

Skywire Embedded Modems Technical Specs Comparison Chart

Use this comparison chart to choose the right Skywire® embedded modem for your IoT Project
If you'd like to speak to a Sales representative, feel free to contact us.

	3G	LTE-M/NB-IoT	LTE-M/NB-IoT	LTE-M/NB-IoT	LTE-M/NB-IoT	LTE CAT 1	LTE CAT 1	LTE CAT 1	LTE CAT 1	LTE CAT 4	LTE CAT 4	LTE CAT 4	LTE CAT 4	LTE CAT 4
	NL-SW-HSPA	NL-SWN-LTE-NRF9160	NL-SW-LTE-QBG96	NL-SW-LTE-QBG95	NL-SW-LTE-TG1VWWG	NL-SW-LTE-S7648	NL-SW-LTE-S7618RD	NL-SW-LTE-GELS3	NL-SW-LTE-TC1NAG	NL-SW-LTE-S7588	NL-SW-LTE-TC4EU	NL-SW-LTE-TC4APG	NL-SW-LTE-TC4NAG	NL-SW-LTE-SRC7611-4
Target Region														
Region	Global	Global	Global	Global	Global	North America	United States	United States	North America	North America	Europe	Asia-Pacific	North America	North America
Compatible Carriers	AT&T, T-Mobile, WW 3G Networks	Verizon	AT&T, Orange, Telstra, Telus, Verizon, Vodafone	AT&T, Orange, Telstra, Telus, T-Mobile, Verizon, Vodafone, and more	AT&T, Orange, Telstra, Telus, T-Mobile, Verizon, Vodafone, and more	AT&T, Bell, Rogers, Telus, T-Mobile	Verizon	Verizon	AT&T, Bell, Rogers, Telus, Verizon	AT&T, Verizon	Orange, Vodafone	N/A	AT&T, Bell, Rogers, Telus, T-Mobile, Verizon	AT&T, Bell, Rogers, Telus, Verizon
Cellular Technology														
LTE Category	NA	LTE-M (CAT M1), NB-IoT (NB1, NB2)	LTE-M, NB-IoT	LTE-M (CAT M1), NB-IoT (NB1, NB2)	LTE-M (CAT M1), NB-IoT (NB1, NB2)	LTE CAT 1	LTE CAT 1	LTE CAT 1	LTE CAT 1	LTE CAT 4	LTE CAT 4	LTE CAT 4, 3GPP Release 10 Compliant	LTE CAT 4	LTE CAT 4
LTE Frequency Bands	N/A	LTE-FDD: B1[2100], B2[1900] B3 [1800], B4[1700], B5[850], B8 [900], B12[700], B13[700],B14 [700], B17[700], B18[850], B19 [850], B20[800], B25[1900], B26 [850], B28[700], B66[1700]	LTE-FDD: B1[2100], B2[1900] B3 [1800], B4[1700], B5[850], B8 [900], B12[700], B13[700], B18 [850], B19[850], B20[800], B26 [850], B28[700] LTE-TDD: B39 [1900] (LTE-M only)	LTE-FDD: B1[2100], B2[1900] B3 [1800], B4[1700], B5[850], B8 [900], B12[700], B13[700], B14 [700], B17[700], B18[850], B19 [1900], B20[800], B25[1900], B26 [850], B27[850], B28[700], B31 [450], B66[1700], B71[600]	LTE-FDD: B1[2100], B2[1900] B3 [1800], B4[1700], B5[850], B8 [900], B12[700], B13[700], B18 [850], B19[850], B20[800], B25 [1900], B26[850], B27[850], B28 [700], B66[1700], B71[600], B85 [700]	LTE B2 [1900], B4 [1700], B12 [700]	LTE B4 [1700], B13 [700]	LTE B4 [1700], B13 [700]	FDD B2[1900], B4[1700], B5[850], B12[700], B13[700], B14[700], B66[1700], B71[600]	LTE: B2 [1900], B4[1700], B5[850], B13[700], B17[700]	FDD B1[2100], B3[1800], B7 [2600], B8[900], B20[800]	FDD B1[2100], B3[1800], B5[850], B8[900], B9[1800], B18[850], B19 [850], B26[850], B28[700]	FDD B2[1900], B4[1700], B5[850], B12[700], B13[700], B14[700], B66[1700], B71[600]	FDD B2[1900], B4[1700], B5[850], B12[700], B13[700], B14[700], B25[1900], B26 [850],B66[1700],B71[600]
