PHILIPS

IntelliBridge
System

Making **clever connections**

When comprehensive information is your target, interoperability is your tactic

Vendor-neutral interoperability between your hospital information systems and patient care devices can both enhance the efficiency of your clinical workflow, and let you leverage patient data to inform clinical decisions. Whether the sources are ventilators, infusion pumps, anesthesia machines, or other equipment – from Philips or other manufacturers – IntelliBridge System can provide the hardware and software to make connections possible. It captures data from a broad range of devices, and translates it to HL7 format for upload to an electronic medical record.

This reduces the need for manual data entry, and may enhance the accuracy of medical records. The result can also go beyond just documentation. IntelliBridge System also supports gathering alarm and alert information from the patient care devices connected to it, and transferring it to the Patient Information Center iX (PIC iX). Through the PIC iX and the mobility solutions that integrate with it, such as CareEvent, this information can then be further distributed. This helps caregivers make informed decisions, even when they are not at the bedside, and is what makes IntelliBridge System a leading interoperability solutions for medical devices.

Key benefits

- IHE-compliant, vendor-neutral interoperability between your hospital information systems and various patient care devices

- Conversion of parameter units for consistent documentation across devices

- Automatic association of patients with devices (using the PIC iX ADT interface)

- Inclusion of alarm information into PIC iX and Philips mobility solutions

Components

IntelliBridge System consists of hardware, and of software components.

Patient care devices
- Standalone patient monitoring
- Respiratory care
- Anesthesia delivery
- Hemodialysis
- Infusion
- Infant thermal care
- ECLS/ECMO
- …

For patient care devices without a direct connection to the hospital LAN, the **IntelliBridge EC5 Device ID Module** connects to the serial port (RS-232). The module provides unique identification information to make the device "plug and play".

CAT5 cable
(RJ-45 connectors)

The **IntelliBridge EC40** (4 data ports) or **EC80 Hub** (8 data ports) detects the device, and selects the right interface to capture its Medical Data Interface Language (MDIL) data. The hub then passes the data on to the IntelliBridge Device Interfacing Engine.

10/100/1000 Mbps Ethernet connection to the hospital LAN

- The **IntelliBridge Device Interfacing Engine** runs on a Philips-supplied host computer, a virtual server, or the PIC iX. The device interfacing engine collects data from patient care devices either connected through IntelliBridge hubs or directly to it over the LAN. It both maintains a database of the data it aggregates and translates the data into HL7 format, which it sends to hospital information systems.

- The **IntelliBridge Management Console** is a web application that runs with the device interfacing engine, to give support personnel a way of configuring and troubleshooting the IntelliBridge System from a browser.
  - View status of the hubs and connected patient care devices.
  - Install patient care device interfaces and firmware on the hubs.
  - Define parameter unit conversions.

Network Recommendations
We recommend running IntelliBridge System on a dedicated VLAN, to avoid conflicts with other devices. Multiple IntelliBridge Systems can run on the same VLAN, if necessary.

Features and benefits

Connectivity for a broad selection of patient care devices

IntelliBridge System provides device interfaces for many popular patient care devices (for a full, current list refer to the IntelliBridge Device Interface Library). We collaborate with leading medical device manufacturers to continually develop interfaces as new devices are introduced, as well as to keep existing interfaces up-to-date. And many medical device manufacturers – including companies with devices for niche applications – develop their own interfaces, using our IntelliBridge Open Interface protocol.

Compliance to IHE HL7

The Integrating the Healthcare Enterprise (IHE) initiative aims to establish standards for healthcare interoperability. Because Philips is an active member and key contributor to the initiative, IntelliBridge System uses an HL7 format that complies with several IHE profiles, making integration and maintenance easy. These profiles include
- In the IHE Patient Care Device (PCD) domain
  o Alert Communication Management (ACM) profile
  o Device Enterprise Communication (DEC) profile
- In the IHE IT Infrastructure Technical Framework
  o Patient Administration Management (PAM) profile.

Converting parameter units

Different healthcare organizations use different units for patient parameter data. For example, one site may document volumes in liters while another prefers milliliters. IntelliBridge System lets users specify which units to use for which parameters, and converts these for the HL7 output. IntelliBridge System applies the conversion globally for each specified parameter. This means that even if several patient care devices use different units for the same parameter, the HL7 data sent to the electronic medical record is consistent.

If you are using a Patient Information Center iX (PIC iX)

- To help you achieve more comprehensive and accurate patient records, IntelliBridge System can use the PIC iX ADT interface. This lets it automatically associate patient demographic information with the data from the patient care device.
- To help caregivers make informed decisions, IntelliBridge System can distribute alarm or alert notifications and integrate with the PIC iX alarm management tools. This makes it possible for IntelliBridge System to distribute alarms from patient care devices to mobility solutions, such as CareEvent.

Specifications	IntelliBridge EC5	IntelliBridge E40/EC80
Physical		
Dimensions (H × W × D)	17 × 35 × 57 mm (0.67 × 1.38 × 2.24 in)	With mounting bracket: 200 × 200 × 75 mm (7.87 × 7.87 × 2.95 in) Without mounting bracket: 200 × 200 × 87 mm (7.87 × 7.87 × 3.43 in)
Weight	35 g (1.23 oz)	1.4 kg (3.09 lb)
Electrical		
Input power	N/A	100 to 240 VAC (auto sensing), 1A, 50 to 60 Hz
Environmental		
Operating temperature	–5 to 50°C (23 to 122°F)	0 to 55°C (32 to 131°F)
Operating humidity	15 to 95% RH at 45°C (113°F)	Up to 95% RH at 40°C (104°F)
Operating altitude	–457 to 4,572 m (–1500 to 15,000 ft)	Up to 3,048 m (10,000 ft)
Storage temperature	–40 to 70°C (–40 to 158°F)	–40 to 60°C (–40 to 140°F)
Storage humidity	Up to 90% RH at 65°C (149°F)	Up to 90% RH at 60°C (140°F)
Storage altitude	–457 to 15,240 m (–1500 to 50,000 ft)	Up to 3,048 m (10,000 ft)
Compliance		
Safety	· EN 60601–1:1990+A1:1993+A2:1995 · IEC 60601–1:1988+A1:1991+A2:1995 · EN 60601–1–1:2001/IEC 60601–1–1:2000 · UL 60601–1:2003 · CAN/CSA C22.2#601.1–M90:1990 · AS/NZS 3200.1.0–1998 · EN/IEC 60601–2–49:2001	· IEC 601–1 + Am. 1 + Am.2 + Corr. · EN60601–1: 1991/A2:1995 · IEC 60601–1–4: 1996/A1:1999 · EN60601–1–4: 1996/A1:1999 · For Canada: CSA C22.2 No. 601.1– M90 (2005) · For U.S.: UL 60601–1, First Edition · CE marking to Council Directive 93/42/EEC · CSA marking to applicable Canadian and U.S. standards
Electromagnetic compatibility	EN/IEC 60601–1–2:2001	EN/IEC 60601–1–2:2001

About the Philips IntelliBridge solution

Philips has a proven track record of providing patient device connectivity for a broad selection of Philips and third-party patient care devices since we introduced the VueLink Interface Module in 1992. The IntelliBridge family of connectivity solutions – IntelliBridge Bedside, IntelliBridge System, and IntelliBridge Enterprise - continues this commitment to addressing the need for automated data capture and documentation, and end-to-end alarm management and alert notification.

www.philips.com

4522 991 23691 * DEC 2016