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 for the U.S., Canada, and Mexico

Wireless Gateway ARG600
Wireless Gateway ARG600 provides wireless monitoring and control of field devices via cellular network from a central site or a control center. The devices offer industrial quality connectivity for the TCP/IP based protocols.

ARG600 provides a fast, reliable and secure wireless link between Ethernet devices, such as a Distribution Automation Controller COM600F and 615 series protection relays.

Features
- ARG600 wireless gateways are industrial-grade wireless routers
- Ideal for connecting TCP/IP based traffic between remote sites and a central control room
- Also supports serial over TCP/IP traffic
- DNP3 serial devices can be connected to a DNP3 TCP/IP SCADA system
- Application independent - any type of remote application can be connected to any type of central application
- Easy configuration via web user interface
- Available in single SIM variants

M2M Gateway ARM600
M2M Gateway ARM600 is a communication server, VPN concentrator and firewall. M2M Gateway manages all connections to remote Arctic gateways and controllers. M2M Gateway is the interface between the central monitoring and control system and remote Arctic Gateways and controllers.

ARM600 includes a device management application, called Arctic Patrol, which features advanced condition monitoring and allows remote management of Arctic gateways and controllers.

ARM600 provides static IP addressing for the central control and monitoring system. This means that the Arctic 600 series wireless in remote locations can utilize normal SIM cards with dynamic IP addresses from any operator.

Features
- VPN concentrator manages VPN tunnels to Arctic 600 series wireless gateways
- Supports OpenVPN, L2TP and SSH
- OpenVPN routing and bridging modes
- Connection to ARM600 with a PC from any location via VPN
- Firewall to restrict unauthorized access
- Provides static IP addressing of Arctic 600 series wireless gateways for SCADA
- Full routing capability allows integrating remote LAN into a central LAN
- Configuration via Web UI and console (SSH and serial) access
- Arctic Patrol offers condition monitoring and centralized device management application that supervises the cellular connections to the connected Arctic 600 series wireless gateways and enables advanced remote management of all connected Arctic gateways
- 19" rack mountable design
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.
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 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
# Product selection table

## Arctic family selection table for US, Canada, and Mexico

<table>
<thead>
<tr>
<th>ARG600 US, MX, &amp; CA operator variant</th>
<th>Cellular operator</th>
<th>FCC ID and IC Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARG600A1270NA</td>
<td>AT&amp;T</td>
<td>FCC ID: N7NMC7355</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IC: 2417C-MC7355</td>
</tr>
<tr>
<td>ARG600A1280NA</td>
<td>Verizon Wireless</td>
<td>FCC ID: N7NMC7355</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IC: 2417C-MC7355</td>
</tr>
<tr>
<td>ARG600A1290NA</td>
<td>Rogers, TELUS, Telcell &amp; AT&amp;T</td>
<td>FCC ID: N7NMC7355</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IC: 2417C-MC7355</td>
</tr>
</tbody>
</table>

## LTE frequency band support

<table>
<thead>
<tr>
<th>Band *</th>
<th>Frequencies*</th>
<th>ARG600 variant code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Band 2</td>
<td>Tx: 1850–1910 MHz, Rx: 1930–1990 MHz</td>
<td>ARG600A1270NA, ARG600A1280NA</td>
</tr>
<tr>
<td>Band 4 (AWS)</td>
<td>Tx: 1710–1755 MHz, Rx: 2110–2155 MHz</td>
<td>ARG600A1270NA, ARG600A1280NA</td>
</tr>
<tr>
<td>Band 5</td>
<td>Tx: 824–849 MHz, Rx: 869–894 MHz</td>
<td>ARG600A1270NA</td>
</tr>
<tr>
<td>Band 13</td>
<td>Tx: 777–787 MHz, Rx: 746–756 MHz</td>
<td>ARG600A1280NA</td>
</tr>
<tr>
<td>Band 17</td>
<td>Tx: 704–716 MHz, Rx: 734–746 MHz</td>
<td>ARG600A1270NA</td>
</tr>
<tr>
<td>Band 25</td>
<td>Tx: 1850–1915 MHz, Rx: 1930–1995 MHz</td>
<td>Other</td>
</tr>
</tbody>
</table>

*All listed bands and frequencies supported in the integrated radio module. Note! See cellular operator compatibility and LTE frequency bands used by operators, column 3 – ARG600 variant codes.
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