3G Technology Supported WW 3G providers	UMTS, HSPA+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DC-HSPA+	HSPA+	HSPA+	HSPA+	DC-HSPA+	N/A
3G Frequency Band	B1[2100], B2[1900], B4[1700], B5 [850], B8[900]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B2[1900], B4[1700], B5[850]	B2[1900], B5[850]	B1 [2100], B8 [900]	B1[2100], B5[850], B6[800], B8 [900], B19[800]	B2[1900], B4[1700], B5[850]	N/A
2G Technology Supported	GSM, EDGE, GPRS	N/A	GSM, EDGE, GPRS	GSM, EDGE, GPRS	GSM, EDGE, GPRS, EGPRS	N/A	N/A	N/A	N/A	N/A	GSM, EDGE	N/A	N/A	N/A
2G Frequency Band	GSM850/900, DCS1800, PCS1900	N/A	GSM850, EGSM900, DCS1800, PCS1900	GSM850, EGSM900, DCS1800, PCS1900	GSM850, EGSM900, DCS1800, PCS1900	N/A	N/A	N/A	N/A	N/A	GSM900, DCS1800	N/A	N/A	N/A
Data Speeds														
Download Rate and Upload Rate	Download: HSPA+: 21.0 Mbps EDGE: 296 Kbps GPRS: 107 Kbps Upload: HSPA+ 5.76 Mbps EDGE: 236.8 Kbps GPRS: 85.6 Kbps	Download Max: LTE-M: 375 Kbps NB-IoT: 60 Kbps Upload Max: LTE-M: 300 Kbps NB-IoT: 30 Kbps	Download: LTE-M: 375 Kbps NB-IoT: 32 Kbps GPRS: 107 Kbps EDGE: 296 Kbps Upload: LTE-M: 375 Kbps NB-IoT: 70 Kbps GPRS: 85.6 Kbps EDGE: 236.8 Kbps	Download Max: LTE-M: 589 Kbps NB-IoT: 136 Kbps GPRS: 107 Kbps EDGE: 296 Kbps Upload Max: LTE-M: 1.2 Mbps NB-IoT: 150 Kbps GPRS: 85.6 Kbps EDGE: 236.8 Kbps	Download Max: LTE-M: 588 Kbps NB-IoT: 120 Kbps GPRS: 107 Kbps EDGE: 296 Kbps Upload Max: LTE-M: 1 Mbps NB-IoT: 160 Kbps EGPRS: 210 Kbps	Download: LTE: 10 Mbps Upload: LTE: 5 Mbps	Download: LTE: 10 Mbps Upload: LTE: 5 Mbps	Download: LTE: 10 Mbps Upload: LTE: 5 Mbps	Download: LTE: 10 Mbps HSPA+: 42.0 Mbps Upload: LTE: 5 Mbps HSPA+: 5.76 Mbps	Download: LTE: 150 Mbps HSPA+: 42.2 Mbps Upload: LTE: 50 Mbps HSPA+: 5.7 Mbps	Download: LTE: 150 Mbps HSPA+: 42.0 Mbps EDGE: 296 Kbps Upload: LTE: 50 Mbps HSPA+: 5.76 Mbps EDGE: 236.8 Kbps	Download: LTE: 150 Mbps HSPA+: 42.0 Mbps HSPA+: 5.76 Mbps	Download: LTE: 150 Mbps HSPA+: 42.0 Mbps Upload: LTE: 50 Mbps HSPA+: 5.76 Mbps	Download: LTE: 150 Mbps Upload: LTE: 50 Mbps
Hardware														
Form Factor	Skywire Interface	Skywire Nano Interface	Skywire Interface	Skywire Interface	Skywire Interface	Skywire Interface	Skywire Interface	Skywire Interface	Skywire Interface	Skywire Interface	Skywire Interface	Skywire Interface	Skywire Interface	Skywire Interface
