Network connectivity of products provides simplified interface for control and management of drives; improving quality, productivity, flexibility and scalability. Communication networks also offer a cost reduction in wiring costs, compared to traditional I/O connections. Combining these feature-rich adapter modules with ABB’s drives offers a powerful drive solution to OEM’s and system integrators.

Advantages of network connectivity
- Decreases mechanical and electrical installation time
- Reduces downtime
- More data is available at a lower cost
- Reduces time and cost of machine expansion or relocation
- Remote data access
- Diagnostics provide predictive failure warnings
- Open protocols, connectivity to any major PLC
- PC tool communication via installed PLC networks

Advantages of ABB network connectivity
- Connectivity to virtually any automation architecture
- Fast and simple connectivity
- Products designed and tested to conform to protocol specifications
- Best in class support resources
- Ethernet/IP™ with ring topology DLR (Device Level Ring)
- Profinet IO with ring topology MRP (Media Redundancy Protocol)
- PROFINET S2 system redundancy

End user benefits
- Decrease in mechanical and electrical installation cost
- Decrease in down time
- Increase in productivity
- Diminished start-up cost
- Lower maintenance and diagnostic cost
- Quick access to network drives with PC based start-up and maintenance software tools

ABB drives ensure connectivity to automation systems thanks to embedded Protocols and a wide range of F-series fieldbus interface modules, giving you a simplified interface to control and manage all ABB drives in low to medium voltage ranges.
PROFINET® IO is an open standard for Industrial Ethernet and it is used from process automation to motion control, as well as for functional-safety solutions. The interface module supports PROFIdrive and ABB drive profiles and it is equipped with 2 RJ45 connections with an integrated switch that certified according to Conformance Class B (CC-B). It supports ring topology with Media Redundancy Protocol (MRP) and S2 system redundancy; PROFIsafe together with FSO-12/-21 for ACS880. FSPS-21 supports PROFIsafe over PROFINET for ACS380, ACS580 and ACS880.

Ethernet/IP™ is an industrial network protocol that adapts the Common Industrial Protocol (CIP) to standard Ethernet. It is one of the leading industrial protocols and it is widely used in a range of industries. The interface module acts as an EtherNet/IP™ server with support for ODVA AC/DC drive and ABB drive profiles. It supports both explicit messaging where each attribute of a class is set individually, and implicit messaging using input and output instances. It is equipped with 2 RJ45 connections with an integrated switch and support device-level ring (DLR). Add-On Instructions are available.

This is a Modbus® variant used for communications over TCP/IP networks. The interface module acts as a Modbus® TCP server with support for ABB drive profiles. Common read/write single- and multiple register function codes are supported. It is equipped with 2 RJ45 connections with an integrated switch.

EtherCAT® is a real-time Ethernet master/slave fieldbus system. The EtherCAT slave devices read the data addressed to them while the telegram passes through the device enabling fast real-time communication and the telegrams are only delayed by a few nanoseconds. Interface module supports CiA 402 and ABB drives profiles.

Ethernet POWERLINK is a real-time protocol for standard Ethernet and the protocol guarantees transfer of time-critical data in very short cycles with configurable response time. Interface module supports CiA 402 and ABB drives profiles.

PROFIBUS® DP is the most widely used industrial network, ABB drives support PROFIBUS DP-V0 and DP-V1. Interface module supports PROFIdrive and ABB drives profiles.

CANopen® is a popular industrial communication network originally designed for motion-oriented machine control networks, such as handling systems. Interface module supports both cyclic and acyclic event driven communication. This makes it possible to reduce the bus load to a minimum and maintain short reaction times. It supports CiA 402 and ABB drive profiles.

DeviceNet™ offers robust, efficient data handling since it is based on a Produce/Consume model. Interface module uses CAN (Controller Area Network) as the backbone technology and defines an application layer to cover a range of device profiles. It supports ODVA AC/DC drive and ABB drives profiles.

Learn more from the fieldbus connectivity website: new.abb.com/drives/connectivity/fieldbus-connectivity