

Wireless Module

VIA EMIO-2551

Full-size miniPCIe 3.75G
HSPA/UMTS wireless
broadband module



Features

- 3.75G UMTS/HSPA module
- HSDPA up to 14.4 Mb/s
- HSUPA 5.76 Mb/s
- Integrated GPS/GNSS (EMIO-2551-01A0 and EMIO-2551-03A0 only)
- Integrated SIM card slot (EMIO-2551-00A0 and EMIO-2551-01A0 only)

Specifications

Model Name	EMIO-2551 Mobile Broadband miniPCIe Module	
Wireless	HSDPA Data Rate	Up to 14.4 Mb/s
	HSUPA Data Rate	Up to 5.76 Mb/s
	UMTS/HSPA Bands	900/2100 MHz (Europe) 800/850/900/1900/2100 MHz (Global)
	GPRS/EDGE Bands	850/900/1800/1900 MHz
	WCDMA/HSDPA/HSUPA Power Class	Power Class 3 (24dB) for WCDMA/HSDPA/HSUPA mode
	GSM/GPRS Power Class	Power Class 4 (33dB) for GSM850 and EGSM 900 bands Power Class 1 (30dB) for DCS1800 and PCS1900 bands
	EDGE Power Class	Power Class E2 (27dB) for GSM850 and EGSM900 bands Power Class E2 (26dB) for DCS1800 and PCS1900 bands
GPS	Frequency	1575.42 MHz
	GNSS Features	gpsOne Gen8 of Qualcomm (GPS) Protocol: NMEA 0183
	Sensitivity	Tracking & Navigation -161dBm Reacquisition -159dBm Cold Start -147dBm
	TTF	Cold Start: (Autonomous 32s, XTRA enabled 22s) Warm Start: (Autonomous 29s, XTRA enabled 3s) Hot Start: (Autonomous 2.5s, XTRA enabled 2s)
	Accuracy	CEP-50: (Autonomous <1.5m)
3G Antenna Guideline	Impedance	50Ω nominal characteristic impedance
	Frequency	800..900MHz: (Avg. gain -1.42dBi, V.S.W.R 4.0:1 Max.) 1800..1900MHz: (Avg. gain -1.13dBi, V.S.W.R 3.6:1 Max.) 2100..2500MHz: (Avg. gain -0.96dBi, V.S.W.R 2.6:1 Max.)
	Polarization	Linear, Vertical
GPS Antenna Guideline	Antenna Type	Active antenna Gain 28dB (Typical) Noise figure 1.5dB (Maximum)
	Output V.S.W.R	1.6 (Maximum)
	Antenna Connector Type	U.FL microwave coaxial connector
General	Operating Voltage	3.3V (Typical)
	Form Factor	miniPCIe
	Interface	PCIe + USB 2.0
Mechanical	Dimension	30mm(W) x 4.9mm(H) x 50.9mm(D) (1.18" x 0.19" x 1.99")
	Weight	9.8g
Environment	Operating Temperature Condition	-30°C ~ 70°C
	Storage Temperature	-45°C ~ 90°C
Certification	Compliant	FCC, PTCRB, CE, RED



Ordering Information

Part Number	Description
EMIO-2551-00A0	3.75G HSPA/UMTS mobile broadband full size miniPCIe module with SIM slot
EMIO-2551-01A0	3.75G HSPA/UMTS mobile broadband full size miniPCIe module with GPS and SIM slot
EMIO-2551-02A0	3.75G HSPA/UMTS mobile broadband full size miniPCIe module
EMIO-2551-03A0	3.75G HSPA/UMTS mobile broadband full size miniPCIe module with GPS

Packing List

Items
EMIO-2551 module
3G antenna
3G antenna cable with washer and nut
GPS active antenna (EMIO-2551-01A0 & EMIO-2551-03A0 only)
GPS antenna cable with washer and nut (EMIO-2551-01A0 & EMIO-2551-03A0 only)