



Over 5 Hours Battery Operation, Smart Power Management

Built-in 300m Wireless

Fastest and Most Reliable Data Transmission

Durable, All Weather Design



SMART ICU (Imager Control Unit)

As the heart of all of Vidisco's cutting-edge Digital Radiography X series systems, the smart ICU serves as real-time interface between the Imager and the laptop. This compact, lightweight device offers a wide range of sophisticated features unavailable in comparable products including an embedded computer; smart power system supporting various digital flat panels and system accessories; a large capacity battery with a smart charger; advanced communication interface enabling communication with the detectors, the X-ray sources and the laptop; built-in, wireless WiFi X providing 300m line of sight communication with the laptop; and built-in WXR facilitating coded and safe wireless communication with the X-ray source.

Vidisco's smart ICU enables synchronization of X-ray sources - this refers not only to the smart ICU's ability to operate various X-ray sources (e.g, Golden Pulsed X-ray sources or industrial Constant Potential sources), but also to the significant reduction of the dose use, thereby improving safety and performances without compromising image quality. The smart ICU's uniqueness lies in its ability not only to synchronize and control the panel and X-ray, but also to maintain in its own built-in memory the image produced by the panel. This enables the user to receive a perfect, complete image under any conditions. In other systems, if the wireless communication is disrupted by interference, part of the image may be lost, requiring an X-ray reshoot in the hope that the interference will not recur. Vidisco's smart ICU ensures that any "lost packet" can be re-sent independently from the ICU to the computer, thus automatically achieving fast and complete image transfer without any need to reshoot.

Smart ICU Power Management

With the aim of enhancing system flexibility, the ICU switches automatically from external power (such as a DC/AC vehicle inverter) to internal battery use. When connected to an external power, the system automatically charges the battery parallel to system operation. Operator safety is ensured by providing power “down the line” – no second downrange approach is required to change dead batteries during inspection.

The smart ICU also has the ability to power the system panel, as well as internal/external components and accessories including:

- Various types of a-Si panels (**FlashX**, **BlazeX**, **RayzorX** and **BoltX**)
- Two types of built-in wireless (WXR or WiFi X)
- External accessories such as XR-DE *Plus* and Sliders



Multiple Mode Operation

The Smart ICU enables the system to operate in three different modes:

- **Fully wired** – The X-ray source and system are both connected by cable
- **Semi-wireless** – Using one of the two wireless options (WXR or WiFi X)
- **Full wireless** – X-ray source and laptop are connected wirelessly

The Smart ICU can operate a series of X-ray sources including Pulsed X-ray sources (Golden XR-150, XR-200, XRS-3, XRS-4) and synchronize industrial Constant Potential sources including Balteau Spot and Balteau Graph series, Yxlon's Smart (MGC4X, Y.xpo), GE (Seifert) - Eresco control panels, Medex - GemX sources as well as Hamamatsu Microfocus L8121-03, and other sources which work on the same communication protocol. For some industrial Constant Potential sources, the smart ICU can also control and adjust energy levels (kV and mA) using the source communication channel (RS-232), through the Vidisco software.

Smart ICU Advantages

- **Easily portable** - An adjustable shoulder strap and handle enable the operator to easily carry the smart ICU to field inspections
- **Durability** – Featuring all weather design, the smart ICU is both durable and reliable
- **Built-in wireless** - 300m to laptop and X-ray source
- **X-ray synchronization** – The ICU controls and synchronizes the X-ray, controlling the stop and start of X-ray radiation as well as kV, mA when available
- **Plug & Play** – The single 50m cable is interchangeable with the CCDs, allowing the user to have 6 interchangeable digital detectors! (three CCD and four a-Si flat panels)
- **Tripod mountable** – The ability to position the smart ICU on a tripod ensures extra flexibility in the field
- **Modular structure** – The smart ICU's modular structure enables compatibility with future developments