
Arctic family of wireless communication products

Secure wireless connectivity



Bringing your remote assets within reach

The Arctic family offers secure and cost-effective wireless connectivity for all industrial and utility applications, ranging from enabling the industrial Internet of Things to remote real-time grid automation. As the backbone for communication, the Arctic family utilizes wireless cellular networks, making it possible to combine the products into secure and cost-effective wireless communication systems with global coverage. The Arctic products allow accessing and managing any remote asset from a central location. The result is a smarter distribution network and a more interconnected world.

Product family highlights

- Enables industrial Internet of Things (IoT)
- Allows wireless connection to any remote asset within any application
- Utilizes secure and cost-effective wireless cellular networks with global coverage
- Involves no network investment or maintenance costs other than for data transfer
- Allows wireless access to geographically remote areas inaccessible before
- Ensures optimal cyber security throughout the entire wireless communication system



Products in the family

Wireless gateway ARG600



The wireless protocol gateway ARG600 provides monitoring and control of field devices over a wireless cellular network from a central location. The gateway offers industrial quality connectivity for IEC 60870 and Modbus-based protocols, in addition to TCP/IP-based protocols.

Wireless I/O gateway ARR600



The wireless I/O gateway ARR600 provides monitoring and control of field devices over a wireless cellular network from a central location. The gateway offers industrial quality connectivity for IEC 60870 and Modbus-based protocols, in addition to TCP/IP-based protocols. ARR600's built-in digital and analog I/Os can be used for connecting field devices to a monitoring and control system, such as SCADA (Supervisory Control and Data Acquisition).

Wireless controller ARC600



The wireless controller ARC600 is a compact, all-in-one device for remote monitoring and control of secondary substations, network disconnectors, load-break switches and ring main units (RMU) in distribution networks. The controller allows the monitoring and control system, such as SCADA, to wirelessly monitor and control field devices over the wireless cellular network.

