DOME SYSTEM - X2 PV

System contains 2 panels with a control router. It is meant for installations inside existing and operational VSAT or TVRO domes.
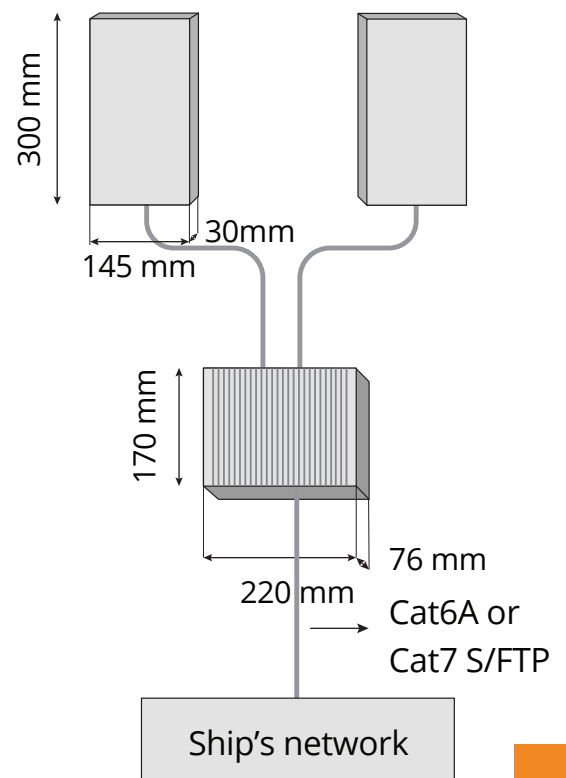
For installation of our Panel Version there should be at least 10cm clearance between the dish and the dome cover, to keep the dish fully operational.

- 2 panels (two 5G modems and 8 omnidirectional antennas in total, see "Panel" spec page 4 for more info)
- Dual-LEO (e.g. Starlink Maritime) connectivity
- **Panel Mounting:** panels can be mounted either vertically or horizontally (but not flat) near the dome's base. Thus, they will not interfere with the satellite dish system.
- **Mounting brackets:** will be provided to fit the diameter of the dome (spec on page 5)
- **Control Router:** mounted flat in the dome's base.
- **Power:** 160W peak load. DC 12V, 12A (3x4sqmm) or AC 100V..240V (3x1.5sqmm).
- **Operating temperature:** -40° to +75°C
- **Cabling required:** Ethernet to the ship's firewall: Cat6A or Cat7 S/FTP (shielded).

Remarks: 360° non-blocked horizontal line of sight recommended

The systems comes with all parts/cables required, except the ethernet cable connecting the dome to the ship's network.

X2 model of the panel version can be upgraded at a later time by purchasing additional panel(s) (up to 2 more). Such upgrade is very easily done. Optional SIM extender is available so SIM cards can be conveniently changed below deck. It does not require any extra cables (uses the same ethernet cable as for the user data).

