

# Solid-State Radio Module

GKP-2781

## User's Manual

2018 November



# PREFACE

## BEFORE OPERATION






### ■ GRAPHIC INDICATION

Various graphic indications are included in this manual and are shown on the equipment so that it can be operated safely and correctly and prevent any danger to the operator and/or to other persons and any damage to property during operation. Such indications and their meanings are as follows.

Understand them before reading this manual.

	<b>WARNING</b> This indication is shown where it indicates that any person will be in danger of seriously injured or loss of life if this indication is neglected and the equipment are not operated correctly.
	<b>CAUTION</b> This indication is shown where it indicates that any person will be in danger of seriously injured or loss of life if this indication is neglected and the equipment are not operated correctly.

### ■ EXAMPLES OF GRAPHIC INDICATION

	The $\Delta$ mark represents CAUTION (including DANGER and WARNING). Detailed contents of CAUTION ("Electric Shock" in the example on the left.) is shown in the mark.	
		The $\ominus$ mark represents prohibition. Detailed contents of the prohibited action ("Disassembling Prohibited" in the example on the left.) is shown in the mark.
		The $\bullet$ mark represents instruction. Detailed contents of the instruction ("Disconnect the power plug" in the example on the left.) is shown in the mark.

•PRECAUTIONS



## WARNING



Do not touch Transmitter/ Receiver.

Transmitter/ Receiver is a moving part, and it may cause injury.

For internal inspection and repair work of equipment components,  
consult with our branch office, branch shop, sales office, or our  
distributor in your district.

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

This device complies with Part 90 of the FCC rules.

## Table of content

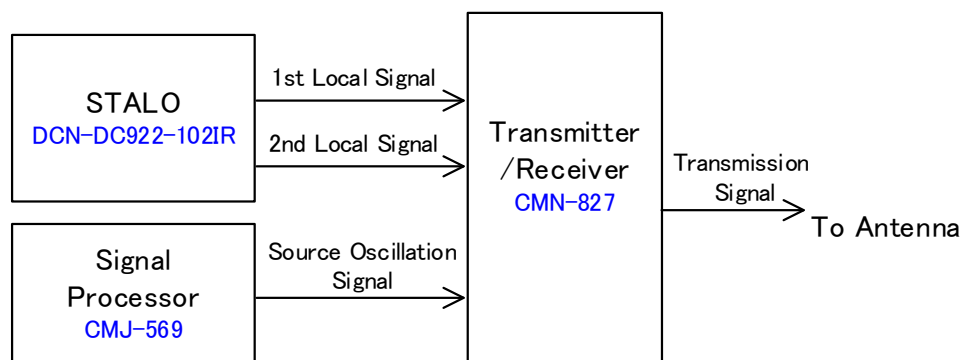
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## 1. General

GKP-2781 is solid-state radio module of compact weather radar. It is composed with STALO, Signal Processor, and Transmitter/Receiver Module. The source oscillation signal is generated in Signal Processor. Transmitter/Receiver up-convert the source oscillation to the transmission frequency by mixing it with the local signals generated in STALO.

Since this is solid-state type, it does not require either pre-heat or tune-up. Also, it is possible to keep stable transmission and low power consumption for longer period of time.

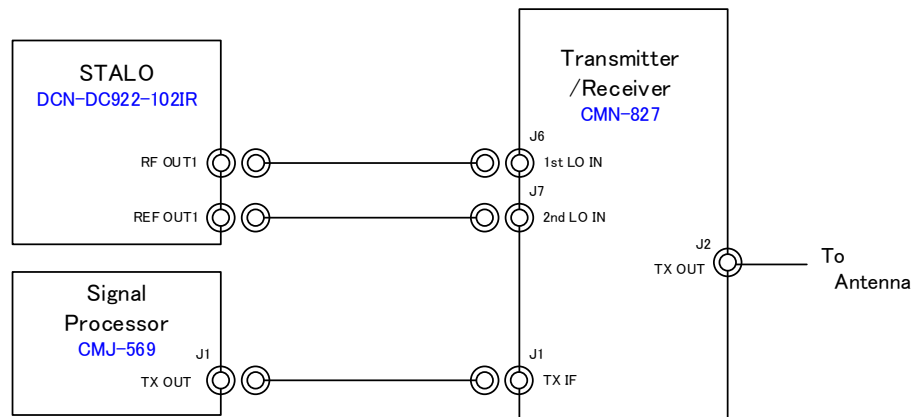
Details of the components are shown in the next page.



Block Diagram of transmission

## 2. Specifications

### 2.1 Interface



	No	Port Name	Detail	Spec.	Remarks
STALO					
		RF OUT1	1st Local Signal Output	SMAJ	
		REF OUT1	2nd Local Signal Output	SMAJ	
Signal Processor					
	J1	TX OUT	IF Signal Output	SMAJ	
Transmitter/Receiver					
	J1	TX IF	TX IF Signal Input	SMAJ	
	J2	TX OUT	TX RF Signal Input	SMAJ	
	J6	1st LO IN	1stLO Input	SMAJ	
	J7	2nd LO IN	2ndLO Input	SMAJ	

### 2.2 Performance

No	Item	Specification	Remarks
1	Transmission frequency	9700 MHz, 9800 MHz	The transmission RF bandpass filter has a bandwidth as low as a little lower than 300MHz
2	Transmission / Receive IF frequency	60MHz	
3	Duty	10% or less	
4	OBW	8MHz or less	
5	Transmit RF output	130 W (Peak)	
6	Operating temperature range	-20°C~+50°C	
7	Storage temperature range	-30°C~+60°C	
8	Power Supply	DC12V: STALO, Signal Processor DC+24V: Transmitter/Receiver	