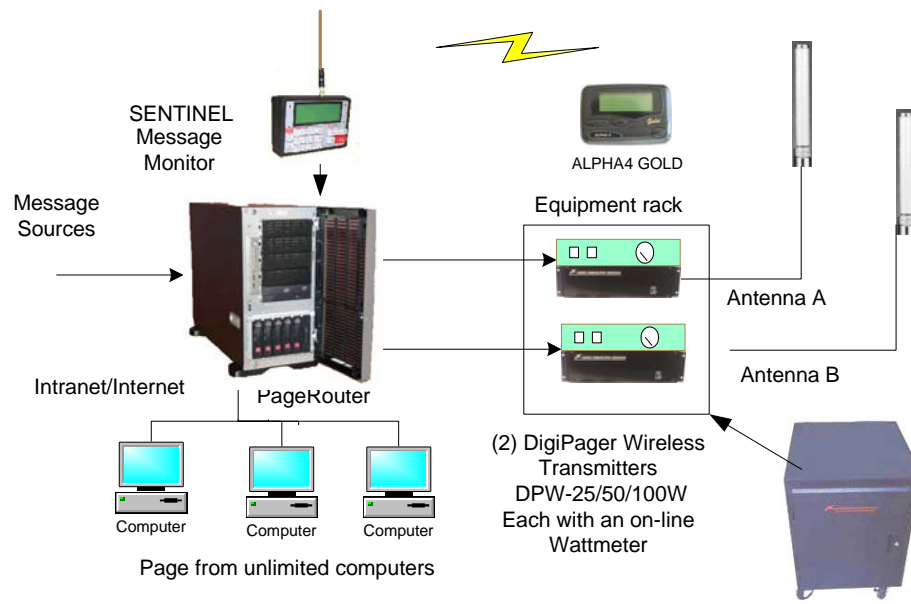


## Onsite Backup

*Automatic and Manual switch between the Main and the Backup transmitters to guarantee 100% transmission reliability in critical onsite messaging applications*



### System Description

1. A Canamex equipment rack contains (2) DigiPager Wireless paging encoder transmitters with a power selected according to the size of the building and the desired coverage.
2. The output of each DigiPager Wireless transmitter is connected to a power meter and to an antenna mounted on the roof of the building.
3. By programming in PageRouter Enterprise, you can select either DigiPager Wireless transmitter to operate as the Main or as the Backup transmitter. PageRouter delivers messages to each DigiPager Wireless transmitter via an independent cable connection of up to 500 ft.
4. A Canamex Sentinel Message monitor receiver is connected to PageRouter Enterprise.
5. PageRouter Enterprise can receive messages from one or multiple message sources.
6. Staff can also send messages from unlimited computers using WebPager.



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## System Operation

### Message Status "Transmitted"

1. PageRouter Enterprise receives a message from a source or from a network computer.
2. PageRouter Enterprise sends the message to the Main DigiPager Wireless Transmitter and keeps a copy in a Sentinel Message Wait queue.
3. The Sentinel monitor receives the message over the air, which is proof that the same message has been delivered to the destination pager(s).
4. Sentinel sends the message back to PageRouter Enterprise, where the message is matched against the message in the Sentinel Message Waiting queue. PageRouter Enterprise posts in the log "Transmitted" as the status for that message.

### Monitoring the Main Transmitter operation using the Sentinel Monitor receiver

5. PageRouter Enterprise will automatically resend the same message if Sentinel does not return the transmitted message within a programmable message wait period.
6. PageRouter assumes that the transmitter has failed after it sends the same message by a programmable number of repeats and the message is not received from the Sentinel receiver.
7. In this case, PageRouter Enterprise switches to deliver the same message via the Backup transmitter.
8. Next, PageRouter Enterprise sends a message to the Administrator notifying of the transmitter switch, and requesting to check the Main transmitter RF output capability.

### Monitoring cable connections and checking transmitter capability to receive messages

9. PageRouter Enterprise automatically switches to send a message via the backup transmitter if it cannot deliver the message to the Main transmitter.
10. This may be the case if the cable has become disconnected or if the transmitter is not in operation to receive messages.
11. PageRouter Enterprise sends a message to the Administrator notifying of the transmitter switch, and requests checking the cable connection and the transmitter.

### Automatic checking the backup transmitter

12. PageRouter Enterprise can alternate using the Main and the Backup transmitters at a programmable interval.
13. Optionally, PageRouter Enterprise can quickly switch to the Backup transmitter, send a message and return to the Main transmitter. PageRouter will report if the test message failed to be received by Sentinel, if there is a cable disconnection or if the backup transmitter is unable to receive messages. This operation ensures the availability of the Backup transmitter whenever is needed.

PageRouter US patent 7,019,616

