CEL-FI GO G51
2110~3800 MHz

Smart Signal Booster / 5G / NSA/SA

Key Features

The **Cel-Fi GO G51** Smart Signal Booster is designed to solve cellular coverage problems for voice and data. With up to 100 dB of gain, it is the most powerful 5G carrier grade solution available. The **Cel-Fi GO G51** supports up to 100 MHz bandwidth in band n78. The **G51** is auto-configurable based on SIB reading and equipped with digital echo cancellation. Our commitment is to protect the operator's network, deliver the best cellular performance, and be the easiest solution to install.

Advantages

- ☑ Improves 5G NSA/SA coverage
- ☑ Data and voice support in one solution
- ☑ Up to 100 MHz bandwidth in band n78, 20 MHz in other bands
- ☑ Auto-configure based on SIB reading
- ☑ Digital echo cancellation

Specifications

System Features
Smart Signal Booster
Multiple Installation options supported
LED User Indicators for Status
Simple, built-in, self-test
Support for Cel-Fi WAVE mobile application
End-to-end cellular communication encryption without additional risk of vulnerability
Convection cooling

Wireless Features
Carrier Grade, Smart Signal Booster
5G NSA/SA
100 dB gain
Seven (7) RF front ends (check model number for bands specifics)
120 MHz relay bandwidth
Relays two (2) channels simultaneously (100MHz on band n78)
SMA RF Connectors for Donor and Server, for flexible deployment

Mobile Network & Network Protection Features
Works with any user equipment (UE) on the configured network (no whitelist/blacklist)
Provider-specific system: Cel-Fi distributes and boosts service only for the Operator PLMN-IDs for which the device is authorized and configured
Secure and ciphered provisioning
System intelligence accurately establishes proper safe uplink power in real time
Uplink Muting Mode automatically shuts down uplink cellular transmissions when no active user equipment is detected
System shuts down upon failure detection
Nextivity purpose-built, high-performance, six core ASIC processor, provides best performance at lowest cost

Wireless Benefits

Distribute and boost cellular coverage
5G NSA/SA support, Voice and Data, network safe
LED cues provide visual feedback for ease of setup and status
Supports peaceful co-existence with guard band NB-IoT deployments

System Benefits

Clear and reliable cellular connections within coverage area up to 3,000 m2 per system
Highest gain (100 dB) provides best coverage footprint
Advanced Echo-Cancelation allows Cel-Fi to transmit more power without feedback interference
Subscriber devices (UE) require less transmit power for improved battery life
Linearity eliminates IMD desense issues
Dynamic gain control ensures maximum gain — best coverage — at all times in ever changing RF environments, without user intervention

Mobile Network Benefits

Flexibly deploy on 5G NR, LTE, VoLTE, LTE-Advanced, NB-IoT and WCDMA networks
Automatically adjusts channel bandwidths
UE control is transparent and remains centralized in the network core (no gateways or third-party software)

Compliance

3GPP TS 25.143 Rel.13
3GPP TS 36.143 Rel.13
3GPP TS 38.104 Rel 16
BS type 1-C , Local Area BS, for Tx emissions
CE
ACMA (Australia)
R-NZ (New Zealand)

System Management

Via Cel-Fi WAVE cloud Portal	
Cel-Fi WAVE Portal capabilty	Status (list and map); Settings; Commissioning; Reporting
	Alarms & Notifications ; Diagnostics ; Software Updates

Antenna Ports (Donor and Server)

Impedance	50 Ohms
Port-to-port Isolation	>110 dB
Connector	SMA FEMALE
Return Loss	<-8 dB

Environmental

Operating temperature	0°C to 40°C
IP Rating	20
Relative humidity	0% to 95%, non-condensing
RoHS (European and China compliant)	
CE	
Convection Cooling	

Power Consumption

40W (max)

Dimensions

Height	***Width***	***Length***	***Weight***
106 mm	63 mm	270 mm	2Kg

Installation

Wall-mounting hardware included

Radio Performance

Downlink Power / Per Band		*Uplink Power / Per Band*	
Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 41, 71, 20, 28L	20 dBm	Bands 1, 2, 3, 4, 7, 41	22 dBm
Band n78	27 dBm	Bands 5, 8, 12, 13, 20, 28L, 71	20 dBm
		Band n78	24 dBm

Radio

Noise figure	8 dB
Return Loss	-8 dB

Group Delay

LTE 15 MHz, 20 MHz = 5.5 us

Band Variations

Band	*Downlink*	*Uplink*	*Bandwidth*
1	2110–2170 MHz	1920–1980 MHz	Up to 20 MHz per carrier, 1 carrier
2	1930–1990 MHz	1850–1910 MHz	Up to 20 MHz per carrier, 1 carrier
3	1805–1880 MHz	1710–1785 MHz	Up to 20 MHz per carrier, 1 carrier
4	2110–2155 MHz	1710–1755 MHz	Up to 20 MHz per carrier, 1 carrier
5	869–894 MHz	824–849 MHz	Up to 15 MHz per carrier, 1 carrier
7	2620–2690 MHz	2500–2570 MHz	Up to 20 MHz per carrier, 1 carrier
8	925–960 MHz	880–915 MHz	Up to 15 MHz per carrier, 1 carrier
12	728–746 MHz	698–716 MHz	Up to 10 MHz per carrier, 1 carrier
13	746–756 MHz	777–787 MHz	Up to 10 MHz per carrier, 1 carrier
28L	758–788 MHz	703–733 MHz	Up to 20 MHz per carrier, 1 carrier
41	2496–2690 MHz (TDD)		Up to 20 MHz per carrier, 1 carrier
71	617–652 MHz	663–698 MHz	Up to 20 MHz per carrier, 1 carrier
n78	3300 - 3800 MHz (TDD NR)		100 MHz per channel (SISO)

Band configuration

Model Numbers	*Power*
SEL000582	1, 3, 5, 7, 8, 20, n78
SEL000583	1, 3, 5, 7, 8, 28L, n78
SEL000584	2, 4, 5, 12, 13, 41, 71, n78

For more information: ***www.see-critical.com***

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