

# AerFrame™



AerFrame, developed by Aeris®, provides a seamless, standards-based, end-to-end communications and management infrastructure for commercial, machine-to-machine (M2M) applications. AerFrame is the industry's first open network management environment to provide rugged, real-time connectivity combined with standby availability of multi-layered bandwidth, voice, and content on a real-time, as needed basis. AerFrame is part of the unique network services available only from Aeris.

## When To Use AerFrame

AerFrame greatly reduces time-to-market for M2M applications by enabling you to focus on developing your application, without spending precious development resources on building the communications infrastructure.

Wireless devices can use off-the-shelf radio modules to send and receive data through Aeris, using any standard technology (CDMA, GSM, satellite, etc.).

Commercial applications can use the Aeris® API (Application Programming Interface) to send and receive data in a variety of standard formats. This API provides a degree of transparency in the communications between commercial applications and deployed devices, insulating commercial applications against changes in wireless technology.

After devices are deployed, use AerFrame's Device Management Services to manage the devices, and to monitor the traffic sent to and from the devices (see below).

## How to Use AerFrame

To connect your commercial application to AerFrame, you can either leverage the Aeris API or use industry standards.

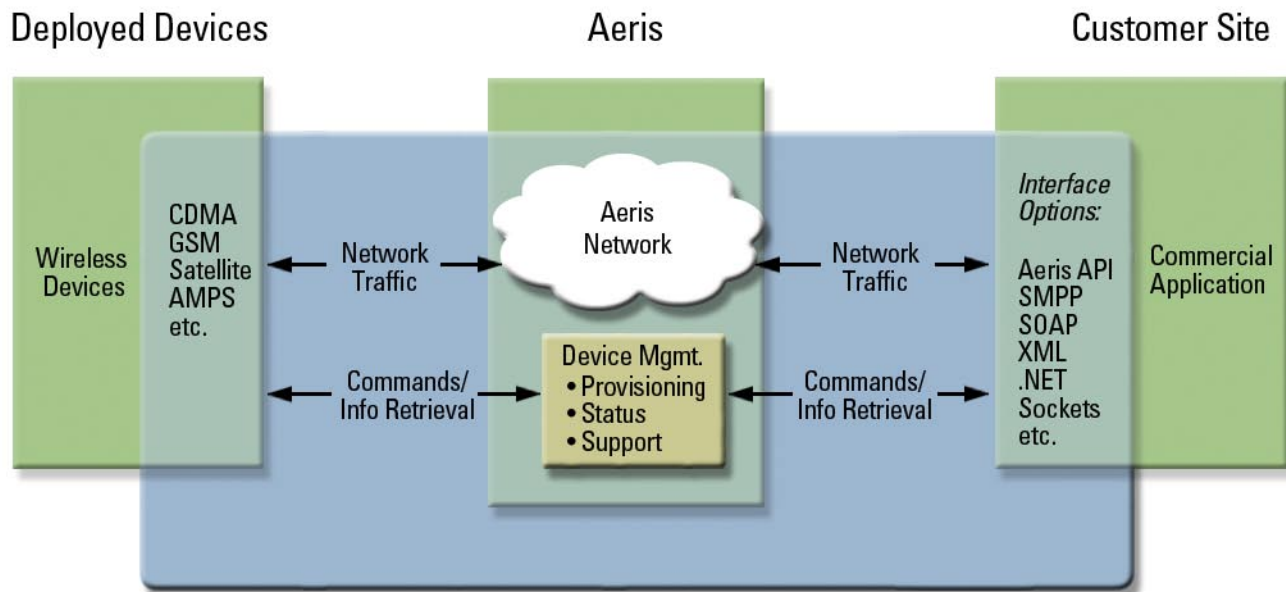
- The Aeris API is customized to support M2M functionality and expedites the development of a new application.
- Industry standard protocols, such as SMPP, can also be used to interface your application to AerFrame. This permits you to port an existing application from another carrier's network to AerFrame.

## Network Services

AerFrame provides a variety of transport interfaces to wireless devices as well as numerous industry standard interfaces to commercial applications.

Wireless devices can use *MicroBurst*® or *SMSDirect*™ to send and receive messages. Aeris Voice Services allow a commercial application or wireless device to open a voice channel for human use in rare or emergency situations, without requiring human dialing to set up the connection. For greater-bandwidth Aeris Broadband Services, such as *1x OnDemand*™ and GPRS, are available.

More information can be found on the specific datasheets for each of the Aeris network services.



## Device Management

In addition to seamless connectivity, AerFrame provides two methods for reliable, real-time management of devices in the field. The first is a device management interface to programmatically manage your population of deployed devices. A second tool is also available that gives you the ability to activate or make changes to a small number of devices for test purposes or to trouble-shoot specific devices. This second method is an interactive tool that is available via the Customer Portal. Both methods allow you to remotely perform the following functions:

- Provision and test new devices on the factory floor, in the showroom, in the field, or anywhere you need.
- Monitor and change the status of deployed devices.
- View or change service rate plans to suit changing message traffic needs.
- Locate lost devices.
- Remotely diagnose and troubleshoot devices in the field.

These capabilities are a key part of what AERIS delivers to ensure a rapid development and deployment experience.

## Technical Specifications

Supported network services	MicroBurst SMSDirect SMS (generic) AERIS Broadband Services AERIS Voice Services and others
Supported interfaces to deliver data to or from commercial applications	AERIS API SMPP version 3.4 SOAP XML .NET Socket
Technologies	CDMA GSM Satellite Wireline AMPS and others
Backend network options	Device provisioning Device traffic Device status Device support