



# Release Notes for C881G-B/S/V-K9

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**OL-24269-01**

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## Introduction

This document describes the release features of the EVDO versions (BSNL, Sprint, and Verizon) of the Cisco C881G Series Integrated Services Routers (ISRs). These routers come with embedded multiband, multiservice WAN modems for use over WCDMA Radio Access Networks (RAN).

For more information about this release, see [www.cisco.com/go/3g](http://www.cisco.com/go/3g).



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**Americas Headquarters:**

**Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA**

## New Features

This section describes the new features in this release.

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## GPS

The GPS feature provides the following commands:

Command	Syntax	Description
<code>cdma gps mode</code>	<code>cdma gps mode standalone</code>	Enables the GPS standalone mode.
<code>cdma gps nmea</code>	<code>cdma gps nmea</code>	Enables the NMEA mode.
<code>show cellular gps</code>	<code>show cellular <i>unit</i> gps</code>	Displays a summary of GPS data.
	<code>show cellular <i>unit</i> gps detail</code>	Displays a detailed list of GPS data.

In the syntax of these commands, the *unit* parameter refers to:

- (EHWIC-3G-EVDO-*x*) The router slot, WAN interface card (WIC) slot, and port separated by slashes (for example, 0/1/0).
- (C881G-*x*-K9) The number 0.

These examples show how to enable GPS standalone and NMEA for EHWIC-3G-EVDO-*x*:

```
router(config)#controller cellular 0/0
router(config-controller)#cdma gps mode standalone
...
controller Cellular 0/0
  cdma gps mode standalone

router(config-controller)#cdma gps nmea
...
controller Cellular 0/0
  cdma gps mode standalone
  cdma gps nmea
!
```

These examples show how to display summary and detailed GPS data for C881G-*x*-K9:

```
router#show cellular 0 gps
GPS Info
-----
GPS State: GPS enabled
GPS Mode Configured: standalone
Latitude: 37 Deg 24 Min 59 Sec North
Longitude: 121 Deg 55 Min 8 Sec West
Timestamp (GMT): Thu Jul 29 11:08:39 2010
Fix type: 3D, Height: -6 m
Heading: 408, Velocity Horiz: 3, Velocity Vert: 0
Satellite Info
```

```
-----  
Satellite #13, elevation 75, azimuth 46, SNR 21  
...
```

```
router#show cellular 0 gps detail  
GPS Info  
-----  
GPS State: GPS enabled  
GPS Mode Configured: standalone  
Latitude: 37 Deg 24 Min 59 Sec North  
Longitude: 121 Deg 55 Min 7 Sec West  
Timestamp (GMT): Thu Jul 29 22:17:57 2010  
Fix type: 3D, Height: 12 m  
Heading: 0, Velocity Horiz: 0, Velocity Vert: 0  
...
```

**Note**

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Obtaining a GPS-fixed location requires a supported GPS antenna to be connected to the DIV/GPS port.

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**Note**

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Obtaining a GPS-fixed location using the Standalone mode can take up to 12 minutes. This depends on the location and type of antenna used.

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## SMS

This feature enables the router to send and receive SMS messages. This feature also enables the router to save and store the SMS messages in an FTP server.


**Note**

SMS is enabled by default. However, you need to define the FTP server to store incoming and outgoing SMS messages.

The SMS feature provides the following commands:

Command	Syntax	Description
<b>cellular cdma sms send</b>	<b>cellular</b> <i>unit</i> <b>cdma sms send</b> <i>telNum message</i>	Sends SMS messages (up to 160 characters per message).
<b>cellular cdma sms delete</b>	<b>cellular</b> <i>unit</i> <b>cdma sms delete</b> { <b>all</b>   <i>msg_ID</i> }	Deletes SMS messages.
<b>cellular cdma sms view</b>	<b>cellular</b> <i>unit</i> <b>cdma sms view</b> { <b>summary</b>   <b>all</b>   <i>msg_ID</i> }	Displays SMS messages.
<b>cdma sms archive path</b>	<b>cdma sms archive path</b> <b>ftp:</b> <i>path_to_FTP_server</i>	Saves SMS messages on an FTP server.

In the syntax of these commands, the *unit* parameter refers to:

- (EHWIC-3G-EVDO-*x*) The router slot, WIC slot, and port separated by slashes (for example, 0/1/0).
- (C881G-*x*-K9) The number 0.


**Note**

You can use the call screening command **dialer caller number callback** to authenticate SMS messages that you can use to establish data connections.

This example shows you how to send an SMS message (C881G-*x*-K9):

```
router#cellular 0 cdma sms send <phone number> "Test message"
```

This example deletes all SMS messages (EHWIC-3G-EVDO-*x*):

```
router#cellular 0/1/0 cdma sms delete all
```

This example shows you how to display a summary of SMS messages (EHWIC-3G-EVDO-*x*):

```
router#cellular 0/1/0 cdma sms view summary
ID   FROM           YY/MM/DD  HR:MN:SC  SIZE  CONTENT
0    4087993680     10/05/04  21:29:55  32    from John ...
1    4087993680     10/05/04  21:52:45  32    from Jane ...
2    4087993680     10/05/04  21:56:56  32    from Jake ...
3    4087993680     10/05/04  21:56:58  32    from Tom ...
4    4087993680     10/05/04  21:57:00  32    from Sam ...
```

The following example sets FTP path to the SMS\_archive directory on the FTP server at 192.168.1.3 (C881G-*x*-K9 and EHWIC-3G-EVDO-*x*):

```
router(config-controller)# gsm sms archive path
ftp://username:password@192.168.1.3/SMS_archive
```