M2M gateway ARM600

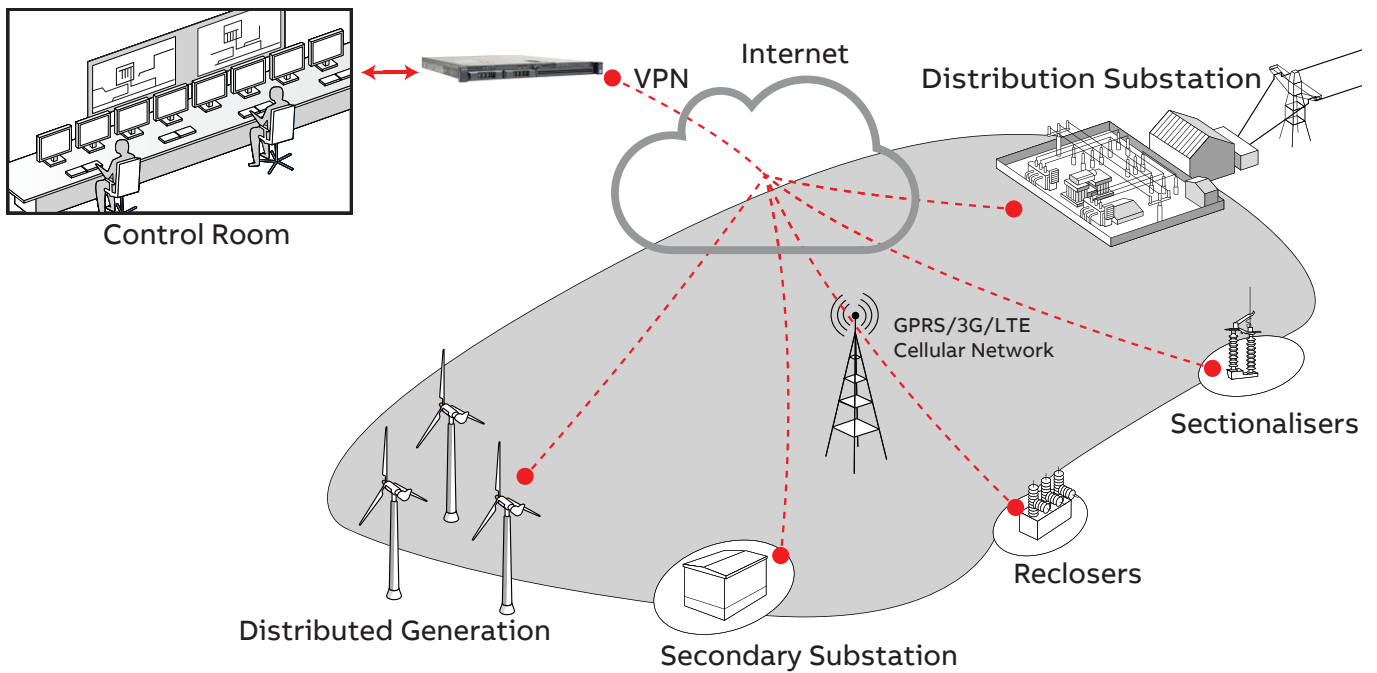


The M2M gateway ARM600 is a communication server, VPN concentrator and firewall. The M2M gateway manages all connections to remote Arctic gateways and controllers. The M2M gateway is the interface between the central monitoring and control system and remote Arctic gateways and controllers. The M2M includes a device management application, called Arctic Patrol, which features advanced condition monitoring and allows remote management of Arctic gateways and controllers.

ARM600 is available as two variants, with the server hardware (ARM600) and as the software version (ARM600SW), which can be run on virtual machine on premise or cloud base solution.

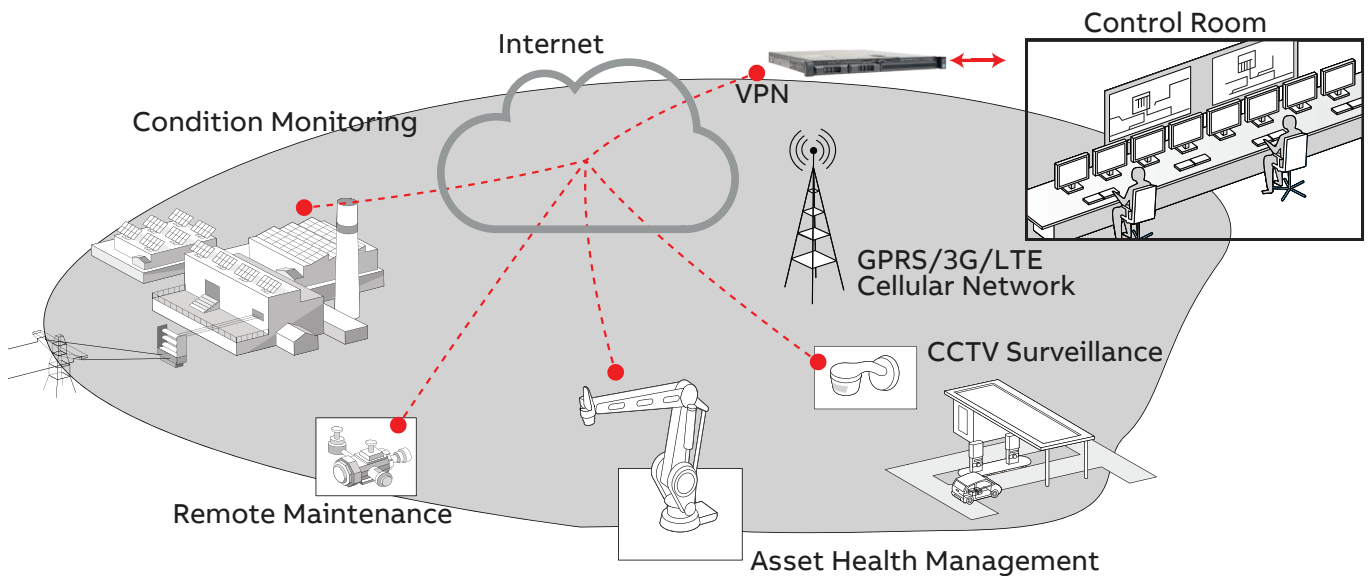
Utility applications

Wireless communication products that utilize public cellular networks offer a secure and cost-effective platform for substation automation. The Arctic family allows easy access to remote assets as well as remote maintenance and condition monitoring. Any remote asset, such as an outdoor breaker or a ring main unit (RMU), can be connected to any central monitoring and control application, such as SCADA. The Arctic products support a variety of standard communication protocols for effortless integration with SCADA. The Arctic products can also be used as wireless backup for any primary communication link.



Industrial applications

The Arctic wireless communication products allow industries to remotely manage their assets. Remote access to field devices and valuable information such as condition monitoring data significantly facilitates preventive maintenance. Asset health information can be gathered from the devices in the field for convenient, centralized asset health management. Other applications include weather monitoring stations, live video streaming, CCTV surveillance (Closed Circuit Television), building automation and smart traffic management systems, to mention a few.



