



Avaya Solution & Interoperability Test Lab

Application Notes for EnGenius Technologies DuraFon 1X with Avaya PARTNER ACS - Issue 1.0

Abstract

These Application Notes describe the configuration required for EnGenius Technologies DuraFon 1X to successfully interoperate with Avaya PARTNER ACS. DuraFon 1X is a long-range industrial cordless phone system that connects to Avaya PARTNER ACS analog station ports to provide cordless telephone capability for users.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes describe the configuration required for EnGenius Technologies DuraFon 1X to successfully interoperate with Avaya PARTNER ACS. DuraFon 1X is a long-range industrial cordless phone system that connects to Avaya PARTNER ACS analog station ports, to provide cordless telephone capability for users. DuraFon 1X provides the following capabilities and features:

- Cordless capabilities up to:
 - 12 floors in a building
 - 250,000 square feet in a warehouse
 - 3,000 acres on a farm or ranch
- Single line base unit
- Multiple handsets (up to 9 per base unit)

Figure 1 illustrates the network configuration used to verify EnGenius Technologies DuraFon 1X with Avaya PARTNER ACS. The test configuration consisted of Avaya PARTNER ACS with the following equipment connected to it: Avaya PARTNER 18D telephones, EnGenius Technologies DuraFon 1X Industrial Cordless telephones, and an analog telephone. The test configuration also included two analog trunk (line) connections to the Public Switched Telephone Network (PSTN).

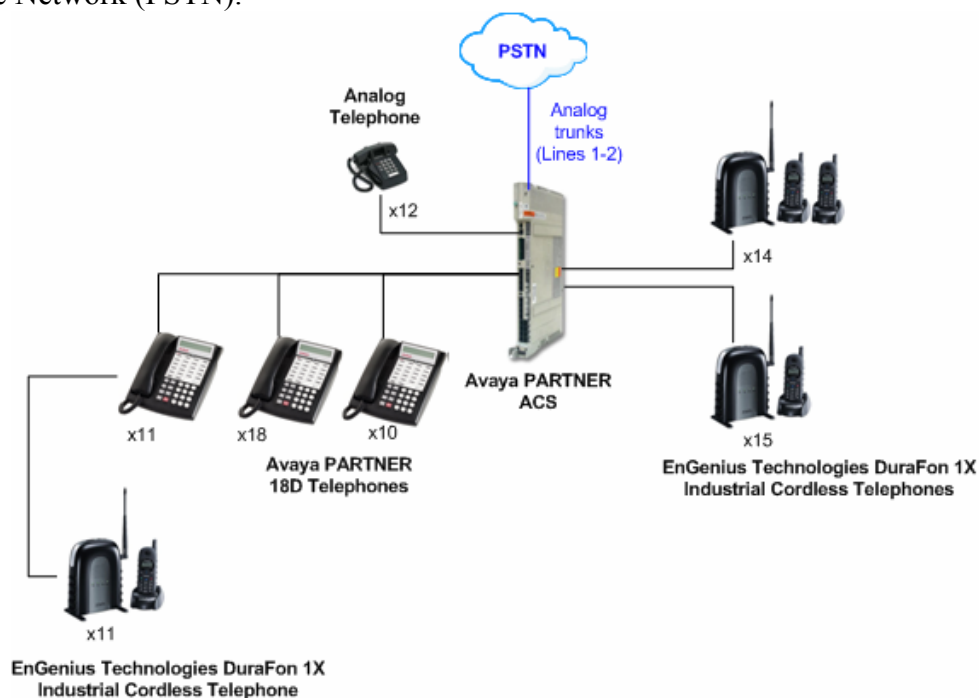


Figure 1: Network Configuration

Avaya DevConnect compliance testing focused on EnGenius Technologies DuraFon 1X interoperability with Avaya PARTNER ACS. Hardware and radio testing of DuraFon 1X was beyond the scope of the compliance test.

2. Equipment and Software Validated

The following equipment and software/firmware were used for the sample configuration provided:

Equipment	Software
Avaya PARTNER ACS	R7 (91K)
Avaya PARTNER Voice Messaging	3.0
Avaya PARTNER 18D Telephones	-
Analog Telephone	-
EnGenius Technologies DuraFon 1X	-

3. Configure Avaya PARTNER ACS

The configuration information provided in this section describes the steps required to configure Avaya PARTNER ACS to interoperate with EnGenius Technologies DuraFon 1X. For all other configuration information, please refer to the Avaya PARTNER ACS product documentation in **Section 9**.

