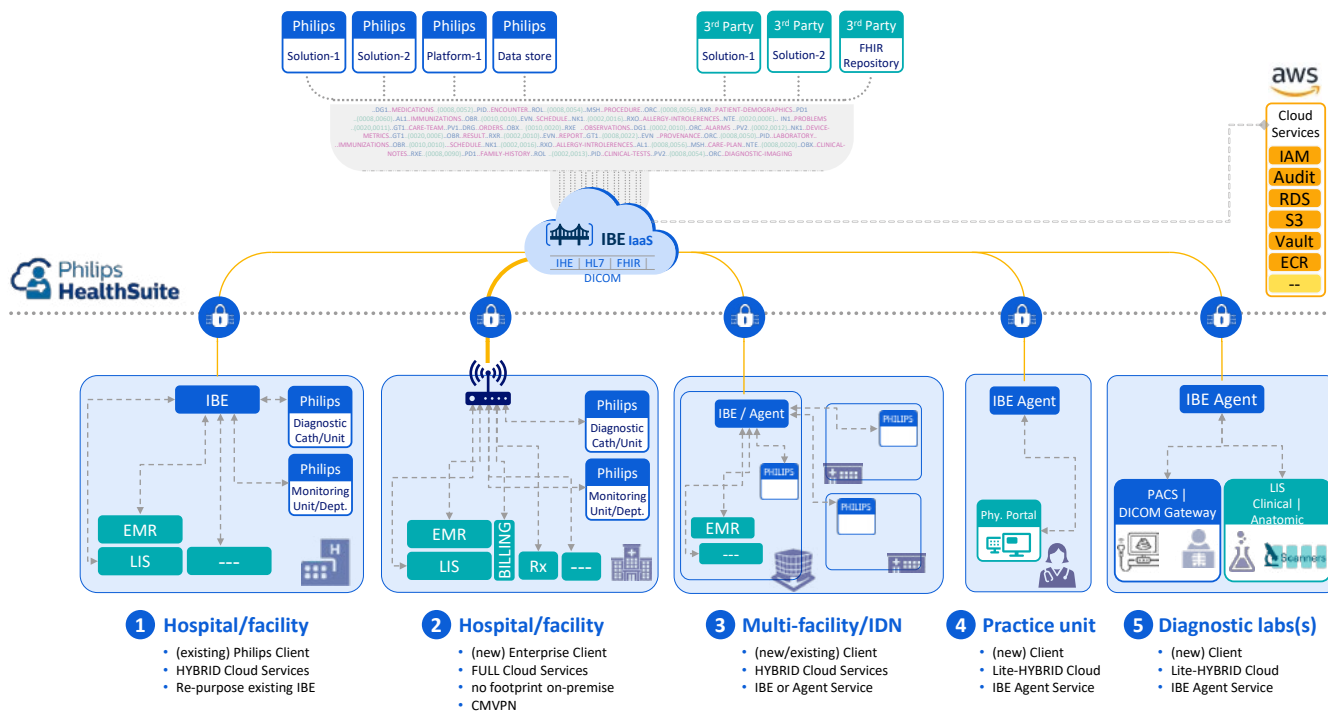
The system is prepared for remote support via the Philips approved and supported connectivity mechanism PRS IPSEC VPN.

IBE on cloud

Philips HSP-AWS hosted solution

IntelliBridge Enterprise is now offered as a cloud-hosted solution, extending its integration capabilities from on-premises to the cloud. This transition marks a strategic modernization of the broker application, leveraging Amazon Web Services (AWS) to deliver enhanced agility, scalability, and operational efficiency. The legacy application has been containerized, enabling seamless deployment and Kubernetes based orchestration within AWS. This shift unlocks a range of automation capabilities — from provisioning and backup to monitoring and alerting — with a goal of reducing manual overhead and improving reliability.

While hospital IT teams handle maintenance and patching for the on-premises setup, Philips will manage the cloud-hosted solution. Alongside the standalone on-premises IBE setup, the cloud option introduces various deployment models tailored to meet interoperability needs based on integrated solutions. The following representation illustrates the potential deployments.



