

Patria CANDL

Patria CANDL - Compact Airborne Networking Data Link



Protected Mobility and Defence Systems



Through Life Capability



Battlefield and Critical Systems



EXTREME SURVIVABILITY

Finland is known for high technology and extreme resilience. The harsh nature and limited resources have pushed us to learn and innovate efficiently. Thorough preparation for the future is the backbone of our culture.

Patria has grown from its Finnish heritage to a modern and international defence and technology company with over 100 years of experience. We use resources wisely, create innovative solutions and build intelligent systems that provide extreme survivability in any condition. We work with our customers throughout the entire lifecycle to ensure maximum value. Honest and straightforward co-operation is at the core of our work.

We build exceptional partnerships that last through critical operations. That's what it takes when you stand for your sovereignty.

Trust us, we have been there.

TOTAL CONTROL

Improve your critical security with our C5ISTAR and cyber intelligence solutions.

Patria's innovative data services, with insightful visualizations and analytics, ensure that you have real-time, comprehensive situational awareness and a powerful mission control. We create a seamless defence system for those who want to have the advantage in every situation.

Stay one step ahead in your decisions with our turnkey solutions and be in total control.

Patria - Extreme conditions embedded.

Patria CANDL

Patria CANDL is a single data link solution for communications requiring high reliability, such as UAS payload data and C2.

It provides flexible air-to-air and air-to-ground networking as well as beyond line-of-sight relaying functionalities, enabling capabilities such as Manned Unmanned Teaming (MUMT) and Live Virtual Constructive (LVC) training.



Data rate

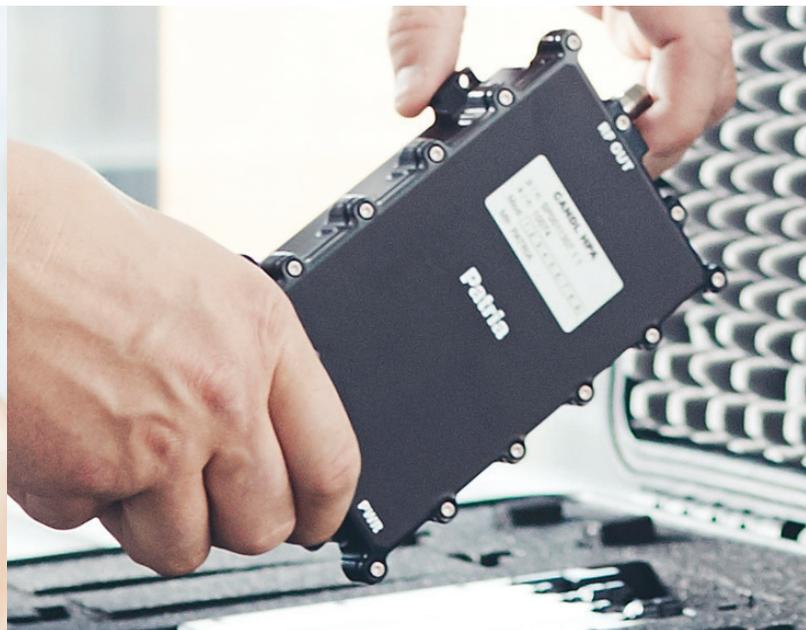
Up to 8 Mbit/s data rate with additional safety features for critical data, dynamic Ad Hoc Networking, motion video and digital voice capability are all integrated in one Software Defined Radio -based compact airworthy terminal.

Patria CANDL is designed for the most demanding environments enabling capabilities such as MUMT and LVC training.

Frequencies

Patria CANDL operating frequencies cover the NATO band IV as well as WRC 2012 defined civil UAS C2 band in a single housing enabling both military and civil UAS applications.

Networking and range performance can be further extended with optional external High Power Amplifier (HPA) module.



Networking

- TDMA networking with dynamic, on-the-fly reconfiguration
- Full IP compatibility
- Up to 24 network members
- Robust and flexible network management
- Synchronization based on internal (high stability oscillator) or external (e.g. GPS) time reference

Adaptive Throughput

- Scalable bandwidth, protection level and data rate from 126 kbit/s to 8 Mbit/s
- User configurable data rate allocation for different services such as C2 and payload data
- Multiple Quality of Service levels for different types of user data

Range

- >150 km/80 NM LOS with high availability
- >250 km/130 NM LOS (with external HPA)
- Relaying for BLOS and range extension
- Supports different types of omni-directional, sector and directional antennas
- Optional antenna pointing system with GNSS-aided or RF signal tracking

Frequency Band

- C band covering NATO IV band as well as civil UAS C2 band according to WRC 2012
- Configurable frequency and channel allocation

Low Probability of Intercept and Detection

- Frequency Hopping (FH)
- Direct Sequence Spread Spectrum (DSSS)
- Dynamic transmission power control
- Automatic diversity selection (air, ground) for up to four antennas (omni and/or directional)

Operation in GNSS-denied Environment

- Internal time synchronization
- Automatic RF signal tracking
- Accurate range measurement functionality for navigation support

Qualified Solution for UAS Applications

- STANAG 4586 compatibility
- Data link functionality integrated, tested and verified in multiple UAS and MUMT systems

Software Defined Radio Architecture

- Software configurable waveform
- Flexible user-specific tailoring
- Easy capability upgrades
- Built-in AES-256 Encryption and key management
- Secure SSH-based management and loading interface
- Optional internal COMSEC module with user specific encryption allocation

Compact Data Link Terminal

- Suitable for fixed and mobile installations on different platforms
- Size: 110 x 175 x 100 mm (4.4 x 6.9 x 4.0 in)
- Weight: 2.5 kg (5.5 lbs)
- Input Power: typical 55 W
- Operating Temperature: -40...+70 °C



Optional External HPA

- Size: 110 x 162 x 43 mm (4.0 x 6.4 x 1.7 in)
- Weight: 1.0 kg (2.2 lbs)
- Input Power: typical 150 W
- Operating Temperature: -40...+70 °C
- Conduction cooled

Patria

When it is not an option.

www.patriagroup.com