

## Lossless GPS/GNSS Signal Splitter

for GPS/GNSS signal distribution

Microlab's Dx-42FN-NL Signal Splitters can be used to distribute GPS/GNSS RF signals from a single antenna to 2 or 4 devices. They are designed for applications where extra gain is needed in the RF path. The splitter has an LNA with an extremely low noise figure and band-pass filter. The splitters do not require any external power supply and operate directly from the power provided by the GPS receiver. The other outputs are DC terminated

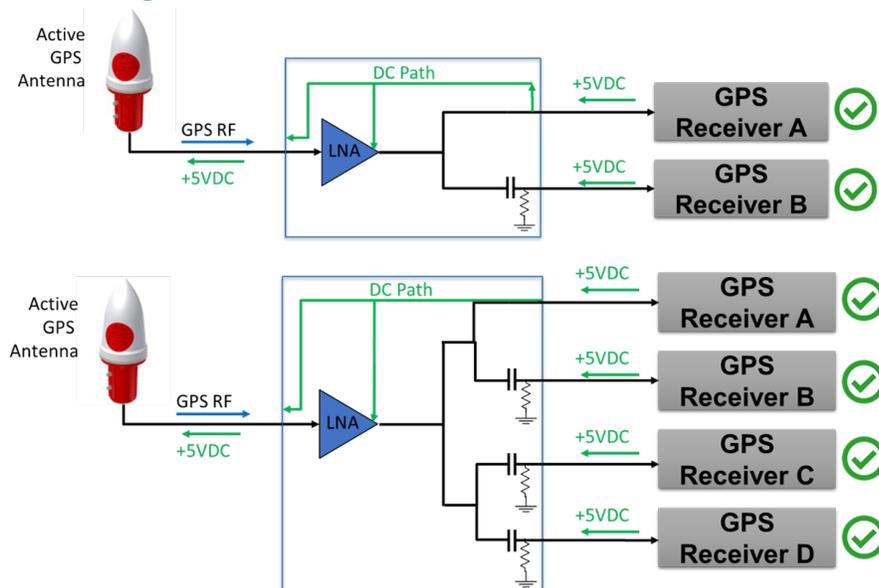
### Features

- 2 and 4-way splitters with gain and filtering
- Small form factor with N-type connectors
- Includes all GPS/GNSS L1/E1/G1 bands
- Extremely low noise figure
- No external power supply required
- Outdoor IP67 rated
- Works with active and passive GNSS antennas

### Applications

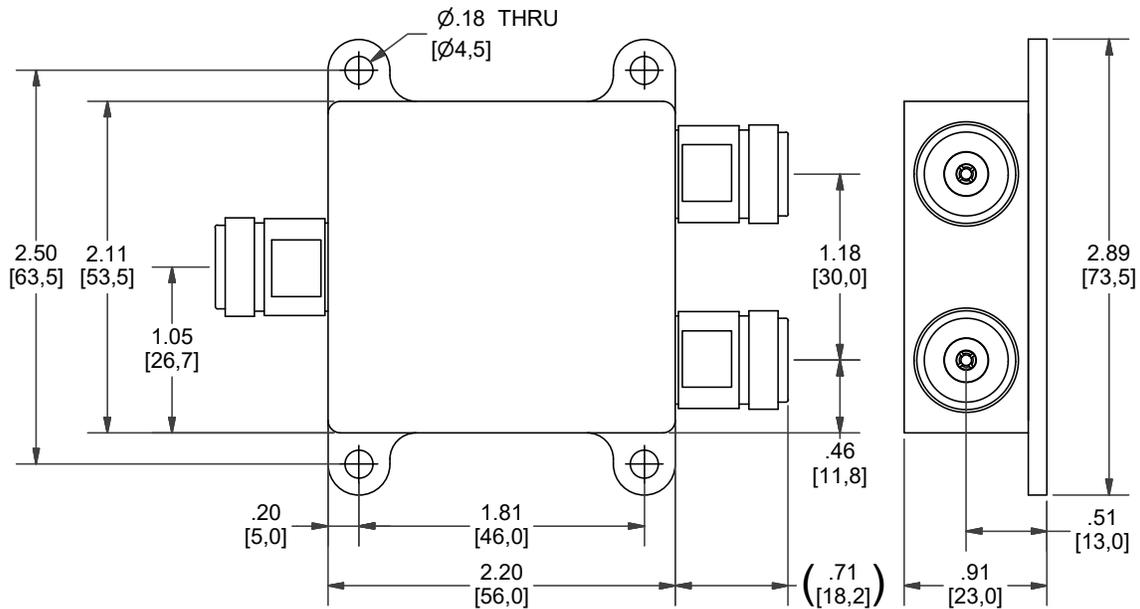
- Signal distribution for cellular communications for UTC synchronization
- Compact splitter for small cell sites

### 2 & 4-way Connection Diagrams



SPECIFICATIONS	D2-42FN-NL	D4-42FN-NL	Comments
Description	1 to 2 Splitter	1 to 4 Splitter	
# RF output ports	2	4	
3dB Bandwidth	1.559 to 1.610GHz		All GNSS L1/G1/E1 Band
Gain @ 1575.42MHz	0 dB		
VSWR (max)	2.0:1		
Impedance	50 ohms		
Gain Flatness (max)	±1.0 dB		Single port
Amplitude Balance (max)	±1.0 dB		Port to port
Output Isolation (min)	20 dB		Port to port
Noise Figure (max)	5 dB		
Output IP3 (min)	-24 dBm		
Input P1dB (min)	-32 dBm		
DC current consumption	5 mA min, 10 mA max		At +5 V
DC load to output ports	200 ohm, 0.25 W		RF out 2 and above
RF Connectors	SMA(f) or N(f)		Suffix -S/-N for connector
Max RF input without damage	-10 dBm		
DC voltage for LNA	+5.5 V max +3.6 V min		On RF port 1, other ports DC terminated
Temperature range	-40 °C to +70 °C		
Environmental	Outdoor, IP67		

## D2-42FN-NL - Mechanical Outline



### DISCLAIMER:

GPS and GNSS re-transmission to an antenna requires regulatory approval. These approvals are granted on an individual basis by regulating bodies. Microlab cannot grant these approvals, and cannot be held responsible for violating these regulations using the system.

The FCC requires commercial users within the US to acquire and maintain a Part 5 experimental license to re-broadcast GPS signals. Licenses are not required if they are inside an RF shielded environment. European regulations vary by country. Consult local authorities for additional details.