300 mm
30mm
145 mm
170 mm
76 mm
220 mm
Cat6A or Cat7 S/FTP
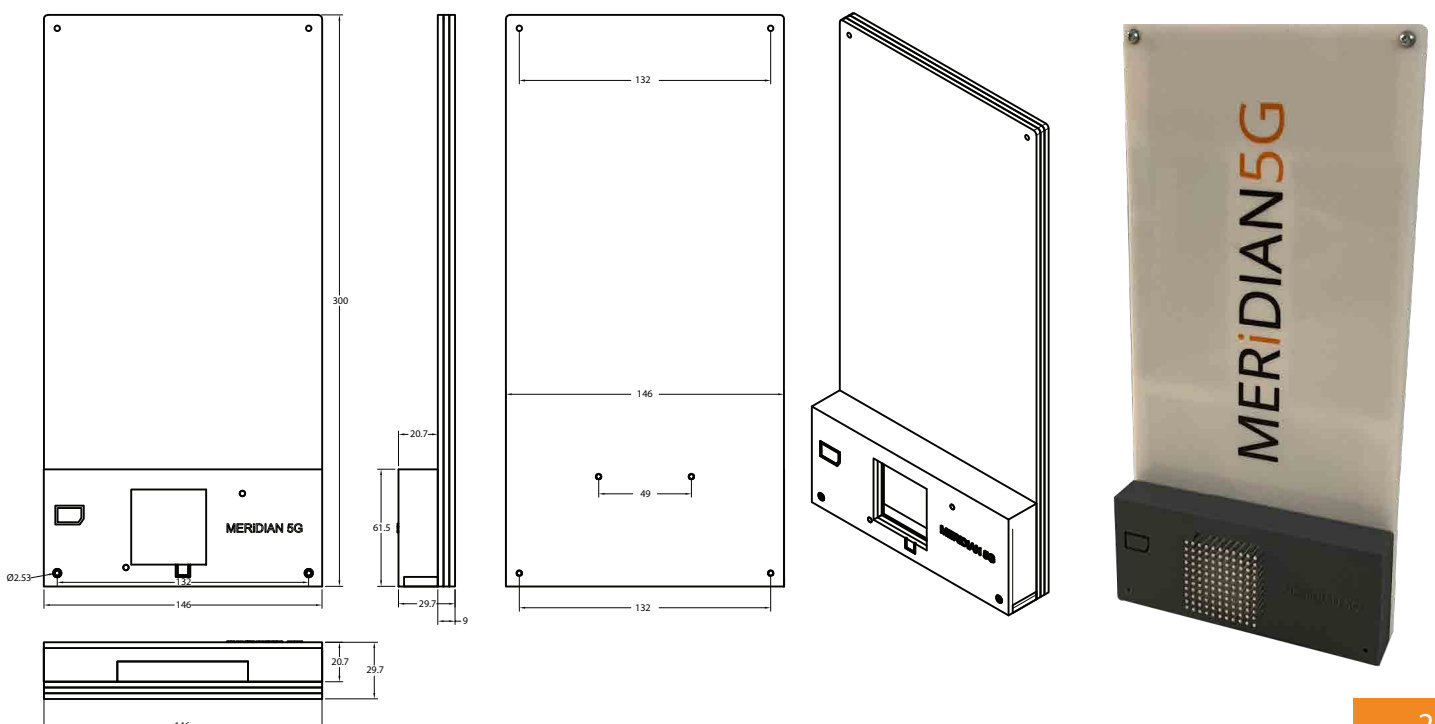Ship's network

DOME SYSTEM

MERiDIAN5G

Panel

TECHNICAL SPECIFICATIONS

Panel is a part, not a complete system. A control router is required to operate the panels.

Panels are the main parts in the DOME systems. A panel can also be used to upgrade either a DOME system to include more modems/antennas, or to upgrade M1 or M2 rugged.

- **Modem:** One 5G modem with 1 push-pull SIM slot (Nano, 4FF)
- **Antennas:** 4 omnidirectional wide band antenna modules (600MHz-6Ghz, peak gain 5dBi), arranged orthogonally in pairs to achieve 4x4 MiMo
- **Antenna layout:** Slim design on the antenna section to fit tight VSAT domes as well, e.g. Intellian V60
- **Dimensions in mm:** 300 x 146 x 29.7
- **Weight:** 800g
- **Material:** Polyester resin and ABS plastic
- **Operating temperature:** Heatsink to allow for up to 75°C operations
- **Connectors:** USB-C connector for USB-3.2 data bus and auxiliary power
- **Power:** DC 5V/3A (provided over USB-C from the control router)
- **Mounting:** vertical or horizontal, but not flat

5G Modems in all systems

Model: Qualcomm Snapdragon (SD) x55 modem, Cat. 20
Coverage: Worldwide 5G coverage with 3G/4G fallback
Power Class 2, max. TX power 400mW

MAXIMUM SPEED per modem:

