

Empower Enterprise LAC/E Solutions

Reliable, robust connectivity for your instruments

It is critical to have a network device that can ruggedly and robustly connect remote instrumentation and provide flexibility to support the various instruments used in your lab. Waters™ offers multiple LAC/E™ (Laboratory Acquisition Control Environment) options based on the needs of your organization. Using the most up-to-date technology to ensure stable and reliable connectivity to your Empower™ Chromatography Data System (CDS), Waters provides both Enterprise LAC/E and BC (Business Continuity) LAC/E solutions to maximize your uptime and give you 24/7/365 reliability.

ENTERPRISE LAC/E SOLUTION

Designed to perform instrument control, data acquisition, remote processing, and manage short-term network interruptions, the Empower Enterprise LAC/E solution provides enhanced raw data security and robust remote access to instrument systems. In the event of a short-term network disruption, your Empower LAC/E continues acquisition and protects your data using buffering. During buffering, raw data is written to and stored on the hard drive of the LAC/E and, when communication is re-established, all data is automatically uploaded to the server with full traceability. Your data is always protected – no data is ever lost.

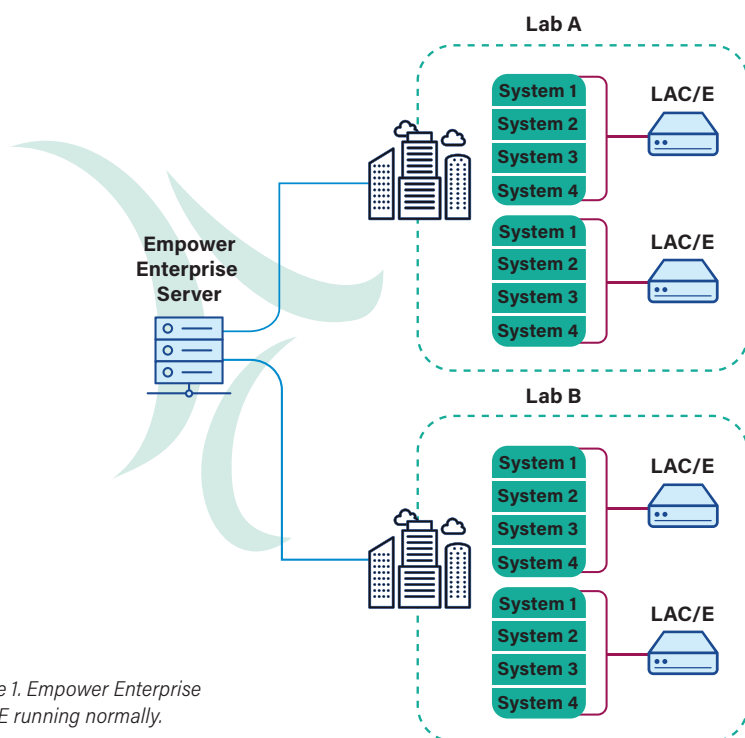


Figure 1. Empower Enterprise LAC/E running normally.

BENEFITS OF WATERS EMPOWER LAC/E

- Data protection
- Traceability
- Reliability
- Robustness



BUSINESS CONTINUITY LAC/E SOLUTION

In the event of a natural disaster or virus attack, if your Empower Enterprise is unavailable for an extended period of time, the BC LAC/E with SecureSync™ plays an integral role by quickly restoring your critical laboratory operations. The Empower BC LAC/E provides the same functionality as the Empower Enterprise LAC/E with the added capability of offering continuity of operations during a long-term network outage. Using this single, multi-purpose device allows you to securely control the transition from Enterprise LAC/E mode to BC LAC/E mode with full traceability.

In addition, with the added capability of SecureSync, you can proactively prepare for long-term disruptions in the event of a disaster. SecureSync automatically synchronizes all the Empower information needed to analyze your samples to the BC LAC/E and ensures you are using your same validated methods, calculations, and Empower controls. This combined solution enables you to switch over quickly and operate independently with full traceability for as long as the disruption lasts.

HARDWARE OPTIONS

Using hardware carefully evaluated and selected to meet the quality standards you need, the Empower LAC/E gives you the advantage of having an identical and globally consistent platform across your organization. With the flexibility to deploy various best-in-class Waters systems and third-party instruments, you can simultaneously collect data from up to four systems.

In order to maximize your laboratory's productivity, the Empower LAC/E comes equipped with a validated, custom-built Microsoft Windows 10* Enterprise LTSB (Long Term Service Branch) Build 1607 version that is designed and configured for Empower.

To provide stability, only minimal quality updates are needed to ensure the device security stays up to date. Rigorously tested to ensure compatibility with every version of your Empower CDS, two hardware options are provided based on your systems and footprint. The two hardware options include the Classic LAC/E for legacy IEEE connectivity and the smaller footprint eLACE.

