



# Crystalspace C1U Communication system

## ***Overview***

Crystalspace C1U communication system will be the smallest half duplex communication system available. Operating in the popular 70 cm (430 MHz) amateur band and offering up to 30 dBm (1 W) output power. Advanced amplifiers will offer very low receive power and high transmit efficiency (up to 65 %). Microcontroller allows changeable transmit baud rates and data buffering. Small size allows to integrate the system with other subsystems or have two complete systems on the same PCB for added redundancy.

## ***Features***

- All critical components are doubled
- Radiation hardened by design
- 8 mm thick and weighs < 50 g
- Low power consumption
- Architecture flight tested on successful ESTCube-1 satellite
- RS485, RS422, UART or SPI controllable
- Compatible with CubeSat Kit and other standard components
- System can be easily tested, controlled and calibrated with Crystalspace control application

## ***Performance***

- Up to 30 dBm (1 W) output power
- Up to -125 dBm receive sensitivity
- 65 % power amplifier efficiency

## ***Product Properties***

- Dimensions: 96 mm x 90 x 8 mm
- Temperature range -40°C to 85°C
- Mass: < 50 g
- IPC-A-610 Class 3 assembly
- Vibration and shock tested
- Thermal vacuum tested