Download: 2.0 Gbit/s per modem, 7xCA, max. Modulation 256QAM
Upload: 211 Mbit/s per modem, 2xCA, max. Modulation 256QAM
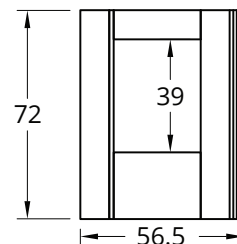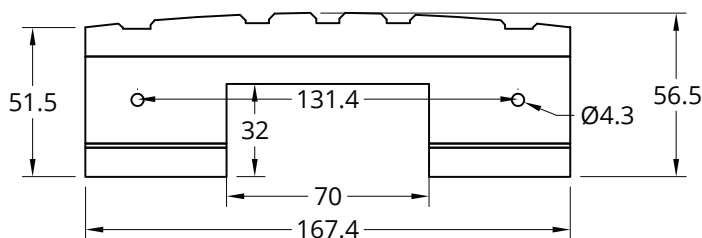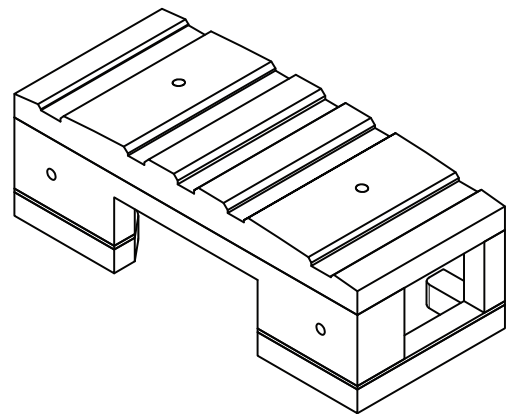
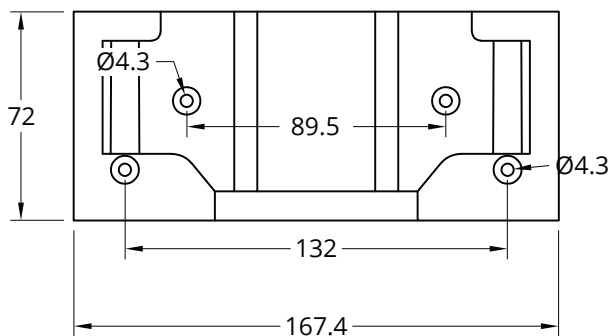## SUPPORTED RF BANDS (Worldwide Coverage)

Technology	Bands	Diversity Connection
3G	B1, B2, B4, B5, B6, B8, B9, B19	YES
4G LTE-A-PRO	B1-B5, B7, B8, B12-B14, B17-B20, B25, B26, B28-B30, B32, B34, B38-B43, B46, B48, B66, B71	YES (4x4 MIMO)
5G	n1, n2, n3, n5, n7, n8, n12, n20, n25, n28, n38, n40, n41, n48, n66, n71, n77, n78, n79	YES (4x4 MIMO)

DOME SYSTEM

Panel bracket

The bracket is used for the installations of the panels inside existing domes (for example, "Panel versions" of our DOME system or Panel upgrades). The bracket is 3D printed to match the diameter of the dome where the panel will be installed. It is then glued to the inner wall of such dome at the base. The panel can then be easily inserted (and if needed easily changed).

- **Weight:** 200g
- **Material:** Polyester resin
- Curve matching the dome's diameter (the one on the rear facing the dome cover)

User interface

MERi**DIAN**5G

DASHBOARD:

Modem Status	System Status	System Control
• SIM card inserted • Connection status • Aggregation status • Temperature • Error indication	• Aggregator status • Current network load (down/up) • Temperature • Error indication	• Power down • Reset

FURTHER CONTROL:

Modem Status	System Status	System Control
• Reset • Set offline • Roaming on/off • Modem Status information (IMEI, Signal level..)	• PIN/PUK • C/E Description • Roaming on/off • Contract or pay as you go data package	• Limit for signal Level • Limit for network technology • Limit for BER (bit error rate) • Limit for latency