Building the complete wireless communication system

Complete end-to-end communication system

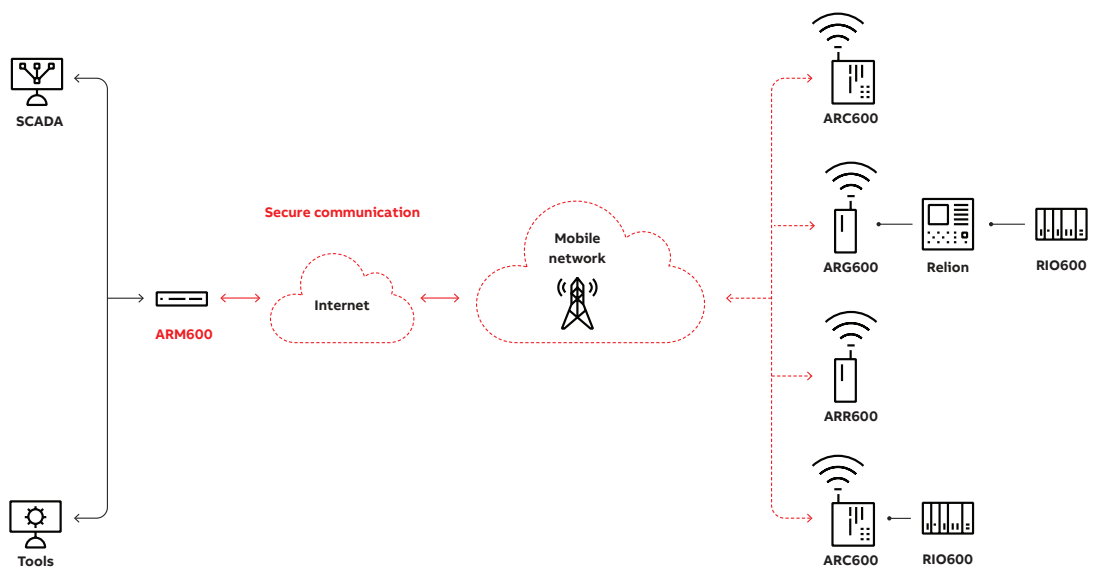
The Arctic family products are typically part of a complete communication system, with Arctic gateways and controllers in remote locations and a centrally located Arctic M2M gateway, connected via existing GPRS, 3G or LTE networks and internet. The M2M gateway is an essential part of the communication solution and has all the features required for building a secure end-to-end communication system. The system features include:

- Arctic Patrol – a unique device management application for supervision of communication links and remote management of Arctic gateways and controllers
- VPN concentrator for secure communication between the central monitoring and control system and remote gateways and controllers
- Firewall for controlling incoming and outgoing network traffic
- Private or public APN (Access Point Name) SIM card support

Optimal level of cyber security

The Arctic wireless communication products can be combined into secure as well as cost-effective wireless communication systems with global coverage. ABB employs strict cyber security measures to safeguard all network traffic between remote assets and the central monitoring and control system. The security features include:

- Virtual Private Network (VPN) connections between the M2M gateway ARM600 and remote Arctic gateways and controllers
- Private IP addressing – no access from external networks
- Firewall in every Arctic device
- SIM card protected by PIN code
- User authentication



Monitoring, control, fault passage indication and protection

Product selection table

	Radio	LAN/WAN	RS232/485	SIM	Inputs/Outputs
ARG600A1260NA	2G, 3G, 4G	1	2	1	-
ARG600A2625NA	2G, 3G, 4G	4	2	2	-
ARG600A1270NA	2G, 3G, 4G*	1	2	1	-
ARG600A1290NA	2G, 3G, 4G**	1	2	1	-
ARR600A3261NA	2G, 3G, 4G	1	2	1	8I/2O
ARR600A3262NA	2G, 3G, 4G	1	2	1	6I/4O/2AI
ARC600A2324NA	2G, 3G, 4G	1	2	1	17I/10O/2AI

* AT&T variant

** South American generic variant



ABB Distribution Solutions

P.O.BOX 699

FI-65101 VAASA, Finland

Phone: +358 10 22 11

Fax: +358 10 22 41094

abb.com/mediumvoltage

abb.com/substationautomation