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**DATA COMM FOR BUSINESS**

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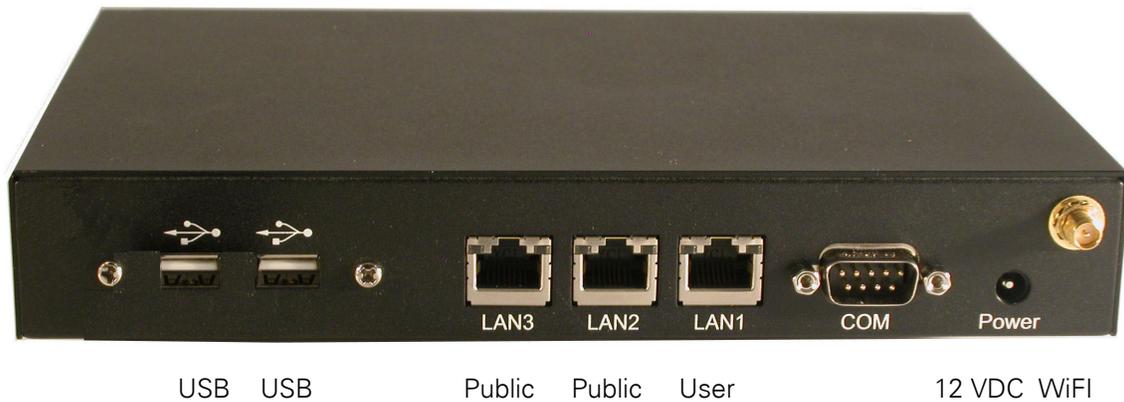
## **ET-6601 Cell modem and 802.11 Applications Note**

The ET-6601, in addition to the wired 10/100 BaseT connections, now supports both 802.11 WiFi and Sprint wireless cellular EVDO broadband modem options.

The 802.11 is via an internal mini-PCI card with an external reverse SMA connector.

The cell broadband EVDO modems are USB attached. The USB modem can be plugged into the USB connectors (either one) on the rear of the ET-6601. As of this date, the Novatel 720 and 727 models are both supported.

The photo below shows the ET-6601 with an internal 802.11 card. Note the the reverse SMA connector on the right for the 802.11 card.



The 802.11 reverse SMA connection allows the user to chose among many antenna options. The 802.11 functions include a site survey tool to find find the appropriate access point with which to connect. WEP is supported. The 802.11 is station only, with no access point capability. The 802.11 support is for the Ubiquiti SuperRange and ExtremeRange 802.11 cards. In addition to 2.4 GHz wifi cards, other Ubiquiti available for the ET-6601 include 900 MHz, 2.4 GHz, 4.9 GHz (licensed public safety) and 5.8 GHz.

To further support cell modem operation, the ET-6601 now supports dynamic DNS. As of this date, these two free sites have been successfully tested: [sitelutions.com](http://sitelutions.com) and [freedns.afraid.org](http://freedns.afraid.org). [Sitelutions.com](http://sitelutions.com) has backup sites, [freedns.afraid.org](http://freedns.afraid.org) is easier to set up. Dynamic DNS is desired if the ET-6601s at both ends of a link use cell modems. Cell service data providers either don't support fixed IP addresses, discourage them through high fees, or won't consider fixed IP addresses for any account that cannot be considered a very large account.



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The pictures below show the ET-6601 with the Novatel Ovation 727.



These cellular modems support external antenna options. An adapter cable plugs into the side of the modem. This cable is then connected to an antenna. External antennas are used when the modem is in a metal enclosure, when the distance from the cell site to the ET-6601 calls for an external antenna or an amplifier, and similar situations where the modem's internal antenna is not sufficient to receive a good signal.

The user can obtain the necessary adapter cables and antennas, or they can be supplied by DCB to meet the customer requirements. Several of the antenna options are illustrated below:



Mag mount antenna



Rubber duck antenna



Mini mag mount antenna

The ET-6601 has a fail over function that allows fail over from the primary outbound interfaces to a secondary interface. The primary interface can be any one of the LAN interfaces, the 802.11, or the cell modem interface. The primary interface will automatically restore when the link comes back up.