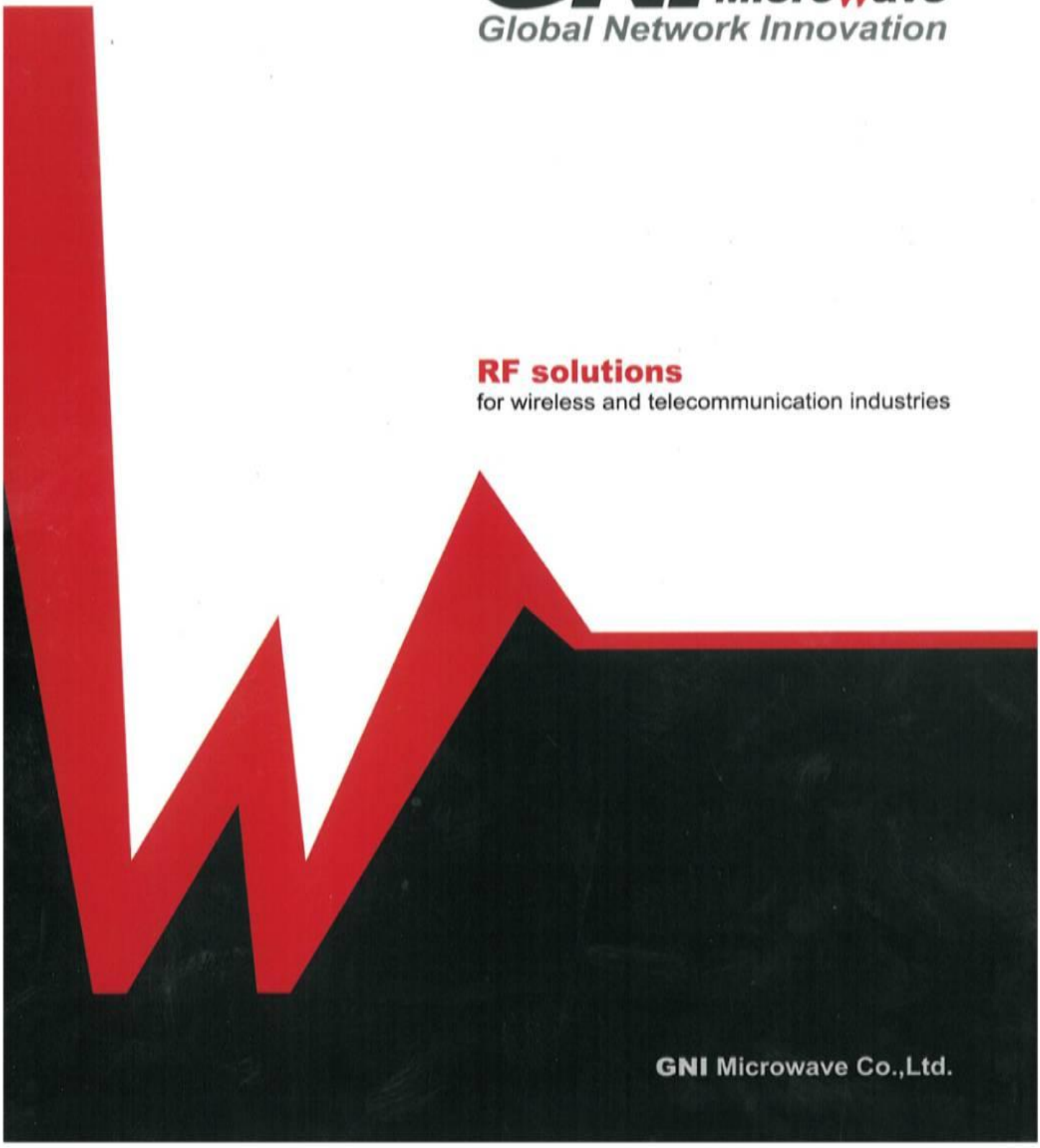
GNI MicroWave

Global Network Innovation



RF solutions

for wireless and telecommunication industries

GNI Microwave Co.,Ltd.

About GNI

GNI is a company consisting of the best talent with much experience and the most advanced technology in the wireless communication industries. We have been making efforts to produce better products to satisfy our customers based on our outstanding technology by constant research and development. GNI Microwave is one of the leading suppliers of RF solutions for wireless and telecommunication industries. The company focuses on developing RF devices, modules and subsystems for mobile communication (CDMA, PCS, WCDMA, GSM, Wimax). The company's facility is fully furnished with the state-of-the-art R&D, productions and quality control equipment, including RF design and test equipment, environmental test laboratory, burn-in room, and machining centers. The company is ISO 9001, ISO14001 certified and maintains a strict quality control system in accordance with the international quality standards.