IBE on cloud is a multi-tenant solution, based on a Elastic Kubernetes Service that enhances scalability of the solution, leveraging key Amazon AWS and Philips HSP services like RDS, S3, HSP IAM, Vault, AWS Secrets, EBS, WAF, ELB, etc.

Key infrastructure enhancements

- **Scalability and performance:** elastic resource allocation supports optimal throughput under varying workloads.
- **Security and compliance:** built-in AWS security frameworks and compliance controls safeguard data and operations.
- **Data management:** cloud-native storage and backup strategies enhance resilience and accessibility.
- Monitoring has been elevated through integration with AWS CloudWatch, Prometheus and Grafana, providing real-time visibility, alerting (PagerDuty), and analytics. These tools complement existing Rhapsody monitoring, offering a unified observability layer across the platform.

This cloud transformation aligns with modern DevOps practices, supporting faster iterations, improved uptime, and better customer experiences.

IBE Agent service

The IBE Agent is a lean service in IBE that compliments IBE on Cloud and is designed to support secure, efficient and reliable data transfer between health systems in the Hospital Network and the Philips HSP-AWS Cloud platform. IBE Agent can be configured to function as:

- **Relay service:** forwards data transactions from the on-premise information systems to the IBE on Cloud
- **Bi-directional:** supports two-way communication between the Hospital Network and Philips HSP Cloud
- **Parallel load processing:** light weight service that can be configured on multiple VM's to process the pre-split transaction load

Compatibility

The IBE Release 3.0 includes integration and compatibility with the following Philips products. The versions listed are the minimum supported versions:

Product	Applicable versions
Advanced Visualization Workspace	ISP12, 15 LR2, 15 LR3 , 15 LR4
Clinical Insights Manager	1.1, 2.0, 2.0.4
Capsule Medical Device Information Platform	11.6.0.253, 11.7.0.295, 2023-2 (11.7).1, 2024-1 (11.9.0)
Capsule Surveillance	2023-1, 2024-1
EarlyVue VS30	863359: A.00.00.68, A.00.01, A.00.02.88, A.00.03.101, A.01.00.107, A.02.00.110, A.02.01.113, A.02.01.113 863380: A.00.00.68, A.00.01, A.00.02.88, A.00.03.101, A.01.01.108, A.01.02.114, A.01.02.116
eCare Manager	3.9, 4.1.1, 4.2, 4.2.1, 4.3
Efficia Central	CM: B.01, C.00.01.05, C.01.01.03, C.01.08.03, 4.3.1.0-3 CMS: 3.2.3.0-2, 2.3.2.0
Emergency Care Informatics	R2, C.00.25309, 3.1, 3.2.2.0, 3.2.3, 3.2.4
Expressions IP	01.03, 03.01.00, 03.03.00
MR Patient Care Portal 5000	01.02.01.00
HealthDot	3.1
Health Informatics Suite	5.0, 5.0.2
Holter	A.03.00.02, A.03.00.03, 3.0.0, 3.0.1
IC Reporting	2.0, 3.0
IntelliBridge Systems	SC50 B.0, B.02, C.0, C.01
IntelliSpace Critical Care and Anesthesia	E.0, F.0, G.0, H.0, J.0, J.01, J.01 FP 01, J.04, J.05, J.05.01, J.06, J.06.01
IntelliSpace ECG	A.01, B.00, B.01, B.02, B.02.01, B.02.02, B.02.03, B.02.04, B.02.06, B.02.07.08, B.02.08
IntelliSpace CardioVascular	R1.1 SP1, R1.1L1, R1.2, R2.1, R2.2, R2.3, R2.3.1, R3.1, R3.2.1, R4.1, R4.2, R5.1, R5.2, R6.1, R6.2, R7.0, R7.1, R8.0, R8.1
IntelliSpace Perinatal	H.0, J.0, K.0, K.00.21, K.00.22
IntelliVue Guardian Solutions	A.01, A.02, B.0, C.0, C.01, D.0, E.0, E.01, E.02, E.02.03
IntelliVue Information Center iX	A.02, B.00, B.01, B.02, C.00.01, C.01, C.02, C.03.01, 4.0, 4.1, 4.2, 4.3.1, 4.3.2
PIC – Event Notification	4.3.8, 4.4, 4.5
IntelliSpace Precision Medicine	R6.13.13
PageWriter TC	TC10 : A.00, A.01 TC35 : 1.0.0.20.698 TC50 : A.06, A.07, A.07.07.03, A.07.08
Performance Bridge	4.0.0, 4.0.1, 4.0.3, 4.0.4, 4.1, 4.1.4, 5.0, 5.0.1
Performance Bridge FocalPoint	A.01, A.02.11, A.02.14, 2.0, 2.1
Philips Hemodynamic Application	1.4, 1.5
Scheduler	4.0, 4.1
Stress ST80i	A.00, A.01, A.02.05, A.03.03
Virtual Acute Care	1.0, 2.0, 2.0.1
Xper Information Management	1.5 SP, 2.3, 2.4, 2.5, 2.6, 5.1, 5.2, 6.0, 6.0.2, 6.1

