

JanamCare Troubleshooting

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Janam XM/XG Series Wireless Overview, Troubleshooting and Best Practices

Overview and Starting Point:

1. There are two options for configuration of your Wireless LAN Profile using the Summit Client Utility and 3rd Party mode or Wireless Zero Config (WZC). Janam recommends using the Summit Client Utility for all installations. Please follow the wireless setup instructions (Chapter 8) of the Users Guide found at this link: <http://www.janam.com/downloads/XM66UserGuide.pdf>.
2. For WZC change the "Active Profile" on the "Main" tab of the Summit Client Utility to "Third Party Config". This change requires a soft reset of the Janam device. The wireless configuration is now accomplished via the WiFi icon on the Windows Mobile 6.1 Home screen.
3. The Summit radio by default will associate to the first available open WLAN if you do not provide a custom profile using the "Scan" or "New" from the SCU "Profile" tab. This is the "out-of-the-box" behavior required by the Wi-Fi Alliance. This can be confusing as it can be associated but not necessarily to your WLAN. So perform the scan described above or enter a "NEW" profile manually.
4. Upon power up the radio takes about 5 seconds to initialize and load drivers so immediate network interaction is not available until the radio is up. You can extend the Windows Mobile "Power" timer for suspend through the "System". "Power" tab if needed.
5. When viewing the Windows Mobile 6.1 "Start" screen WiFi Icon the "On" state indicates that the Wi-fi radio is on/enabled. The "Network Card" state tells you that the radio is connected to an SSID and managed by the Summit Client Utility.
6. By default the Summit radio will select a data rate that has the least amount of missed beacons. When trying to achieve the highest data rate regardless of the signal quality. To force the radio to communicate at 54Mbps use a quality registry editor and create new key "initRateHighest" with a DWORD of "1" under:
[HKEY_LOCAL_MACHINE\Comm\SDCCF10G1\Parms\Configs\GlobalConfig]
7. The XM66W-1NAFBR00 (ABG radio) is configured at the factory for World Wide Domain Channel set of 36, 40, 44, 48. Please configure the infrastructure to one of these channels.

Troubleshooting:

1. When contacting Janam support please have the infrastructure model, security setup and radio network characteristics available for review. Preferably having screen shots of the Access Point/Wireless Router/ Wireless Controller to include firmware version, SSID(s), encryption method, pass phase or encryption key, radio channel, DTIM setting.

2. Some infrastructure products provide monitoring capabilities such as "Term Mon" for Cisco that give clues to mobile device attempt to associate. Please provide any event or logging details.
3. The "Status" tab in SCU provides detailed information about the WLAN connection. The "Diags" tab provides a utility to ping network appliances such as your server, Access Point, Wireless router or controller. Additionally there is a logging feature that captures the radio connection setup and connectivity that may be saved to a file. The output is stored in "My Documents".
4. Remove security from the WLAN profile on the A/P or controller making it an open network then try the association. If this works re-introduce the original encryption method and try again. Ensure the encryption method and key match the infrastructure configuration. These settings must be 100% accurate in character and case. Take the device in question to another wireless coverage area such as a public hotspot or home wireless network and try the association.

Best Practices:

Aruba Networks – Configuration and Best Practices for Janam XM and XG Series

http://www.arubanetworks.com/pdf/partners/PSB_JanamXM66.pdf

Cisco Systems

Cisco Wireless LAN Controller (WLC) Configuration Best Practices

http://www.cisco.com/en/US/tech/tk722/tk809/technologies_tech_note09186a0080810880.shtml

The following are usage notes for the use of Summit radios with a Cisco WLAN infrastructure that uses controllers:

- CCKM: A Cisco controller-based WLAN infrastructure supports Cisco Compatible Extensions (CCX) features only with clients that are certified for CCX Version 4 (V4). Those CCX features include CCKM, a Cisco-defined key management protocol for fast 802.1X reauthentication.

With Summit software V2.00.38 and above, Summit radios are certified for CCX V4 for ASDs. As a result, if you upgrade devices to V2.00.38 or above, you can use CCKM or any other CCX feature with a Cisco controller-based WLAN infrastructure or a Cisco autonomous (non-controller) WLAN infrastructure.

- Radio Mode: The BG subset (formerly BG optimized) value for the Radio Mode setting in a profile is optimized for Cisco APs running certain older versions of IOS in autonomous mode (without controllers). This Radio Mode value is not optimized for and should not be used with Cisco APs that are tied to controllers or in autonomous mode with a current version of IOS. Beginning with V2.00.38, the default value for Radio Mode is BG rates full.

Hewlett Packard

HP Procurve 420 Wireless Access Point

Here is how to make the necessary changes to the HP420 router:

**To change the Data Beacon Rate (DTIM) settings:

- Open the HTML page for the AP and log in
- Click on the "Configuration" tab
- Choose the "Port/Radio Settings" tab
- Scroll down to the "Data Beacon Rate" selection and change it from 1 to 2.
- Scroll to the very bottom and press "Apply Changes"

Meru Networks

- Communication problems with the Meru network: When G rates are enabled and the Summit device is communicating, the Meru infrastructure sends beacon rates at what it perceives to be the connection rate. Because of this, the Summit 10 or 20 Series radios may miss beacons from the Meru infrastructure. This communication issue does not occur when connecting with B rates only.
- Summit recommends the following settings when you use a Meru network:
 - B rates only
 - CCX - Off
 - Aggressive Scanning - Off

Motorola/Symbol

Turn "OFF" the "Global" feature "CCX Extensions" in the Summit Client Utility (SCU).
A recommended DTIM setting of 2 on the infrastructure (A/P or controller) configuration.