ABB MEASUREMENT & ANALYTICS

Create optimal remote I/O expansion

XIO - connectivity made easy

A new extension to the RMC and XSeries family

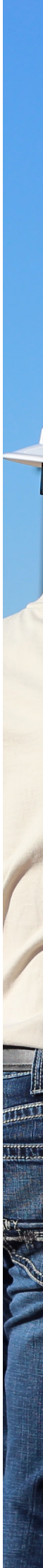
Enhanced, scalable connectivity for existing and new sites

With the growth of data available through flow computers, remote terminal units, and remote modular controllers, 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 I/O 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 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.

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

One-step, automatic integration
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.

Direct and easy access to information
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.

Innovative networking features
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 [1]. The new networking features allow the XIO to support up to four independent networks and the ability to use its Wi-Fi [2] as an independent network or to bridge with one of the Ethernet ports.

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 I/O 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 brownfield and greenfield flow computers and RTUs.

Making RMC automation and measurement even easier with the XIO

New and existing well-site automation through new remote I/O expansion module

—
01 Well site automation with the XIO

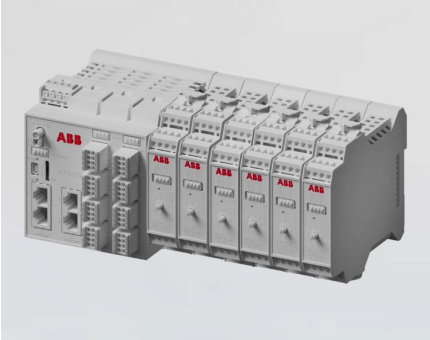
With the increasing need to expand the RMC-100 and X-Series on well sites, ABB has created a comprehensive solution for a low-cost installation of additional serial ports, independent Ethernet ports, and local wireless connectivity.

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

—
01

XIO
Connectivity made easy

Application made easy



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

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

Networking made easy

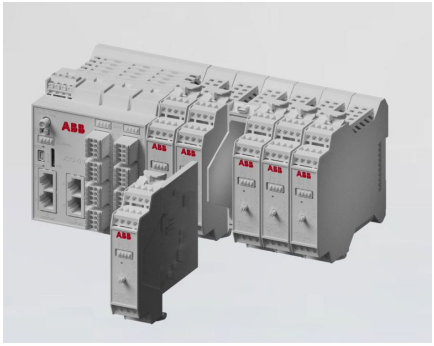
Auto-discovery
The RMC now supports auto-discovery capabilities to detect XIO devices added to their network

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.

Expansion made easy



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

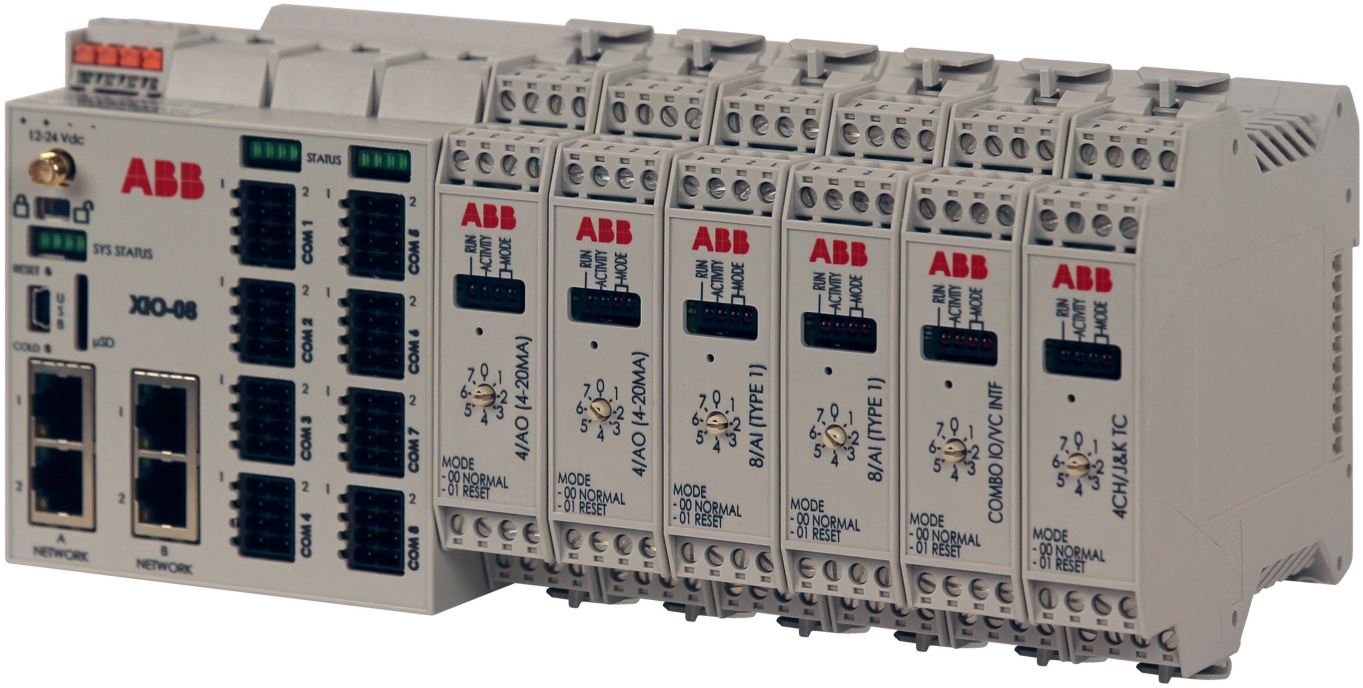
I/O expansion – Hot-pluggable / Hot-swappable
XIO introduces a new feature for enhanced TFIO support. It checks for removed, added, and replaced TFIO modules. Through PCCU, the user can manage and respond to TFIO module changes without the need to restart the device or application. This feature is also 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 I/O, 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. The base unit of the XIO can be simply programmed at any time to add more I/O options, creating optimal flexibility and expandability.



—

ABB Measurement & Analytics

For your local ABB contact, visit:
www.abb.com/contacts

For more product information, visit:
www.abb.com/measurement

—
© ABB 2020

PB_2102776-EN / XIO BROCHURE-EN Rev. B 07.2020