Create optimal remote IO expansion
XIO - connectivity made easy
A new extension to the RMC and XSeries family
Enhanced, scalable connectivity for old and new sites

With the growth of data available through flow computers (XFCs), remote terminal units (RTUs), and remote modular controllers (RMCs), well sites have become increasingly complex. The need for accurate, up-to-the minute (digital) control, expansion options, and flexibility have become critical issues. ABB’s XIO is the solution in addressing these concerns, allowing customers to manage their operations more safely, effectively, and profitably than ever before.

ABB’s new XIO is a path forward to the future. It sets a new standard for control, automation, and measurement solutions, dedicated to upstream oil and gas applications. The new XIO provides remote expansion for both brown field and green field flow computers and RTUs.

With features such as multiple serial ports, hot-swappable IO modules, and auto-detection multidrop connectivity, the XIO-08 will seamlessly integrate with the RMC-100 and X-Series controllers. Minimal commissioning time and low installation costs are two of the main benefits of this new solution.

The new and powerful XIO is connectivity made easy.
The most flexible and most convenient connectivity for brown and green fields.
Keeping connectivity simple
Ensuring you get the optimal solution for wellsite expansion

To take complexity out of expansion of brown field and provide more flexibility for new installations, we’ve created an extension of the RMC and XSeries. The XIO is a remote module that allows multiple, scalable options to meet site needs.

The XIO can connect to the RMC, adding IO points and serial devices and extending site automation. The modular design, including DIN rail mounting, makes the XIO compatible with any standard packaging options.

New software features in the RMC and XIO provides auto discovery of the XIO connected in the network, learning its configuration and allowing one-step functionality when integrating the solution. The XIO will not only update the RMC with the new configuration automatically, but also process data every second.

Communication with serial devices has never been easier. The XIO provides two methods for delivering serial data to the RMC: by using the XIO interface application or by using the Ethernet to Serial function. This setting allows the RMC to directly access the information provided from the Serial port.

Another new feature is the support for hot-pluggable and hot-swappable TFIO modules. Users can now replace, remove, and add TFIO modules to the XIO and RMC dynamically. The new networking features allow the XIO to support up to four independent networks and the ability to use its Wi-Fi as an independent network or to bridge with one of the Ethernet ports.

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1 Depending on site safety and company policy
2 XIO supports Wi-Fi access point or client modes for configuration only
ABB’s smart, expandable, remote IO module, XIO-08, sets a new standard for control, automation, and measurement solutions, dedicated to upstream Oil & Gas applications. This new, game-changer solution provides distributed expansion for both brown-field and green-field flow computers and RTUs.
Making RMC automation and measurement even easier with the XIO
New and existing well-site automation through new remote IO expansion module

With the increasing need to expand the RMC-100 and X-Series on well sites, ABB has created a comprehensive solution for a low-cost installation of additional serial ports, independent Ethernet ports, and local wireless connectivity.

The XIO is a smart, remote, local connectivity module that not only provides additional serial ports, Ethernet ports, and additional IOs, but also allows for multiple, smart expansion module combinations to be connected in the same loop, automatically recognized by the main controller.
XIO
Connectivity made easy

Supported Applications
XIO serves as an extension to the RMC for IO and communications. The following Totalflow applications have been enhanced to support the XIO:

- IO interface
- Operations
- Holding registers
- Trend system
- Generic communication app
- XMV interface
- Wireless remote IO (WellTell)
- Therms master application
- Level master
- Coriolis interface
- Liquid Coriolis interface
- Ethernet-serial pass-through

Auto-discovery
The RMC now supports auto-discovery capabilities to detect XIO devices added to their network

Port-based VLAN
Each Ethernet port can be assigned to individual networks to allow fine-tuning of network traffic

Wi-Fi/Bluetooth
Wireless connectivity for local access configuration and calibration.

Serial expansion
With up to 8 serial communication ports and multiple protocol support, XIO can talk to a variety of serial devices. The addition of the Ethernet-serial passthrough application allows a host controller to extend its reach over Ethernet to the device attached to the XIO’s communication port.

IO expansion – TFIO modules
XIO provides added hardware functionality by allowing the addition of IO modules (TFIO) modular I/O as needed. The TFIO interface supports up to 22 TFIO modules allowing additional connectivity across the entire well site.

IO expansion – Hot-pluggable / Hot-swappable
XIO introduces a new feature for enhanced TFIO support. It checks for removed, added, and replaced TFIO modules. Through PCCU, the user can manage and respond to TFIO module changes without the need to restart the device or application. This feature is also available in the RMC.
Enjoy smarter wellsite expansion

The remote I/O expansion module that saves you time, keeps you safe, and optimizes production.

The XIO provides the flexibility to expand not just IO, but also field connectivity, and interoperability in the same device. With the unique ability to easily integrate with ABB controllers without limiting the customer, the XIO can also communicate with third party devices.

The new XIO is a solution that can also easily incorporate existing devices via Modbus instead of devices lets user RTU or controllers via standard protocol. The base unit of the XIO can be simply programmed at any time to add more IO options, creating optimal flexibility and expandability.