Unitech America, Inc &
Summit Data Communications, Inc.
Quick Start Guide

**for a Summit radio card or module
with software version 1.03**

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Overview

Thank you for choosing one of the following products from
Summit Data Communications, Inc.:

- SDC-CF10G compact flash radio module with antenna
  connectors
- SDC-CF20G compact flash radio card with integrated
  antennas
- SDC-PC10G PCMCIA radio module with antenna
  connectors
- SDC-PC20G PCMCIA radio card with integrated
  antennas

(If you are using the SDC-MCF10G miniature compact
flash radio module with antenna connectors, contact
Summit for hardware installation information and
assistance. The software is the same as for other Summit
products.)

When you install and use your Summit radio module or
card in a computing device, that device can communicate to
a computing network using the IEEE 802.11g and IEEE
802.11b protocols. For details on the capabilities of
Summit products, go to:
http://www.summitdatacom.com/products.htm.

The software that Summit provides for its radio modules
runs on the computing device that houses a radio module.
That software includes:

- A device driver
- An integrated IEEE 802.1X supplicant, which supports the highest level of standards-based WLAN
  security with a broad range of options
- The Summit Client Utility (SCU), a configuration, monitoring, and management application designed
  for Summit radio modules
- On Windows CE/Mobile, a service that displays a Windows System Tray icon that provides a visual
  status for the Summit radio and enables the user to launch SCU by tapping the icon

This software runs on the following operating systems:

- Windows CE .NET 4.2 and Windows Mobile (or Pocket PC) 2003
- Windows CE .NET 5.0 and Windows Mobile 5.0 and 6.0
- Windows XP and Windows XP Embedded (XPe)

Your Summit radio module is Wi-Fi CERTIFIED® and certified for Cisco Compatible Extensions (CCX):

- **Wi-Fi:** The Wi-Fi Alliance certifies that Summit radio modules support 802.11b and 802.11g with
  WPA and WPA2, both Personal and Enterprise. The tested EAP type was PEAP-MSCHAPv2. For
  details, visit the Wi-Fi Alliance Web site at http://www.wi-fi.com, click on the "Wi-Fi CERTIFIED®
  Products" link, and search for Summit Data Communications.

- **CCX:** Summit radio modules are certified to Version 3 of the CCX specification for application-
  specific devices (ASDs). For an overview of CCX, go to
  http://www.cisco.com/web/partners/pr46/pr147/partners_pgm_concept_home.html. For details on

SDC-CF10G   SDC-CF20G

SDC-PC10G   SDC-PC20G

the features in CCX V3 for ASDs, go to
http://www.cisco.com/warp/public/765/ccx/versions_and_features.shtml.

Summit Client Utility (SCU) provides a graphical user interface (GUI) for access to all of its functions. Access to these functions also is available through an application programming interface (API), which an application programmer
can use to enable another utility to manage the radio.

To initialize SCU:
* From the Start menu, select Programs
* Select the directory called Summit
* Inside the Summit directory are two items: a directory for the storage of security certificates and an SCU icon. To run SCU, double-click the SCU icon

SCU has five windows: Main, Profile, Status, and Diags (or Troubleshooting), and Global. Tabs, which are shown as item 8 in Figure 1 below, enable easy navigation between windows. Each window is described in more detail in this section.

Main Window

Figure 1 below is an example of a Main window:

Figure1: Main window

Step 1: Press Admin Login-
        Password: **SUMMIT**

Here are the highlights:

- **Admin Login/Logout:** To login to SCU as an administrator, you select this button when "Admin Login" is displayed and supply the correct admin password on the dialog box. The default password is "SUMMIT" in all capital letters. (The password can be changed through the Admin Password function on the Global Settings window.) Once you are logged in as an administrator, clicking the button again logs you out as an administrator, leaving you with access only to end-user functions.
- **Enable/Disable Radio:** When the radio is enabled, selecting this button disables it; when the radio is disabled, selecting this button enables it.
- **Active Profile:** You can view the name of the active profile and, using the selection list, select a different profile. If you select "ThirdPartyConfig" then, after the device goes through a power cycle, WZC is used for configuration of the radio.
- **Status:** Indicates the radio's status.
- **Radio Type:** Indicates the type of radio in the device. "BG" means a Summit radio that supports 802.11b and 802.11g.
- **Regulatory Domain:** Indicates the regulatory domain or domains for which the radio is configured. "Worldwide" means that the radio can be used in any domain. The domain cannot be configured by an administrator or user.
- **Driver:** Indicates the version of the device driver that is running on the device.
- **SCU:** Indicates the version of SCU that is running on the device.
- **About SCU:** When tapped, supplies information on SCU that on a Windows application normally would appear under Help | About.

Profile Window

Profile settings are radio and security settings that are stored in the registry as part of a configuration profile. When a profile is selected as the active profile on the Main window, the settings for that profile become active. An administrator can define up to 20 profiles, edit them, and delete them on the Profile window in SCU. ***Profile changes made on the window are saved to the profile only when the Commit button is pressed.***

Unless it is modified, the Default profile does not specify an SSID, EAP type, or method of encryption. If the Default profile is the active profile, then the radio will associate only to an access point that broadcasts its SSID and requires no EAP type and no encryption.

