

APS720 Autopointing Antenna Control Unit

1. APS 700 Indoor Controller

1.1. with DVB-S2 Tracking Receiver

2. Outdoor Cabinet with Autopointing Sensors

1. APS 700 Indoor Controller

2. 19" 4 RU Rack Mount Chassis.

- Industrial grade PLC with 800 MHz ARM Cortex A9 CPU and 256 MB RAM + 256MB Flash
- 7" Touchscreen



1.1 DVB-S2 Tracking Receiver

- DVB Standards: DVB-S / DVB-S2: QPSK, 8-/16-/32-APSK CCM only
- Tuning range: 950 to 2150MHz
- Sensitivity: -30 to -60dBm
- Baud rate: 2 – 40MBd
- LNB Power Supply, 13V/18V, 400mA
- 22kHz Tone: On/Off
- Communication Interfaces:
 - USB: Software Upgrade
 - Ethernet: Graphics User Interface, Remote Antenna Control, Communication with Beacon & DVB-S2 Receiver, Autopointing Sensors(GPS, Compass, Inclinometer)
 - BNC: (Analog Interface - 10V to +10V): Beacon receiver, configurable flank
 - RS232: Beacon Receiver



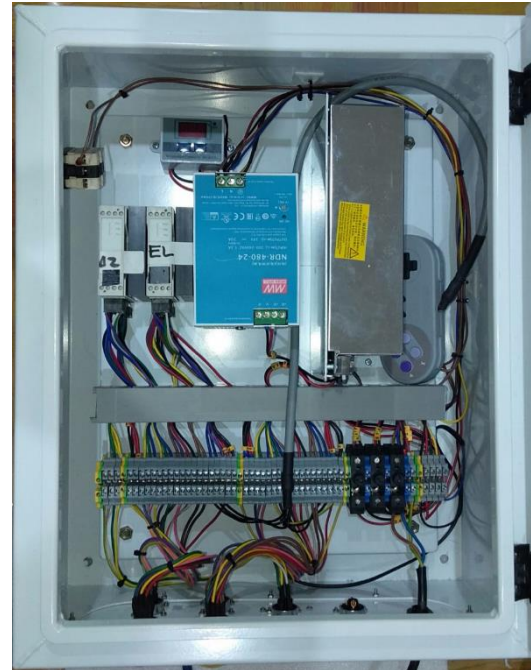
- RF In: L-Band Input to DVB-S2 Receiver
- RF Out: Interface to client receiving equipment
- CAN-BUS: Communication via CAN Cable with positioner & the Outdoor Cabinet, Cable length up to 500m
- Wi-Fi(opt.): Integrated Wi-Fi Router for Wireless Communication to ODU
- Optical(opt.): Fiber Optic Communication with positioner & the ODU Cabinet(SingleMode, MultiMode, various interfaces)
- Power Supply: 110-240V AC, max 0,6 A (depending on configuration)
- 19" 4 RU Rack Mount Chassis.
- Size: 490 x 220 x 177mm(LxWxH)
- Weight: approx. 7kg
- Operation Temperature: 0° to 50°C
- Humidity: 20 - 80% (non-condensing)

2. Outdoor Cabinet

- Motor & Electronics Power supplies
- Intelligent Motion Control Units(iMCU) with variable Speed & Acceleration Control
- For 24 – 60V DC & Brushless DC Motors
- Motor Power up to 800W per axis
- ServoController(opt.) for BLDC & AC Servomotors
- For 24V – 60V BLDC & 230V/400V AC Servomotors(opt.)
- Motor Power up to 15kW per axis
- High resolution Encoder inputs for optic or magnetic encoders
- Multi GNSS Receiver for GPS, GLONASS, GALILEO, BEIDU, QZSS Navigation Satellite Networks
- Navigation Compass
- Digital Inclinometer
- ODU Climatisation



- Communication Interfaces
 - Motor Interface: Interface to Positioner(Az, El & Pol Motors, Encoders & Limit switches)
 - Polarization Switch(opt.)
 - Revolver Interface(opt.)
 - CAN-BUS: Communication via CAN Cable to APS700 Indoor Controller, cable length up to 500m
 - Optical(opt.): Fiber Optic Communication with APS700 IDU (SingleMode, MultiMode, various interfaces)
 - Wi-Fi(opt.): