





Your Complete **Continuous Glucose Monitoring Systems** Reference Guide From *Diabetes Health*

Feature	Abbott Freestyle Navigator	MiniMed Paradigm REAL-Time System	MiniMed Guardian	DexCom STS
Photos				
Availability	Pending FDA approval	Across the U.S.	Available to adults and children in 7 cities with prescription: Austin, Boston, Chicago, Houston, Minneapolis/St. Paul, San Antonio, Tampa and UW- Wisconsin	Across the U.S.
FDA approval	Pending	For adults 18 and older	For adults 18 and older	For adults 18 and older
Communicates with an insulin pump	No	Yes, communicates with the Paradigm 522 and 722 pumps	No	No
Price	Price not set	\$999 start up with transmitter and 10 sensors or upgrade with the Pathway Program for current Medtronic pump users. Insulin pump would be handled through insurance coverage and contracts negotiated.	US: \$1,995 + \$395 docking station + \$35/sensor	\$800 for receiver, transmitter and 2 sensors. \$175 per 5 sensors.
Insurance coverage		Reports of some people obtaining coverage for sensors	Reports of some people obtaining coverage for sensors	Reports of some people obtaining coverage for sensors
Accuracy		MARE: 16.59% - 24.84% Clark Error Grid - 96% in A+B and 61.7% in A MARD (Mean) - 17.32% MARD (Median) - 12%	Clark Error Grid - 96% in A+B and 61.7% in A MARD (Mean) - 17.32% MARD (Median) - 12%	Clark Error Grid - 95.4% in A +B, 49% in A MARD (Median) - 15.9%
	GlucoWatch Biographer data for comparison: MARD: 17% to 21% . Clarke Error Grid A+B: 94% Clarke Error Grid A: 60%			
Sensor life	Abbott is pursuing a 5-day wear indication	Shuts off at 72 hours (FDA stipulation), but has gone longer in trials	Shuts off at 72 hours (FDA stipulation), but has gone longer in trials	72 hours, (applying to FDA for longer), has gone longer in trials
Length of sensor probe	6 mm	14 mm as measured by user	14 mm as measured by user	13 mm
Gauge of sensor probe		22	22	25
Angle of sensor insertion	90 degrees	45 degrees	45 degrees	45 degrees
Insertion device available	Each sensor has a disposable inserter	Sen-serter, manual insertion possible also	Sen-serter, manual insertion possible also	DexCom STS Applicator
Monitor size	3" x 2.5"	Displays on insulin pump, no separate monitor	3" x 2.5"	3" x 2.5"
Start-up initialization time	10 hours	2 hours and 20 minutes	2 hours and 20 minutes	2 hours
Calibration	Calibrate at 10, 12, 24 and 72 hours after insertion with no further calibration for the final 2 days of the 5 day wear	First calibration is 2 hours after insertion. Second calibration 6 hours after first, then every 12 hours. Will alarm if calibration value not entered.	First calibration is 2 hours after insertion. Second calibration 6 hours after first, then every 12 hours. Will alarm if calibration value not entered.	Must calibrate with One Touch Ultra -- cannot be entered manually. Calibrate every 12 hours, first calibration must have 2 done within 30 minutes of each other.
Transmitter/sensor or body surface size	2" x 1" (combined)	Sensor the size of a nickel. Transmitter is 2" x 1 1/2" with a cable that connects the two.	Sensor the size of a nickel. Transmitter is 2" x 1 1/2" with a cable that connects the two.	2.5 inches (both combined)
Alarms on user-set low and high thresholds	Yes	Yes, different sounds for different alarms, different volumes. Extremely loud "back up" alarm if no response to the first alarm	Yes, different sounds for different alarms, different volumes. Extremely loud "back up" alarm if no response to the first alarm	Yes, alerts for high and low are manually set. Low alarm set at 55 mg/dl by manufacturer. High alarm can be overrode.
	Note: In clinical trials, some people never respond to alarms at night regardless of the volume. An alarming device (receiver or pump) that is under covers, a pillow, or underneath a body is almost impossible to hear.			

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Displays glucose numbers	Every 1 minute	Every 5 minutes	Every 5 minutes	Every 5 minutes
Displays directional trends	Yes, always has directional and rate of change arrow. Can view 2, 4, 6, 12 or 24 hour glucose graph. Can go back 28 days.	Yes, arrows that display how fast and in what direction, and 3 and 24 hour graphs	No, must manually scroll and wait to upload graphs to software	Yes, can display a 1, 3, or 9 hour glucose graph
Displays rate of change	Yes	Yes	Yes	Yes
Alarms on vector technology	Yes	No, but updated version will rate rate of change alarms	No	No
Alarms, vibrate, alarm, or both	Alarm or Vibrate	Vibrate, Escalating Alarm, or both	Yes	Alarm or Vibrate; low first vibrate, then alarm
Transmitter waterproof	Yes	Yes, IPX8	Yes, IPX8	Yes
Transmitter batteries	Watch battery. Replace every month.	Non-replaceable. Transmitter life about 9 months to 1 year. Additional transmitter \$999 (will come with another 10 sensors at that time)	Non-replaceable. Transmitter life about 1 year. Additional Transmitter \$500.	Non-replaceable. Additional Transmitter is \$250.
Monitor batteries	2 AAA batteries. Replace every 3 months.	No separate monitor, results displayed on Paradigm 522 or 722 insulin pump	2 AAA batteries. Monitor alerts when change is needed.	Must recharge the battery every 5 days, charge time 3 hours
Range of monitor to transmitter (Factory Stated)	10 feet (reports of significantly greater distance)	6 feet	6 feet	5 feet
Sensor storage: refrigerated or room temperature	Room temperature, 4 month life	Refrigerated, 6 month life, can be at room temperature for 1 week	Refrigerated, 6 month life, can be at room temperature for 1 week	Room temperature, 4 month life
Snooze alarm feature	Yes, 1 hour silence	Yes, both high and low alarms settings differ	Yes, both high and low alarms settings differ	
Built in BG monitor	Built in Freestyle monitor	BD meter RF to pump or manually enter with other meters. With BD leaving market, plans unknown.	No, can use any meter and manually enter	Must calibrate with One Touch Ultra
Computer software	Freestyle CoPilot	Carelink or Solutions	Guardian Solutions	DexCom DM Consumer Data Manager (\$79)
Warranty		6 months on transmitter, 4 years on insulin pump	6 months on transmitter, 1 year on monitor	6 month warranty for receiver and transmitter
Money-back guarantee		30 day return policy for transmitter	30 day return policy for transmitter	90 day money back guarantee if not happy
Developing technology	Open loop system with new Abbott Pump-Aviator	Closed loop system where the devices would interact with each other and autopilot themselves. This includes implanted sensor/pump technology and external sensor/pump technology. In clinical trials, including with pediatric patients.	Guardian REALtime FDA approved in July, nationally available at end of year	Longterm (about 1 year/outpatient procedure) implantable sensor
Official product website	www.abbottdiabetescare.com/freestylenavigator/qa.aspx	www.minimed.com/products/insulinpumps/index.html	www.minimed.com/products/guardianrt/	www.dexcom.com/html/dexcom_products.html
Additional web sites and blogs			LifeAfterDx - Guardian Blog: www.lifeafterdx.blogspot.com Until a Cure: www.untilacure.blogspot.com	FDA Site for the DexCom STS: http://www.fda.gov/cdrh/pdf/p050012.html Photos of DexCom STS in Use: www.childrenwithdiabetes.com/DexComSensor.htm My New Friend Dexcom: www.insulinfactor.com/article_dexcom.html

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