Dimensions	29mm x 33mm x 10.5mm	22mm x 15mm x 4mm	29mm x 33mm x 10.5mm	29mm x 33mm x 10.5mm	29mm x 33mm x 10.5mm	29mm x 33mm x 10.5mm	29mm x 33mm x 10.5mm	29mm x 33mm x 10.5mm	29mm x 33mm x 10.5mm	29mm x 33mm x 10.5mm	29mm x 33mm x 10.5mm	29mm x 33mm x 10.5mm	29mm x 33mm x 10.5mm	29mm x 33mm x 10.5mm
Weight	8 grams	4 grams	8 grams	8 grams	8 grams	8 grams	8 grams	8 grams	8 grams	8 grams	8 grams	8 grams	8 grams	8 grams
Internet Protocols														
Network Stack Support	Integrated TCP/IP, UDP/IP, HTTP/HTTPS, FTP, SSL/TLS, IPv4/IPv6, NITZ, PING, PPP Stacks	NimbleLink provided AT command parser supporting: TCP/IP, UDP/IP, IPv4/IPv6, PING, Roadmap for TLS 1.2 and MQTT	Integrated TCP/IP, UDP/IP, HTTP/HTTPS, FTP/SFTP, SSL/TLS, IPv4/IPv6, NITZ, PING, MQTT, PPP Stacks	Integrated TCP/IP, UDP/IP, HTTP/HTTPS, FTP/SFTP, SSL/TLS, IPv4/IPv6, NITZ, PING, MQTT, PPP Stacks	Integrated TCP/IP, UDP/IP, HTTP, FTP, SSL/TLS, IPv4/IPv6, NITZ, PPP Stacks	Integrated TCP/IP, UDP/IP, HTTP, FTP, SSL/TLS, IPv4/IPv6, NITZ, PPP Stacks	Integrated TCP/IP, UDP/IP, HTTP, FTP, SSL/TLS, IPv4/IPv6, NITZ, PPP Stacks	Integrated TCP/IP, UDP/IP, HTTP, FTP, SSL/TLS, SMTP, IPv4/IPv6, NITZ, PING, PPP Stacks	Integrated TCP/IP, UDP/IP, HTTP, FTP, SSL/TLS, SMTP, IPv4/IPv6, NITZ, PING, PPP Stacks	Integrated TCP/IP, UDP/IP, HTTP, FTP, SSL/TLS, SMTP, IPv4/IPv6, NITZ, PING, PPP Stacks	Integrated TCP/IP, UDP/IP, HTTP, FTP, SSL/TLS, SMTP, IPv4/IPv6, NITZ, PING, PPP Stacks	Integrated TCP/IP, UDP/IP, HTTP, FTP, SSL/TLS, SMTP, IPv4/IPv6, NITZ, PING, PPP Stacks	Integrated TCP/IP, UDP/IP, HTTP, FTP, SSL/TLS, SMTP, IPv4/IPv6, NITZ, PING, PPP Stacks	Integrated TCP/IP, UDP/IP, HTTP, FTP, SSL/TLS, SMTP, IPv4/IPv6, NITZ, PING, PPP Stacks
SMS	SMS over GPRS	SMS supported	SMS supported	SMS supported	SMS supported	SMS over SGs	SMS over IMS and SGs	SMS over IMS	SMS over IMS	SMS over IMS	SMS over IMS and SGs	SMS over IMS	SMS over IMS	SMS over IMS
Location														
GNSS	GPS, GLONASS	GPS	GPS, GLONASS, Beidou/Compass, Galileo, QZSS	GPS, GLONASS, Beidou, Galileo	GPS, GLONASS, Beidou, Galileo, QZSS	N/A	N/A	N/A	GPS, Glonass, Beidou, Galileo, and QZSS	N/A	N/A	GPS, Glonass, Beidou, Galileo, QZSS	GPS, Glonass, Beidou, Galileo, and QZSS	GPS, Glonass, Beidou, Galileo, and QZSS
Power Supply														
Supply Voltage	3.5V - 4.3V (3.8V nominal)	3.3V to 5.5V (3.8V nominal)	3.4V to 4.3V (3.8V nominal)	2.5V to 4.8V (3.8V nominal)	3.4V to 4.2V (3.8V nominal)	3V - 5.5V (3.8V nominal)	3V - 5.5V (3.8V nominal)	3V - 5.5V (3.8V nominal)	1.65V - 5.5V	3V to 5.5V (3.8V nominal)	3.4V - 4.2V (3.8V nominal)	3.4V - 4.2V (3.8V nominal)	1.65V - 5.5V	3.0V - 5.5V