Ordering information

IntelliBridge Enterprise Solution

Catalog Number **779070**

Option	Description
Deployment type	
NCAA608	New
NCAA609	Expansion
Type of installation	
NCAA610	On-premise
NCAA611	Cloud
Type of connection product	
NCAA612	Philips
NCAA613	3rd party
New tier selection	
NCAA614	Essential
NCAA615	Standard
NCAA616	Advanced
NCAA617	Cloud-native
HS interoper connector	
NCAA618	Yes
NCAA619	No

IBE Essential Tier

Catalog Number **779071**

Option	Description
Essential tier connections	
FCA0175	MDIP
FCA0176	Clinical Insights Manager
FCA0177	SC50 Gateway Entitlement
FCA0178	IS Perinatal Entitlement
FCA0179	ICCA Comprehensive Entitlement
FCA0180	Guardian Comprehensive Etmt
FCA0181	Event Management Entitlement
FCA0182	Expression IP5/IP7 Entitlement
FCA0183	ECG Devices Entitlement
FCA0184	ECG Mgmt Entitlement
FCA0185	General Care Vitals Entitlement
FCA0186	Philips Hemo Entitlement
FCA0188	Surveillance Entitlement
Interface integration group	
FCA0230	HL7 ADT Interface
FCA0231	HL7 Lab Results Interface (ORU)
FCA0232	HL7 Orders Interface (ORM)
FCA0233	HL7 EMR Outbound Interface
FCA0234	HL7 Special-System Interface

IBE Standard Tier

Catalog Number **779072**

Option	Description
Essential tier connections	
FCA0175	MDIP
FCA0176	Clinical Insights Manager
FCA0177	SC50 Gateway Entitlement
FCA0178	IS Perinatal Entitlement
FCA0179	ICCA Comprehensive Entitlement
FCA0180	Guardian Comprehensive Etmt
FCA0181	Event Management Entitlement
FCA0182	Expression IP5/IP7 Entitlement
FCA0183	ECG Devices Entitlement
FCA0184	ECG Mgmt Entitlement
FCA0185	General Care Vitals Entitlement
FCA0186	Philips Hemo Entitlement
FCA0188	Surveillance Entitlement

Option	Description
Standard tier exclusives	
FCA0236	Cardiology Suite
FCA0237	eCareManager
FCA0238	PIC iX Comprehensive Etmt
Interface integration group	
FCA0230	HL7 ADT Interface
FCA0231	HL7 Lab Results Interface (ORU)
FCA0232	HL7 Orders Interface (ORM)
FCA0233	HL7 EMR Outbound Interface
FCA0234	HL7 Special-System Interface

