FM-VHF-TETRA-450 Quadruplex Antenna Combiner

**proFIL 4401 Quadruplex Antenna Combiner**

is a unique solution to reduce vessels' total antenna count and to increase total effectiveness of communication.

proFIL 4401 Quadruplex antenna combiner is specially designed for newbuildings to ease antenna planning for naval architects. The solution solves many severe problems that can exist in small patrol boats.

High performance proFIL™ technology enables modern communications without compromising safety and performance. Its low loss and high isolation output ports improves the overall performance of the communication system in comparison to the traditional one antenna – one radio approach.

proFIL 4401 combines four radios: FM receiver, marine VHF, TETRA and 450MHz UHF band into same antenna when using it together with tactical proTAC 5401 Quad Band antenna. UHF band can be used either for 450MHz LTE/WiMAX radio that is widely available in Europe or for TETRA TEDS extension.

proFIL™ technology is proven and used by many governments and authorities in Europe. High redundancy requirements can be met by using proFIL 4401 in dual combiner set-up.

**Save space, simplify structures**

- reduces antenna count from 4 to 1
- high isolation outputs
- compact and robust design
- designed to be used with proTAC 5401 tactical antenna
- can be used with proISO 1001 to prevent ground loops

**Electromagnetic modelling services fine-tunes performance**

Use our advanced proEMS™ electromagntical simulation, modelling, analysis and measurement services to create a complete 3D-electromagnetic environment of the ships’ external structures. This way the optimum location for each antenna with the least interference can be found and verified. The proEMS™ services are useful for any size of boat or ship and will be tailored for each customer separately.
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**Technical features**

**Filter type:**
High isolation quadruplex filter

**RF performance:**
- **FM:** 88MHz - 108MHz  
  (RL: >13dB @50Ω, Loss: <1.0dB)
- **VHF:** 150MHz - 170MHz  
  (RL: >17dB, Loss: <1.0dB)
- **TETRA:** 380MHz - 420MHz  
  (RL: >17dB, Loss: <0.9dB)
- **UHF:** 450MHz - 470MHz  
  (RL: >13dB, Loss: <1.1dB)
- **ANT:** 88MHz - 470MHz  
  (50Ω)

**Power handling:**
Continuous total 100W

**Mounting:**
Suitable for 19" rack mounting  
M4 threads

**Connectors:**
N-type female at each port

**Environmental:**
Operating temp: -30° - +60°  
Non condensing

**Material:**
Painted aluminium

**Power supply:**
No external power required

**Dimensions:**
- Height: 43 mm (1U)
- Width: 218 mm
- Depth: 140 mm
- Weight: 800 g

**Order code:**
FIL4401: proFIL 4401 FM-VHF-TETRA-450 Quadruplex Antenna Combiner

**Delivery time:**
From stock (with reservations)

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**Connection example**

- **Vessel's hull / mast**
- **proFIL™**
  - FM RADIO
  - MARINE VHF
  - TETRA RADIO
  - UHF 450 / TETRA TEDS
- **proANT™**
  - ANTENNA
  - antenna grounding
  - cable inlet
- **proISO™**