I/O Voltage	1.65V - 5.5V	1.7V - 3.6V	1.65V - 5.5V	1.65V - 5.5V	1.65V - 5.5V	1.65V - 5.5V	1.65V - 5.5V	1.65V - 5.5V	1.65V - 5.5V	1.65V - 5.5V	1.65V - 5.5V	1.65V - 5.5V	1.65V - 5.5V	1.65V - 5.5V
Current Consumption	Average 110 mA Peak 215 mA Idle 19 mA Sleep N/A	Average TBD mA Peak TBD mA Idle TBD mA Sleep TBD uA PSM 5uA eDRX 19uA	Average 130 mA Peak 900 mA Idle 19 mA Sleep 680 uA	Average TBD mA Peak TBD mA Idle TBD mA Sleep TBD uA	Average TBD mA Peak TBD mA Idle TBD mA Sleep TBD uA	Average 135 mA Peak 335 mA Idle 35 mA Sleep 18 mA	Average 177 mA Peak 300 mA Idle 54 mA Sleep 24 mA	Average 135 mA Peak 700 mA Idle 48 mA Sleep 8.6 mA	Average N/A Peak N/A Idle N/A Sleep N/A	Average 66 mA Peak 229 mA Idle 14 mA Sleep 11 mA	Average 135 mA Peak 225 mA Idle 40 mA Sleep N/A	Average TBD mA Peak TBD mA Idle TBD mA Sleep TBD	Average N/A Peak N/A Idle N/A Sleep N/A	Average N/A Peak N/A Idle N/A Sleep N/A
Interfaces														
Type	UART, USB (USB 2.0 compliant)	Multiple UART, SPI, I2C, GPIO	UART, USB (USB 2.0 compliant)	UART, USB (USB 2.0 compliant)	UART, USB (USB 2.0 compliant)	UART, USB (USB 2.0 compliant)	UART, USB (USB 2.0 compliant)	UART, USB (USB 2.0 compliant)	UART, USB (USB 2.0 compliant)	UART, USB (USB 2.0 compliant)	UART, USB (USB 2.0 compliant)	UART, USB (USB 2.0 compliant)	UART, USB (USB 2.0 compliant)	UART, USB (USB 2.0 compliant)
USB Driver Support	OS: Windows 7 Windows 8 Windows 10 Linux Drivers: PPP NMEA AT Console	N/A	OS: Windows XP, Windows Vista, Windows 7, Windows 8, Windows 10, Linux Drivers: PPP QMI AT Console	OS: Windows 7/8/10, Windows CE 5/6/7, Linux 2.6/3.X/4.1-4.14, Android 4/5/6/7/8 Drivers: PPP QMI AT Console RIL Driver	OS: Windows 10, Linux 4.15 Drivers: PPP AT Console ECM MBIM	OS: Windows XP Windows Vista Windows 7 Windows 8 Windows 10 Linux Drivers: MBIM PPP NCM ACM AT Console	OS: Windows XP Windows Vista Windows 7 Windows 8 Windows 10 Linux Drivers: MBIM PPP NCM ACM AT Console	OS: Windows XP Windows Vista Windows 7 Windows 8 Windows 10 Linux Drivers: PPP ECM ACM AT Console	OS: Windows 7 Windows 8 Windows 10 Linux Drivers: MBIM PPP RNDIS ECM QMI NMEA AT Console	OS: Windows XP Windows Vista Windows 7 Windows 8 Windows 10 Linux Drivers: MBIM PPP NCM ACM AT Console	OS: Windows 7 Windows 8 Windows 10 Linux Drivers: MBIM PPP RNDIS ECM QMI NMEA AT Console	OS: Windows 7 Windows 8 Windows 10 Linux Drivers: MBIM PPP RNDIS ECM QMI NMEA AT Console	OS: Windows 7 Windows 8 Windows 10 Linux Drivers: MBIM ECM RIL WMI PPP RmNet QMI NMEA AT Console	OS: Windows 10 Linux Drivers: MBIM ECM RIL WMI PPP RmNet QMI NMEA AT Console