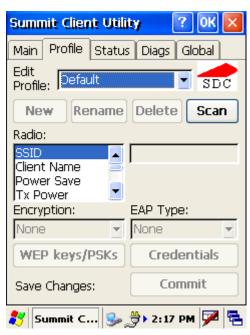Figure 2 below is an example of a Profile window:

Figure 2: Profile window

Here are the highlights:

- **Edit Profile:** This is used to select the profile to be viewed or, if you are an administrator, edited.

- **Actions:** Four actions are available, with the first three available only to an administrator:
    - *New:* Create a new profile with default settings and give it a unique name (and then change settings using other selections on the window).
    - *Rename:* Give the profile a new name, one that is not assigned to another profile.
    - *Delete:* Delete the profile, provided that it is not the active profile.
    - *Scan:* Open a window that lists access points that are broadcasting their SSIDs. Each time you tap the Refresh button, you view an updated list of APs, with each row showing an AP's SSID, its received signal strength indication (RSSI), and whether or not data encryption is in use (true or false). You can sort the list by clicking on the column headers. If you are authorized as an administrator, select an SSID in the list, and tap Commit, you return to the Profile window to create a profile for that SSID.

- **Radio:** Radio attributes in the list box can be selected individually. When an attribute is selected, the current setting or an appropriate selection box with the current setting highlighted appears on the right.

- **Security:** Values for the two primary security attributes, EAP type and encryption type, are displayed in separate dropdown lists, with the current values highlighted. When you as an administrator select an EAP type, the Credentials button appears; when you tap it, a dialog box appears that enables you to define authentication credentials for that EAP type. When you as an administrator select an encryption type that requires the definition of WEP keys or a pre-shared key, the PSKs/WEP Keys button appears; when you tap it, a dialog box appears that enables you to define WEP keys or a PSK.

- **Commit:** To ensure that changes to profile settings made on the window are saved in the profile, you must tap the Commit button.

- **Scan:** To view available wireless networks

To cause a Summit radio to connect to a typical business WLAN, you must select a profile that specifies the SSID, EAP type, and encryption type supported by the WLAN:

- SSID: This is the name or identification of the WLAN.

- EAP type: This is the protocol used to authenticate the device and its user if the WLAN uses the Enterprise version of Wi-Fi Protected Access (WPA) and WPA2. SCU supports five EAP types: PEAP with EAP-MSCHAP (PEAP-MSCHAP), PEAP with EAP-GTC (PEAP-GTC), EAP-TLS, LEAP, and EAP-FAST

- Encryption: This specifies the type of key used to encrypt and decrypt transmitted data and how that key is specified or derived. Encryption options include:
  - WPA2 or WPA with dynamic keys (derived from the EAP authentication process)
  - WPA2 or WPA with pre-shared keys
  - Static WEP keys

Consult the user's guide for details on all profile settings, including security settings.

Status Window

The Status window provides status information on the radio. A sample Status window is shown in Figure 3 on the next page. Here are the highlights:
- Active profile
- Radio's status: Down (not recognized), Disabled, Not Associated, Associated, or [EAP type] Authenticated
- Client info: Name, IP address, and MAC address
- AP info: Name, IP address, MAC address, beacon period, and DTIM interval
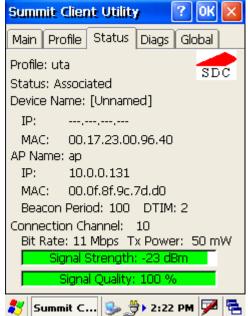- Connection info: Channel, data rate, transmit power, signal strength, and signal quality

Figure 3: Status window

Diags Window

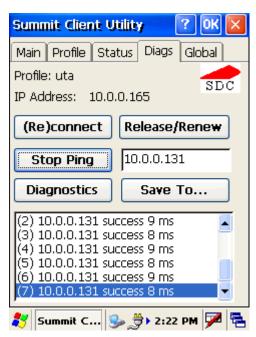A sample Diags, or troubleshooting, window is shown in Figure 4 below:

Figure 4: Diags window, with ping active

Here are the functions available on the Diags window:

- (Re)connect: Disable and enable the radio, apply or reapply the current profile, and attempt to associate and authenticate to the wireless LAN, logging all activity in the output area at the bottom.

- Release/Renew: Obtain a new IP address through DHCP release/renew, and log all activity in the output area at the bottom.

- Start Ping: Start a continuous ping to the address in the edit box next to it. Once the button is clicked, its name and function will change to Stop Ping. Moving to an SCU window other than Status or Diags also will stop the ping, as will Pings will continue until you tap the Stop Ping button, move to an SCU window other than Diags or Status, exit SCU, or remove the radio.

- Diagnostics: Attempt to (re)connect to an AP, and provide a more thorough dump of data than is obtained with (Re)connect. The dump will include radio state, profile settings, global settings, and a BSSID list of APs in the area.

- Save To...: Save the diagnostics output to a file.

Global Window

Global settings include:
- Radio and security settings that apply to all profiles
- Settings that apply to SCU itself

An administrator can define and change most global settings on the Global Settings window in SCU. A sample Global Settings window is shown in Figure 5 below:

Figure 5: Global window

The default setting for each global setting ensures reliable operation in most environments. Consult the user's guide for details on all global settings.