1. Physically connect an available analog station port on Avaya PARTNER ACS to the line port on the DuraFon 1X base station. Make a note of the extension number connected to the line port.
2. Configure the extension setup in **Step 1** as a single-line telephone and setup **Automatic Line Selection** for the extension as follows:
 - From PARTNER ACS extension 10 or 11, press **(Feature) (0) (0) → (System Program) (System Program) → (Central Tel Program)**.
 - Enter the number of the extension setup in **Step 1**.
 - Press **(*) (*)**.
 - Press **(Right Intercom) (Left Intercom)**.
For each button pressed, a display similar to the following appears:
Automatic Line Selection
 - To exit Automatic Line Selection, press **(*) (*)**.
 - Press **(Central Tel Program)**.
 - Press **(Feature) (0) (0)** to exit System Program mode.
3. Repeat **Steps 1 – 2** for each analog station port connected to a DuraFon 1X base station. In the test configuration, extensions 11, 14, and 15 were connected to DuraFon 1X base stations.

4. Configure EnGenius Technologies DuraFon 1X

The configuration information provided in this section describes the steps required to configure EnGenius Technologies DuraFon 1X to interoperate with Avaya PARTNER ACS. For all other configuration information, please refer to the EnGenius Technologies product documentation in **Section 9**.

The steps that follow assume the steps described in **Section 3** have already taken place and cover instructions for configuring a DuraFon 1X base station to an Avaya PARTNER ACS extension.

1. Power up DuraFon 1X base station. **Note:** The 1st handset is already registered by default.
2. Register additional handsets to DuraFon 1X base station as described in reference [3] in **Section 9**.
3. Modify the Welcome screen on each handset to reflect the Avaya PARTNER ACS telephone extension it is associated with as described in reference [4] in **Section 9**.

5. Interoperability Compliance Testing

Interoperability compliance testing included feature/functionality and serviceability testing. Feature and functionality testing examined DuraFon 1X's ability to properly handle inbound, outbound and internal extension calls. Serviceability testing introduced failure scenarios to verify DuraFon 1X could resume placing and receiving calls after failure recovery.

5.1. General Test Approach

Feature and functionality testing was performed manually on Avaya PARTNER ACS configured in Key mode. Two analog loop start trunks from the PSTN were connected to available trunk ports on Avaya PARTNER ACS. The general test approach was to manually place calls to/from DuraFon 1X handsets for inbound, outbound and internal extension calls. Calling features such as hold, transfer, and conference were exercised using DuraFon 1X handsets. Testing also included verifying that leaving and retrieving voicemail using DuraFon 1X handsets were successful. For serviceability testing, failures such as power failures affecting PARTNER ACS and DuraFon 1X were applied.

5.2. Test Results

All feature and serviceability tests passed. All observations noted during testing are presented below. For serviceability testing, DuraFon 1X handsets successfully resumed operations when both Avaya PARTNER ACS and DuraFon 1X base stations were subjected to power failure and restored to power.

Test Observations:

- DuraFon 1X does not support message-waiting lamp indication.
- No Caller ID information appears on DuraFon 1X handsets. This functionality will be made available to single line telephones (analog station ports) in an upcoming Avaya PARTNER ACS release.
- There was occasional interference detected on calls involving DuraFon 1X handsets. According to EnGenius Technologies, there is a three-foot separation recommended between Avaya PARTNER ACS and DuraFon 1X base stations.
- DuraFon 1X handsets appeared to delay ringing about 1 to 1.5 ring cycles compared to wired telephones. According to EnGenius Technologies, this is standard for cordless telephones.

6. Verification Steps

The following steps may be used to verify the configuration.

- Place a call from an Avaya PARTNER ACS or analog telephone extension to an extension connected to a DuraFon 1X base station. Verify the call rings at the corresponding DuraFon 1X handset(s) and the call connects when answered.
- Place a call from a DuraFon 1X handset to an Avaya PARTNER ACS telephone extension or analog extension. Verify the call rings at the called extension and the call connects when answered.

7. Support

Technical support for EnGenius Technologies DuraFon 1X can be obtained by calling 888-735-7888 or sending email to support@engeniustech.com or online via <http://www.engeniustech.com/telecom/support/>.

8. Conclusion

These Application Notes describe the configuration required for EnGenius Technologies DuraFon 1X to successfully interoperate with Avaya PARTNER ACS. EnGenius Technologies DuraFon 1X successfully passed compliance testing. Observations noted during testing are documented in **Section 5.2**.

9. Additional References

Product documentation for Avaya products may be found at <http://support.avaya.com>.

[1] *Avaya PARTNER Advanced Communications System Installation, Programming, and Use*, 518-456-803, Issue 6, July 2004

Product documentation for EnGenius Technologies products may be found at <http://www.enginustech.com>.

[2] *EnGenius DuraFon 1X Instruction Manual*, P/N: 6709A0553060.

[3] *DuraFon 1x Quick Reference Sheet* may be found by browsing to <http://www.enginustech.com/telecom/support> then clicking the DuraFon 1X link.

[4] *Avaya PARTNER ACS – DuraFon Integration Instructions* may be found by browsing to <http://www.enginustech.com/telecom/support/datasheets.aspx>, selecting DuraFon 1X, then clicking the Avaya PARTNER ACS – DuraFon Integration link.

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