

## 4-way Active Extended L-Band Hybrid Splitter/Combiner TX/RX System

The LSCX414 is a 1RU/19" rack mount 4-way active Extended L-Band splitter/combiner unit specially designed in particular for VSAT and SNG/DSNG operations but also for other satellite uplink/downlink applications for instance to interconnect to a corresponding number of satellite modems or other interconnected devices.

The 1:4 active splitter at the RX path supports switchable LNB-supply (13/15/18VDC, 22kHz tone, 400mA) while the 4:1 combiner at the TX path allows DC-supply to a BUC (ON/OFF, 24VDC or 48VDC selectable) (Option). Configuration and monitoring of the DC supply for the LNB and BUC can be done via Ethernet-Interface (WebGUI, SNMP).

Additionally, the unit is equipped with an external 10MHz port and optionally with an internal 10MHz reference signal (available at common ports). Coloured status LED's are displaying the health status of power supplies, the splitter and combiner modules, 10MHz Internal Source (Option) as well as DC supply of LNB and BUC.

1:1 redundant power supply are optionally available.

This LSCX414 is characterized by superior RF performance, high density and beneficial functionalities. It comes with 50Ohm SMA(f) or 75Ohm F(f) connectors (other connectors are available upon request).



### FEATURES & BENEFITS

- ▶ Compact 4-way Splitter & Combiner TX/RX system
- ▶ Space saving 1RU/19" rack mount design
- ▶ Extended L-Band frequency range 850 – 2450MHz
- ▶ Switchable LNB-supply (13/15/18VDC, 22kHz tone, 400mA)
- ▶ Selectable BUC-supply (ON/OFF, 24V or 48V) (Option)
- ▶ External 10MHz reference port

- ▶ Internal 10MHz reference signal (Option)
- ▶ Front panel coloured status LED's displaying health status of splitter and combiner module, power supplies, LNB-supply, BUC-supply and 10MHz
- ▶ Remote configuration via Ethernet-Interface (WebGUI, SNMP)
- ▶ 1:1 redundant dual power supply (Option)

## TECHNICAL SPECIFICATIONS

|                                     |                                                                                      |
|-------------------------------------|--------------------------------------------------------------------------------------|
| <b>Dimensions:</b>                  | 1RU/19" rack mount                                                                   |
| <b>Power Supply:</b>                | 85 – 230V, 50/60Hz, optionally 1:1 redundant, not swappable                          |
| <b>Power Consumption:</b>           | <10W                                                                                 |
| <b>Chassis Assembly:</b>            | 1.4 active Splitter (RX path), 4:1 active Combiner (TX path)                         |
| <b>Frequency Range:</b>             | 850 – 2450MHz (extended L-Band), 850 – 2700MHz*                                      |
| <b>Input/Output Connectors:</b>     | 50Ohm SMA(f), 75Ohm F(f)                                                             |
| <b>Max. RF Input Power:</b>         | +13dBm (no damage), +16dB max.                                                       |
| <b>Input/Output Return Loss:</b>    | 14dB typ.                                                                            |
| <b>Insertion Loss:</b>              | 0dB ±0,5dB typ.                                                                      |
| <b>Frequency Response:</b>          | ±0,5dB typ., ±1,0dB max.                                                             |
| <b>Noise Figure:</b>                | <4dB @ Splitter, < 11dB @ Combiner                                                   |
| <b>Spurious Free Dynamic Range:</b> | < -76dBm                                                                             |
| <b>IMA3:</b>                        | -40dBc typ. @ Splitter, -56dBc typ. @ Combiner                                       |
| <b>1dB Compression Point:</b>       | +12dBm @ Splitter, +16dBm @ Combiner                                                 |
| <b>LNB-Supply via Splitter:</b>     | Switchable 13/15/18VDC, 22kHz tone, 400mA                                            |
| <b>BUC-Supply via Combiner:</b>     | Switchable ON/OFF, selectable 24VDC or 48VDC, 4A, fused* optionally                  |
| <b>10MHz Source:</b>                | External via rear panel 50Ohm BNC(f) or 50Ohm SMA(f), internal* optionally           |
| <b>10MHz Signal Availability:</b>   | Always available via common port at splitter and combiner, externally or internally* |
| <b>RF-Power Monitoring:</b>         | 60dB Dynamic Range Splitter and Combiner                                             |
| <b>Remote Access/Configuration:</b> | 100Mbit Ethernet-Interface (WebGUI, SNMPv2c)                                         |
| <b>Status LED's:</b>                | Splitter, Combiner, DC supply, Power Supply, 10MHz                                   |
| <b>MTBF/MTTR:</b>                   | >400kHrs at 25°C / 24 hours                                                          |
| <b>Operating Temperature:</b>       | 0°C to 45°C                                                                          |
| <b>Storage Temperature:</b>         | -10°C to 70°C                                                                        |
| <b>Humidity:</b>                    | 90%, non-condensing                                                                  |
| <b>RoHS:</b>                        | Compliant                                                                            |

\*Option

### 10MHz Internal Source (Option)

|                               |                                                                        |
|-------------------------------|------------------------------------------------------------------------|
| <b>Frequency:</b>             | 10MHz                                                                  |
| <b>Signal Type and Level:</b> | Sinewave, Level 5dBm                                                   |
| <b>Frequency Stability:</b>   | ±20ppb @ 0 to +50°C                                                    |
| <b>Phase Noise:</b>           | -90dBc@1Hz, -120dBc@10Hz, -142dBc@100Hz, -155dBc@1kHz, -163dBc @ 10kHz |

## ORDER INFORMATION

| Type        | Type No.: | Short Description                                                                             |
|-------------|-----------|-----------------------------------------------------------------------------------------------|
| LSCX414-75F | 9001092   | 4-way active Extended L-Band Splitter/Combiner TX/RX System, 75Ohm F(f), 1RU/19" rack mount   |
| LSCX414-50S | 9001093   | 4-way active Extended L-Band Splitter/Combiner TX/RX System, 50Ohm SMA(f), 1RU/19" rack mount |

## OPTIONS

| Type                         | Type No.: | Short Description                             |
|------------------------------|-----------|-----------------------------------------------|
| Option LSCX414-Redundant-PSU | 9001094   | Option 1:1 Redundant Power Supply             |
| Option LSCX414-Int10MHz      | 9001095   | Internal 10MHz Reference Module               |
| Option LSCX414-24V-48V       | 9001415   | BUC Power Supply 24/48V 4A, Fan Unit included |