

# Points of Interface (POI)

## Model No.TSPOI-7I3O

Tone Spread point of interface (POI) is a platform for multi-system combination which combines different carrier signals and output them to the common distributed antenna system. At the same time, it distributes the different uplink signals to their each system, realizing multi-band and multi-signal combination and avoiding redundant construction of distributed antenna system. This is a feasible and efficient measure of realizing the coverage by different signals from multi-networks.

The rapid growth in the number of base station sites highlights the necessity for network operator co-location. The potential for interference between operators is vast and requires the application of modern filtering and combining technologies to permit the continued growth of existing cellular networks and introduction of new ones.

Indoor coverage becomes feasible by using a POI combiner which combines signals/carriers from many cellular providers. POI combiner should provide good isolation (in-band & out-band), good power handling ability and excellent IMD to generate a harmony combination with less interference.

### POI applications

- Malls & high-rise buildings
- Tunnels
- Underground stations
- Factories



\*Pictures are for reference only.

### Tone Spread POI offers many advantages:

- Customer has flexibility in determining number of input and output ports.
- Monitoring port for each output port is available upon customer request. This monitoring port will facilitate customer to observe combiner performance at any time.
- VSWR alarm monitoring also available upon customer request for each input/output port in which customer is able to detect any network failure.
- High isolation (in-band & out-band), good power handling ability, and excellent IMD.
- Tone Spread is also ready to provide maintenance service to ensure that combiner still performs well or to detect any failure beforehand.

## Data Sheet

- 1、Model Number : TSPOI-7I3O  
 2、Product Name : LTE Band 41 / LTE Band 1 / LTE Band B3 / LTE Band 8 / LTE Band 40  
 Police/ Fire Department  
 7 Input/3 Output POI  
 3、Specification :

### Frequency Allocation (MHz)

Operators Band	Frequency Range(MHz)
F1: LTE Band 41	2496 - 2690
F2: LTE Band 1	1920-1980 / 2110-2170
F3: LTE Band B3	1710-1785 / 1805-1880
F4: LTE Band 8	880-915/925-960
F5: LTE Band 40	2300-2400
F6: Police	410-430
F7: Fire Department	157-165

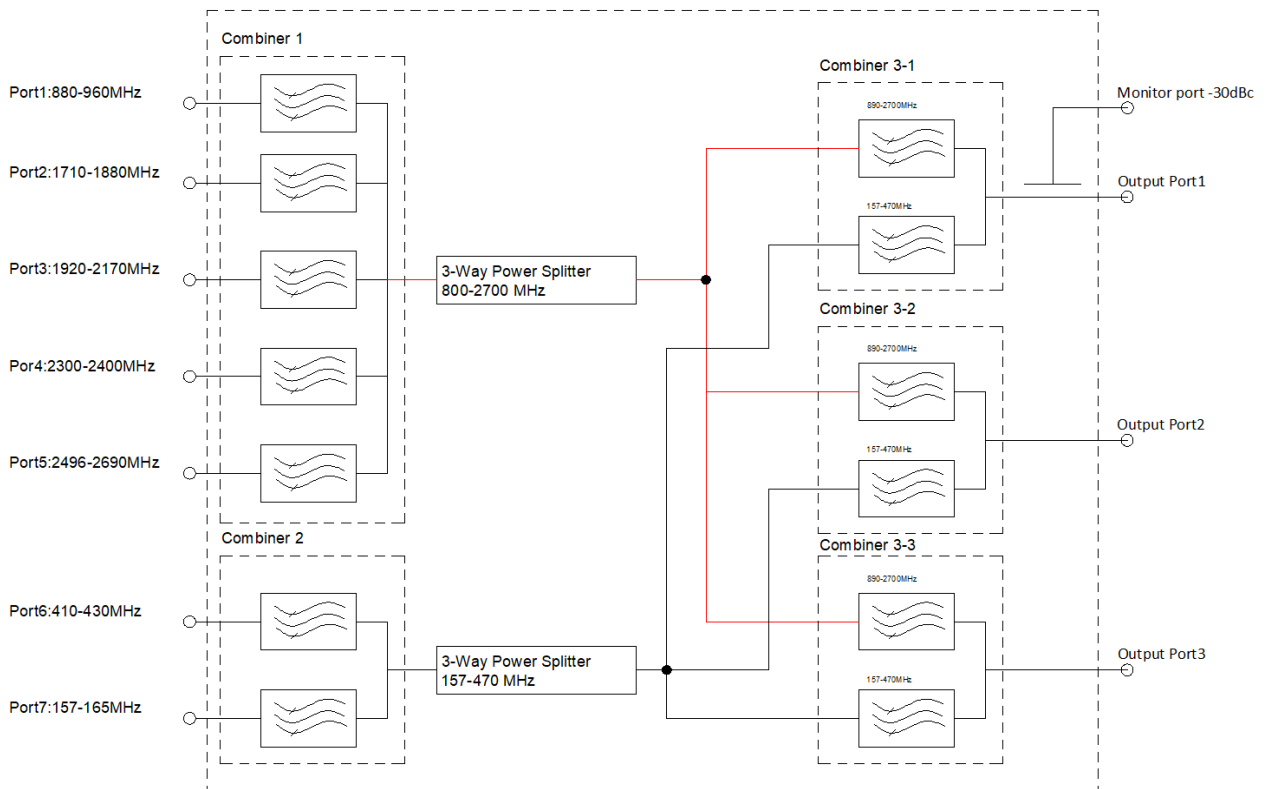
### RF

Item	Specification
Input Ports	7 (Duplexed) operator name is shown at each input port
Output Ports	3 (Duplexed)
Impedance ( $\Omega$ )	50
Monitors Ports	1 (Duplexed) (30+9)+3@F1,F2,F3,F4,F5→ Monitor port (33+9)+3@F6→ Monitor port (35+9)+5@F7 → Monitor port (marked to the coupling port with actual measured values)
Return Loss (dB)	$\geq 18$
Insertion Loss (dB)	$\leq 7$ (Try to achieve 7dB)
Isolation (dB)	$\geq 80$ @ Cross Band
IP3 (dBc)	$\leq -150$ @ +43dBm $\times 2$ Test:(Band8 Band3 Band1 Band41)
Connectors	DIN-F
Input Power (W)	$\leq 150$ W(Avg.)
Operating Temp. ( $^{\circ}$ C)	0 ~ +55

Storage Temp. (°C)	-40 ~ +85
Relative Humidity (%)	5 - 95%
Application	Indoor
Connector	Input port x7 Output port x3 DIN-Female
Dimensions	19 inch standard chassis ( With wall mounting accessories )
Installation	Rack Mount / Wall Mount
Weight	TBD
Packing	1 Pc/Box

\*Frequency can be modified upon customer requests.

### Schematic Diagram



\*Pictures are for reference only.