Ordering information

IBE Advanced Tier

Catalog Number **779073**

Option	Description
Essential tier connections	
FCA0175	MDIP
FCA0176	Clinical Insights Manager
FCA0177	SC50 Gateway Entitlement
FCA0178	IS Perinatal Entitlement
FCA0179	ICCA Comprehensive Entitlement
FCA0180	Guardian Comprehensive Etmt
FCA0181	Event Management Entitlement
FCA0182	Expression IP5/IP7 Entitlement
FCA0183	ECG Devices Entitlement
FCA0184	ECG Mgmt Entitlement
FCA0185	General Care Vitals Entitlement
FCA0186	Philips Hemo Entitlement
FCA0188	Surveillance Entitlement

Option	Description
Standard tier exclusives	
FCA0236	Cardiology Suite
FCA0237	eCareManager
FCA0238	PIC iX Comprehensive Etmt
Advanced tier exclusives	
FCA0240	3rd-Party Products Group
FCA0241	IBE Training
FCA0242	High Availability
Interface integration group	
FCA0230	HL7 ADT Interface
FCA0231	HL7 Lab Results Interface (ORU)
FCA0232	HL7 Orders Interface (ORM)
FCA0233	HL7 EMR Outbound Interface
FCA0234	HL7 Special-System Interface

IBE Cloud Tier

Catalog Number **779075**

Option	Description
IBE cloud connections	
FCA0244	HSPMP Cloud Connectivity
FCA0245	ISPM Cloud Connectivity
FCA0246	DP Cloud Connectivity
FCA0247	BioTel Cloud Connectivity
FCA0248	Cardiologs Cloud Connectivity
FCA0249	Cardiology Suite Cloud
FCA0250	Virtual Acute Care
FCA0251	ECG Mgmt Cloud Connect
FCA0252	Other Cloud Connected Product
989907000354	IBE Cloud Subscription

Ordering information

IBE On-premise Add-on

Catalog Number **779080**

Option	Description
Type of expansion	
NCAA600	Expand within Essential
NCAA601	Expand within Standard
NCAA602	Upgrade-Essential to Standard
NCAA603	Upgrade-Standard to Advanced
On-premise add-ons	
FCA0192	MDIP AO
FCA0193	Clinical Insights Manager AO
FCA0194	SC50 Gateway Entitlement AO
FCA0195	IS Perinatal Entitlement AO
FCA0196	ICCA Comprehensive Etmt AO
FCA0197	Guardian Comprehensive Etmt AO
FCA0198	Event Management Etmt AO
FCA0199	Expression IP5 or IP7 Etmt AO
FCA0200	ECG Devices Entitlement AO
FCA0201	ECG Mgmt Entitlement AO
FCA0202	General Care Vitals Entitlement AO
FCA0203	Philips Hemo Entitlement AO
FCA0205	Surveillance Entitlement AO
FCA0206	Cardiology Suite AO
FCA0207	eCareManager AO
FCA0208	PIC iX Comprehensive Etmt AO
FCA0209	3rd-Party Products Group AO
FCA0211	High Availability AO
Tier additional	
FCA0213	IBE Training AO
FCA0215	Additional Server Instance

IBE Cloud Add-on

Catalog Number **779081**

Option	Description
Type of expansion	
FCA0217	HSPMP Cloud Connectivity AO
FCA0218	ISPM Cloud Connectivity AO
FCA0219	DP Cloud Connectivity AO
FCA0220	BioTel Cloud Connectivity AO
FCA0221	Cardiologs Connectivity AO
FCA0222	Cardiology Suite Cloud AO
FCA0223	ECG Mgmt Cloud Connect
FCA0224	Other Cloud Connected AO
FCA0225	Authentication AO
FCA0226	FHIR Façade AO
FCA0227	Additional CMVPN AO
FCA0228	High-Volume Message Pack AO

IBE Perpetual

Catalog Number **773024**

Option	Description
Type of expansion	
FFS0501	IBE Interop Adv CONN LITE
FFS0503	IBE Interop Adv CONN Inter
FFS0505	IBE Interop Adv CONN Premium