## 3G WWAN MIB Persistence

This feature allows you to retain 3G WWAN MIB object values and trap settings across router reloads. Before configuring 3G WWAN MIB, you should perform some SNMP pre-configuration to avoid getting warning messages. The following is an example of SNMP pre-configuration:

```
snmp-server community public RO
snmp-server community private RW
snmp-server enable traps c3g
```

This example shows you the settings that you need to configure this feature for EHWIC-3G-EVDO-x:

```
controller Cellular 0/1
  cdma event rssi onset mib-trap 1xrtt
  cdma event rssi onset mib-trap evdoRel0
  cdma event rssi onset mib-trap evdoRelA
  cdma event rssi onset threshold -84
  cdma event rssi abate mib-trap 1xrtt
  cdma event rssi abate mib-trap evdoRel0
  cdma event rssi abate mib-trap evdoRelA
  cdma event rssi abate threshold -82
  cdma event ecio onset mib-trap 1xrtt
  cdma event ecio onset mib-trap evdoRel0
  cdma event ecio onset mib-trap evdoRelA
  cdma event ecio onset threshold -7
  cdma event ecio abate mib-trap 1xrtt
  cdma event ecio abate mib-trap evdoRel0
  cdma event ecio abate mib-trap evdoRelA
  cdma event ecio abate threshold -5
  cdma event temperature onset mib-trap
  cdma event temperature onset threshold 34
  cdma event temperature abate mib-trap
  cdma event temperature abate threshold 33
  cdma event modem-state mib-trap down
  cdma event modem-state mib-trap up
  cdma event service mib-trap
  cdma event network mib-trap
  cdma event connection-status mib-trap All-cdma
!
```

## Remotely Initiated Data Call Back Using SMS

This feature remotely brings up the cellular interface by sending SMS messages over CDMA networks. The following example shows you how to configure this feature for the EHWIC:



### Note

In the example below, the phone number of the administrator who wants to remotely bring up the link using SMS is 408-123-4567 on a GSM network (`dialer caller 4081234567 callback`). Replace this number with your own number. To test this example and bring the cellular link up, send an SMS message from your phone.

---

```
chat-script cdma "" "atdt#777" TIMEOUT 60 "CONNECT"
```

```
interface Loopback1
 ip address 1.1.1.1 255.255.255.0
interface Cellular 0
 ip address negotiated
 ip virtual-reassembly in
 encapsulation ppp
 load-interval 30
 dialer in-band
 dialer pool-member 1
 dialer idle-timeout 0
 no peer default ip address
 async mode interactive
 ppp chap hostname abc.cell.org
 ppp chap password 0 nopassword
 ppp ipcp dns request
 routing dynamic

interface Dialer1
 ip address negotiated
 encapsulation ppp
 dialer pool 1
 dialer idle-timeout 0
 dialer string cdma
 dialer caller 4081234567 callback
 dialer-group 1
 ppp chap hostname abc.cell.org
 ppp chap password 0 nopassword
 ppp ipcp dns request

ip route 0.0.0.0 0.0.0.0 Dialer1
!
access-list 1 permit any
dialer-list 1 protocol ip list 1
!
line 3
 script dialer cdma
 login
 modem InOut
 no exec
 transport input all
 transport output all
```

## Rebranding of C8xx-B and EHWIC-3G-EVDO-B

The C881G-B-K9, C819G-B-K9, and EHWIC-EVDO-B (Bharat) SKUs are introduced as an umbrella SKU to cover BSNL, Tata, and Reliance service providers in India.

Software based mechanism is introduced to identify specific carrier.

Carrier ID and name are displayed under "*show cellular <unit> hardware*".

The software mechanism is backward compatible with other existing CDMA SKUs such as HWIC-3G-CDMA(-S,-V) and PCEX-3G-CDMA(-S,-V).

### Cisco IOS Requirement

15.3(2)T, 15.3(3)M or later. New MIB objects for carrier ID and name will be introduced in later release.

### Sample CLI Output

```
Router#show cellular 0/0/0 hardware
Modem Firmware Version = p2813301
Modem Firmware built = 06-24-10
Hardware Version = MC5728V Rev 1.0
Electronic Serial Number (ESN) = 0x60E62C87 [09615084679] Preferred Roaming List (PRL)
Version = 10 PRI SKU ID = 535479 Carrier ID = 19 Carrier Name = Reliance Current Modem
Temperature = 30 degrees Celsius Endpoint Port Map = 75
Router#
```

```
Router#show cellular 0/1/0 hardware
Modem Firmware Version = p2813301
Modem Firmware built = 06-24-10
Hardware Version = MC5728V Rev 1.0
Electronic Serial Number (ESN) = 0x60E62431 [09615082545] Preferred Roaming List (PRL)
Version = 10 PRI SKU ID = 535479 Carrier ID = 29 Carrier Name = Tata Current Modem
Temperature = 30 degrees Celsius Endpoint Port Map = 75
Router#
```

## List of New Commands

The following is a list of the new commands supported by the EHWIC-3G-EVDO-*x* cards:

- cdma event connection-status mib-trap
- cdma event ecio abate
- cdma event ecio onset
- cdma event modem-state mib-trap
- cdma event network mib-trap
- cdma event rssi abate
- cdma event rssi onset
- cdma event service mib-trap
- cdma event temperature abate
- cdma event temperature onset
- cdma gps mode
- cdma gps nmea
- cdma sms archive path
- cellular cdma sms delete
- cellular cdma sms send
- cellular cdma sms view
- debug cellular messages gps
- debug cellular messages nmea
- debug cellular messages sms
- show cellular gps
- show cellular sms

These commands are described in the *Configuring Cisco EHWIC-3G-EVDO-B/S/V and C881G-B/S/V-K9* guide.



## Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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