Certification and Industrial property right

CERTIFICATION

- ISO 9001 Certified
- ISO 14001 Certified

STATUS OF CORPORATE ANNEX LABORATORY

- Selected as a INNO-BIZ
- Selected as a promising company
- Selected as a venture company
- Corporate Annex Laboratory
- Certified as a CLEAN Workplace

PATENT CERTIFICATES

- Data transfer device for two-way radio communication and its method
- Three-dimensional stacked circuit device and its manufacturing method
- Structure of very large scale integration circuits for one-dimensional wavelet transform

Registered ISO 9001:2000 UKAS QUALITY MANAGEMENT 127

INNOBIZ

특허청

Quality and Environment Policy

"Supplying the best products and service timely to satisfy our customers with the quality-oriented spirit and the environmental spirit"

We, GNI Microwave Inc., understand and appreciate the importance and value of environmental preservation in every field and area and take the lead in preserving the clean natural environment by minimizing environmental impacts caused by management activities through establishment of environmental management systems

Quality Policy	Environment Policy
Zero percent faulty process Zero percent customer complaints Zero percent safety management	20% Reduction of waste 10% Reduction in energy consumption

[Quality Objectives Promotion Strategy]

1. We, GNI Microwave Inc., distribute to the world by "supplying the best products and the best service for our customers in time" as a developer, manufacturer and vendor.
2. Our quality system described in the quality manual follows the requirements of ISO9001:2000, and I. as a representative director of GNI, will continuously improve its efficiency through periodic examination into appropriateness of our quality management system.
3. All our staffs should understand our quality policy and continually improve their relevant work processes for efficient performance.

[Environmental Objectives Promotion Strategy]

1. Our executives and the other staffs establish and carry out environmental improvement objectives and promotion plans by building up environmental management system based on ISO 14001:2004 International Environmental Management Standards to improve environment and to prevent pollution.
2. Our executives and the other staffs take the initiative in preserving our planet, the earth, by enhancing environment friendliness to perform our management activities giving priority to preventing all environmental problems and improving environment

Product

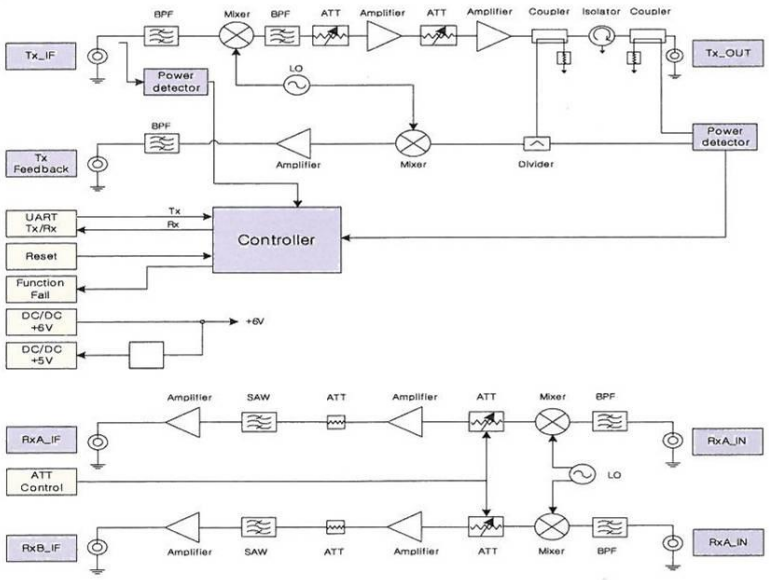
PASSIVE COMPONENTS	ACTIVE MODULES	SUBSYSTEM
FILTER	LNA	TMA
COMBINER	UDCU	(Accessories : Bias Tee ,
SPLITTER	RF SWITCH	Power Distribution Unit)
COUPLER	DETECTOR (VSWR)	BTS FRONT-END UNIT
ARRESTER		
ATTENUATOR		

UDCU

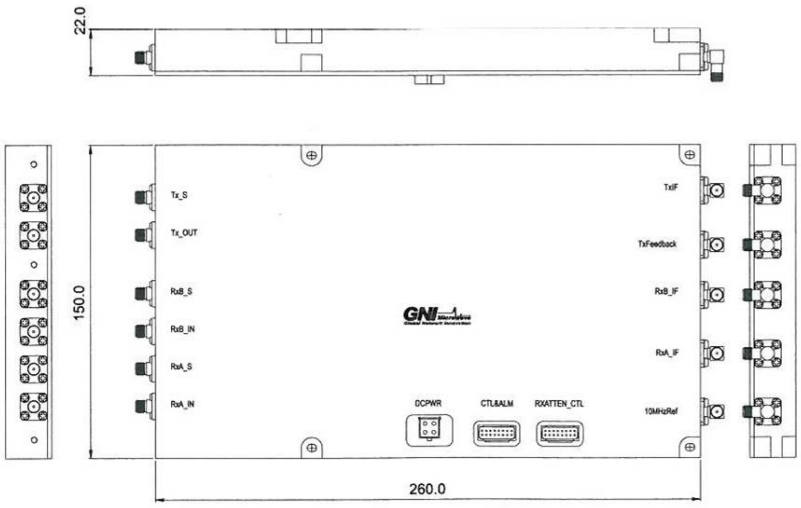
FEATURES

- Up-converting from IF signal of down-link to RF signal
- Down-Converting from RF signal of up-link to IF signal
- Reporting the module status and controlling the gain of RF path