**Waters also offers a fully customized downgrade kit for Windows 7.*

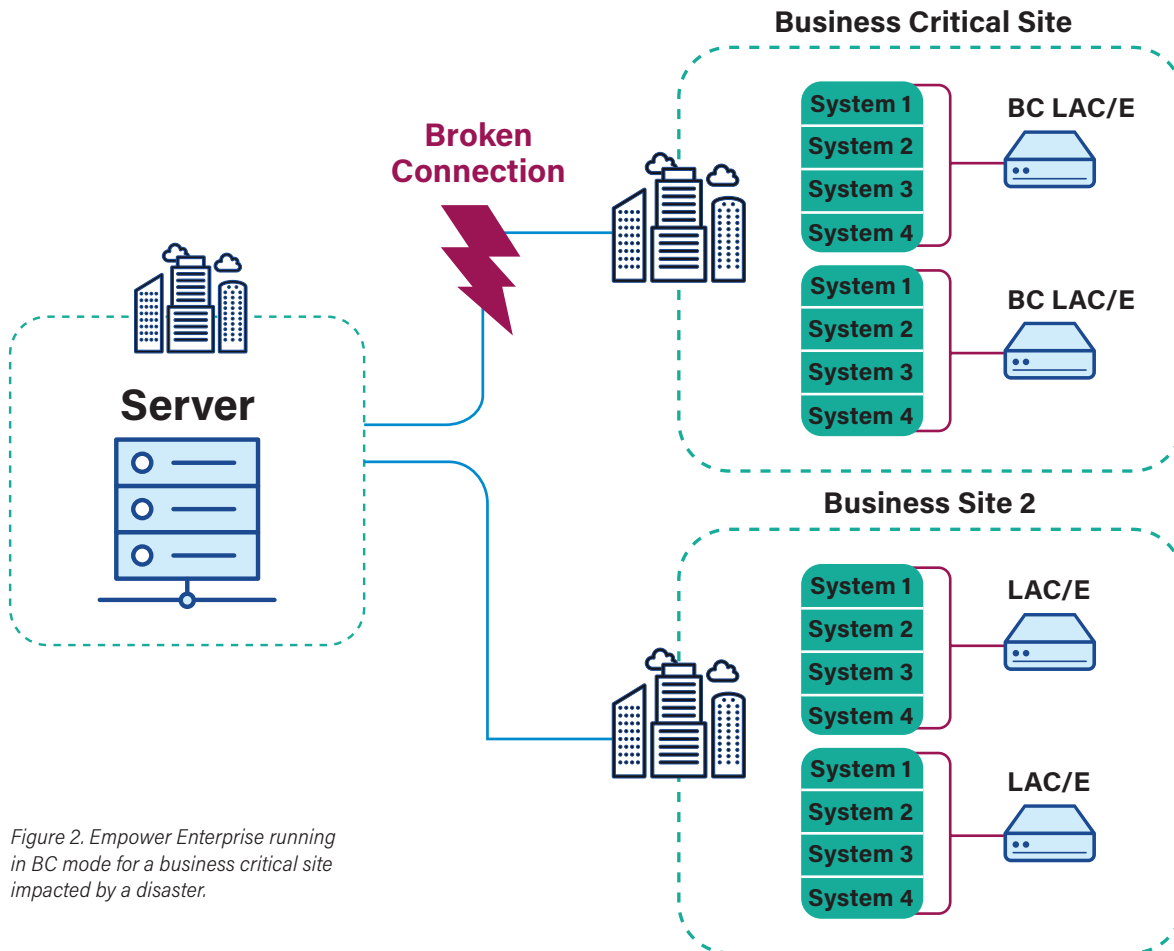


Figure 2. Empower Enterprise running in BC mode for a business critical site impacted by a disaster.



BOTH HARDWARE OPTIONS INCLUDE:

- **Warranty:** Four-year hardware repair/replacement warranty
- **Lower service costs:** Designed with 24/7/365 reliability in mind – with no moving parts
- **Rugged and durable:** Runs at a minimum operating temperature range of 0–50 °C and designed to MIL-STD-810G
- **Operating system:** Pre-installed with Microsoft Windows 10 Enterprise LTSB
- **Multi-core processors:** Increase performance without sacrificing energy

eLAC/E

- Smaller footprint
- Network switch included
- Embedded I/O: Supports both Ethernet and Serial Instrument Control
- Processor: Intel CPU Atom E3845 1.91 GHz, 2 M cache
- Memory: 8 GB (1 x 8 G) 1600 MHz DDR3L
- Hard drive: 512 GB APACER SSD
- Size: Height: 6.5" (161 mm) x Width: 9.5" (240 mm) x Depth: 2.5" (60 mm)
- Target weight: 6.2 lbs. (2.8 kg)
- Environmental: IP30 Rating
- USB ports: 2 USB 2.0 and 1 USB 3.0

CLASSIC LAC/E

- Embedded I/O: Supports Ethernet, Serial Instrument Control, and busLAC/E
- Processor: Intel® Core i3-6100E 2.7 GHz processor
- Memory: 8 GB (2 x 4 G) 2133 MHz DDR4
- Hard drive: 512 GB APACER SSD
- Size: Height: 10.5" (270 mm) x Width: 9.8" (249 mm) x Depth: 4.2" (107 mm)

- Target weight: 12.8 lb (5.8 kg)
- Environmental: IP30 Rating
- USB ports: 4 USB 2.0 and 4 USB 3.0
- Form factor: Fanless design, optimized minimal bench space mounting
- I/O expansion slots:
 - Network: 2 Dual Independent Gigabit Ethernet (RJ-45) and 4 ports for Instrument LAN
 - Serial interfaces: 4 x RS-232/422/485 (set by BIOS)
 - PCI slots: 2 (one utilized by Instrument LAN interface)
- Power: Nominal input 24V DC (12–26V)

ADDITIONAL OPTIONS

- Dual LAC/E – Includes two Empower Enterprise system control licenses with your choice of LAC/E hardware
- Quad LAC/E – Includes four Empower Enterprise system control licenses with your choice of LAC/E hardware

Further Reading

1. Lander, Neil. Protecting Acquisition of Chromatographic Data with Data Buffering. Waters White Paper, 2020, [720006594EN](#).
2. Brennick, Z.; Takalo, L.; Wakeham, C.; Mugavero, L.; Hibbs, T.; Lander, N. The Importance of Business Continuity in Today's Laboratory. Waters White Paper, 2020, [720006933EN](#).
3. Empower LAC/E. Waters Infographic, 2020, [720006905EN](#).
4. Empower BC LAC/E with SecureSync. Waters Infographic, 2020, [720006937EN](#).

Waters

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