RF	Primary (U.FL), Rx Diversity (U.FL)	Primary, SISO DL (U.FL)	Primary, SISO DL (U.FL)	Primary, SISO DL (U.FL)	Primary, SISO DL (U.FL)	Primary (U.FL), Rx Diversity (U.FL)	Primary (U.FL), Rx Diversity (U.FL)	Primary (U.FL), Rx Diversity and MIMO DL 2x2 (U.FL)	Primary (U.FL), Rx Diversity and MIMO DL 2x2 (U.FL)	Primary (U.FL), Rx Diversity and MIMO DL 2x2 (U.FL)	Primary (U.FL), Rx Diversity and MIMO DL 2x2 (U.FL)	Primary (U.FL), Rx Diversity and MIMO DL 2x2 (U.FL)	Primary (U.FL), Rx Diversity and MIMO DL 2x2 (U.FL)	Primary (U.FL), Rx Diversity and MIMO DL 2x2 (U.FL)
SIM														
Type	3FF SIM card slot	Integrated Verizon SIM, support for external SIM sockets	Dual MFF2 Verizon and 3FF standard	Dual MFF2 Verizon and 3FF standard	Integrated Verizon SIM, additional 3FF SIM slot	3FF SIM card slot	3FF SIM card slot	3FF SIM card slot	Integrated Verizon SIM, external 3FF slot	3FF SIM card slot	3FF SIM card slot	3FF SIM card slot	Dual MFF2 Verizon and 3FF standard	Integrated Verizon SIM, external 3FF slot
Approvals														
Regulatory Certifications	GCF, PTCRB, CE/RED, FCC, IC, Anatel	PTCRB, FCC, IC	PTCRB, CE/RED, FCC, IC	PTCRB, CE/RED, FCC, IC	PTCRB, CE/RED, FCC, IC	PTCRB, FCC, IC	FCC	FCC	FCC, IC, PTCRB	PTCRB, FCC, IC	CE/RED	N/A	FCC, IC, PTCRB (In Progress)	FCC, IC, PTCRB (In Progress)
Carrier Approvals	AT&T, Rogers, Telus	Verizon	AT&T, Rogers (In-Progress), Telus, Verizon	AT&T, Rogers, Telus, Verizon, and more	AT&T, Rogers, Telus, Verizon, and more	AT&T, Rogers (In-Progress), Telus	Verizon	Verizon	AT&T (In-Progress), Verizon (In-Progress), Rogers (In-Progress), Telus (In-Progress)	AT&T, Verizon		TBD	AT&T (In-Progress), Rogers (In-Progress), Telus (In-Progress), Verizon	AT&T (In-Progress), Rogers (In-Progress), Telus (In-Progress), Verizon (In-Progress)
Compliance	RoHS compliant	RoHS compliant	RoHS compliant	RoHS compliant	RoHS compliant	RoHS compliant	RoHS compliant	RoHS compliant	RoHS compliant	RoHS compliant	RoHS compliant	RoHS compliant	RoHS compliant	RoHS compliant
Temperature Range														
Industrial Grade	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
Support and Warranty														
	1 Year standard warranty	1 Year standard warranty	1 Year standard warranty	1 Year standard warranty	1 Year standard warranty	1 Year standard warranty	1 Year standard warranty	1 Year standard warranty	1 Year standard warranty	1 Year standard warranty	1 Year standard warranty	1 Year standard warranty	1 Year standard warranty	1 Year standard warranty