BLOCK DIAGRAM



MECHANICAL DIAGRAM



SPECIFICATION

1.1. Tx

PARAMETER		SPECIFICATION		COMMENT
Frequency Range		1860.625 ~ 1869.375MHz		
Output Power		18.5dBm / 8.75MHz		
IF to RF Conversion Gain		33.5 ± 2dB		
Gain Flatness		BW 10MHz	0.5dB Max.	
Return Lose		18dB Min.		
Tx Sample		-35dBc ± 1dB		
Spectrum Mask	@ 885KHz	-45dBc / 30KHz		
	@ 1.98MHz	-55dBc / 30KHz		
	@ 2.25MHz	≤ -46dBm / 1MHz		

1.2. Rx

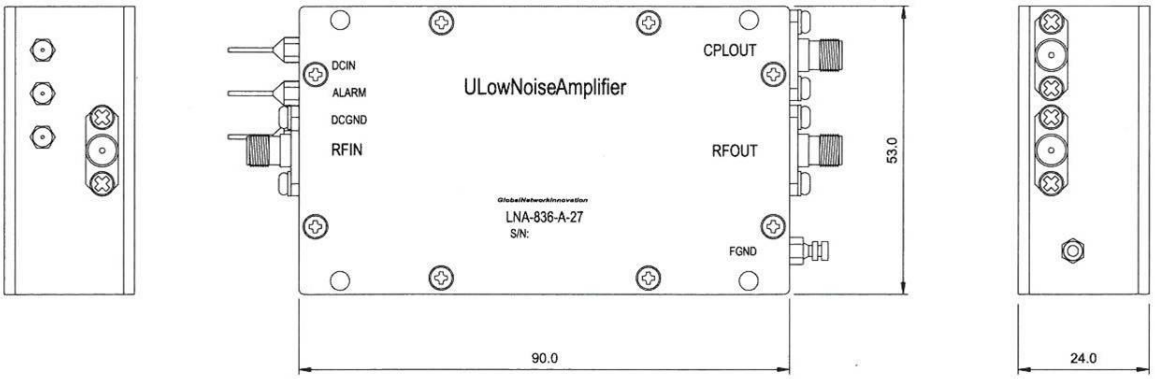
PARAMETER		SPECIFICATION	COMMENT
Frequency Range		1770.625 ~ 1779.375MHz	
Dynamic Range		-35 ~ -90.5dBm	
Maximum Receive Signal without Damage		+10dBm	
Input Port Reflection		18dB min.	
RF to IF Conversion Gain		7 ± 2dB	
Noise Figure		20.0dB Max.	
Pass-band Ripple		1.0dB Max.	
Gain Control Range		15.5dB	Control Step: 0.5dB
Out-of-band Rejection	@ F_c ± 5.5 MHz	−3dBc	
	@ F_c ± 7.5 MHz	-40dBc	
IF Harmonics Rejection		-95dBc	
P1dB	Rx_IN --> Rx _IF	0dBm Min	
IIP3	Rx_IN --> Rx _IF	10dBm Min.	
Operating Temperature		-10 ~ +70℃	
Connectors		SMA R/A(F) , SMA(F)	
Size (mm)		260.0 X 150.0 X 22.0	

LNA (Low Noise Amplifier)

FEATURES

- Excellent gain flatness and Noise figure
- Auto alarm function
- Operating frequency ranges and gain are available

MECHANICAL DIAGRAM



SPECIFICATION

PARAMETERS		SPECIFICATIONS	COMMENT
Frequency Range		824.0 ~ 849.0MHz	
Gain		40.5dB ± 1.0dB	
Gain Flatness		0.25dB Min.	
Return Loss		20.0 Min.	
Noise Figure		1.0dB Max.	
CPL OUT		20.0dB ± 1.0dB	
Isolation		20dB Min.	
1dB Compression Point		27.0dBm Min.	
3rd Order Intercept Point		40.0dBm Min.	
Isolation(RF OUT→RF IN)		-40dB Min.	
Coupler Isolation(CPL OUT→RF OUT)		-37dB Min.	
DC Power	Voltage	20~29V	
	Current	350mA ≥ (27V Operating)	
Operating Temperature		-30℃~70℃	
Connectors		SMA (F)	
Size (mm)		90.0 x 53.0 x 24.0	