

# ABB Wireless US Frequency Licensing Facilitation Service

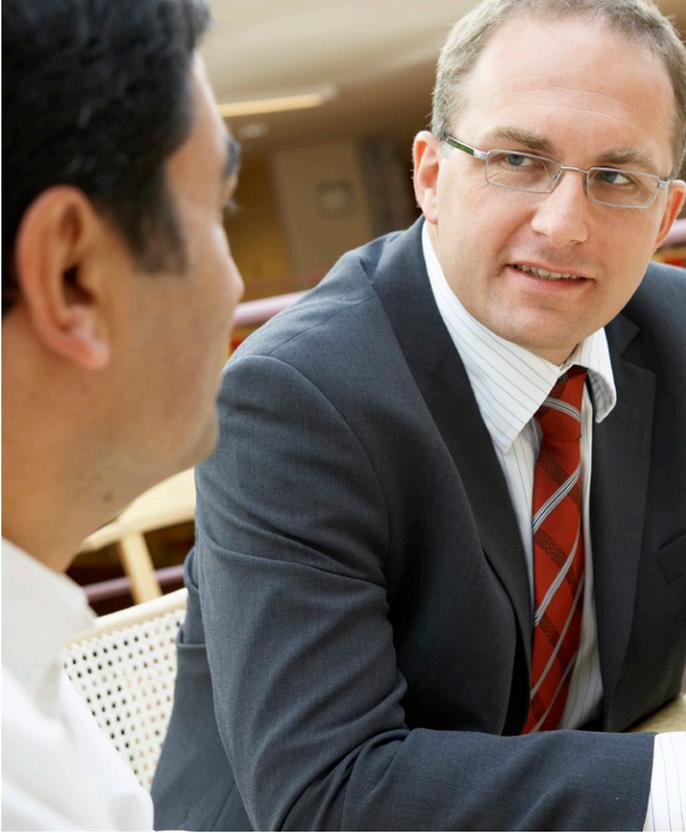


ABB Wireless ArcheOS radio modems are designed to operate on narrow bandwidth radio channels requiring a frequency license. The process for obtaining such a license from the Federal Communications Commission (FCC) can be daunting to navigate. To accelerate and simplify this procedure, ABB Wireless offers a frequency licensing facilitation service that leverages our expertise and enables customers to efficiently obtain authorization for licensed frequency use. ABB Wireless can also facilitate renewal of an existing wireless frequency license for our customers.

## New FCC License Application

To facilitate the acquisition of a new frequency license, ABB will work on behalf the customer to execute the steps below.

- Assess frequency channel requirements – An initial network design to define the number of channels needed. To create the network design, the following parameters are typically considered:
  - Radio coverage area
  - RF output power of radios
  - SCADA network response objectives based on planned applications:
    - Number of master stations
    - Channel bandwidth (typically 12.5 kHz)
    - Topology of repeaters, if any

If the customer wants a detailed network design at this stage, ABB Wireless professional services can provide one for an additional fee. After the frequency plan is reviewed and approved by the customer, the project can proceed to the next step.

- **FCC Registration Number (FRN)** – If the customer does not have an FRN, ABB will apply for an FRN on behalf of the customer. The customer will be identified as the owner of the FRN.
- **Apply for the frequency license** – ABB Wireless will apply for the frequency license on behalf of the customer via a certified frequency coordinator. The frequency coordinator is a private entity that has access to the US global frequency allocation database and has been appointed by the FCC. The frequency coordinator will identify the available spectrum resources based on ABB Wireless frequency plan and will request the approval for use to the Federal Communication Commission. The release of the frequency channels by the FCC via the

frequency coordinator typically takes approximately one month. The license is in the customer's name and is granted for a 10-year period. In some cases, radio frequency channels might be allocated with permission to operate at a reduced EIRP, this might affect system performance and the network design might need to be revised. ABB Wireless will send to the customer a brief technical report that includes all FCC documentation relevant to the customer's application and license grant as well as a project frequency utilization scheme.

### FCC License Renewal

ABB Wireless can assist customers in the frequency license renewal process. The process for renewing a license should begin approximately 90 days before the license's expiration.

### Pricing

Pricing for the ABB Wireless US Frequency Licensing Facilitation Service is a flat fee plus expenses. Expenses, including the license fee, will be billed back to the customer separately, at cost.

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