Cellular Modem vs. Digi Cellular Gateways

DIGI

What Are the Differences Between Cellular Modems and Digi Connect® Cellular Products?

Although the Digi Connect® WAN family products are are able to perform most functions of a cellular modem, they actually do much more. Digi Connect WAN family products are intelligent gateways with a full TCP/IP stack and embedded Real Time Operating System (RTOS) which allow remote devices and networks to be natively integrated with IP devices and applications across high-speed digital cellular networks.

Cellular modems operate in the voice channel. This means throughput is slow and airtime is expensive. In addition, cellular modems typically require a one-to-one connection to an analog (POTS) modem connection at the opposite end of the connection. Multiple connections require modem banks to which remote sites dial in.

Digi Connect WAN family products operate as true TCP/IP devices. They connect seamlessly to the cellular provider's IP network where only one WAN access point is required to connect thousands of devices.
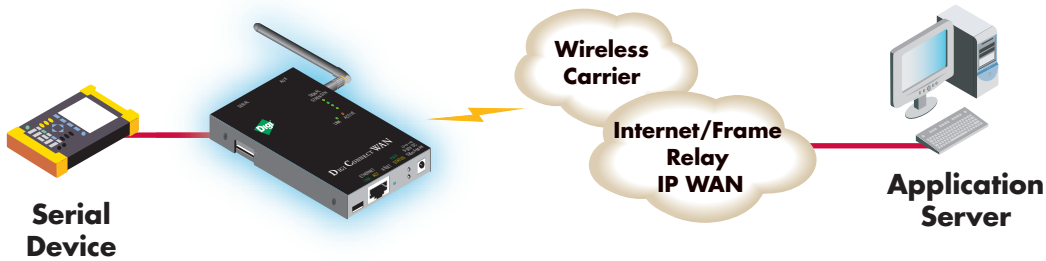
One of the key differences is that applications can natively connect to remote devices using TCP/IP without having to use a standard analog modem at both ends.

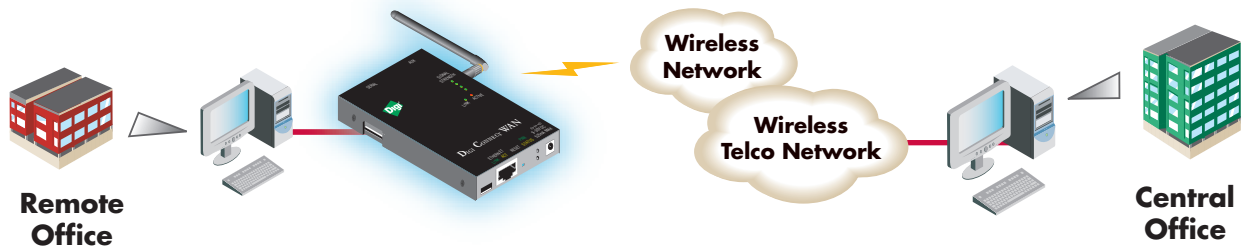| Features	Cellular Modems	Digi Connect WAN Family
What does it do?	Dial in/out to other analog (POTS) modems	Ethernet-to-IP cellular gateway/router
Network architecture	Circuit Switched	Packet switched
Air interface	CDPD (analog) GSM (voice circuit) CDMA (Circuit Switched)	GPRS/EDGE/UMTS/HSDPA CDMA/EV-DO
Bandwidth	Low-speed (14.4 max)	High-speed (up to 230 Kbps)
Connection	Dial in/out	Always on
Carrier charge	Per minute (expensive voice plan)	Per packet (inexpensive data plan)
TCP/IP stack	No	Yes
Local intelligence/ memory	No	8 MB RAM/2 MB Flash
Requires analog (POTS) modem at opposite end	Yes (except CDMA QNC)	No
Supported applications	Low bandwidth SCADA	High bandwidth SCADA & remote network bridging
Network bridging	No (except via serial PPP)	Yes
Special features	Can dial in to RAS server for low speed IP connection	Digi SureLink™ persistent connection Routing/firewall features Integration with Digi Connectware® Manager enterprise software RealPort® COM port redirection Modem emulation

Serial device connection using standard cellular modem (modem required at each end)

Serial Device — Cellular Modem — Wireless Carrier / Landline Carrier — POTS Modem — Application Server

Serial device connection over IP network using Digi Connect WAN

Serial Device — Digi Connect WAN — Wireless Carrier / Internet/Frame Relay IP WAN — Application Server

Remote LAN network connected across wireless WAN to central office using Digi Connect WAN

Remote Office — Digi Connect WAN — Wireless Network / Wireless Telco Network — Central Office

Contact a Digi expert and get started today.

PH: 877-912-3444
www.digi.com

Digi International
9350 Excelsior Blvd
Suite 700
Hopkins, MN 55343

Digi International - Germany
+49-89-540-428-0

Digi International - Japan
+81-3-5428-0261

Digi International - Singapore
+65-6213-5380

Digi International - China
+86-21-5049-2199

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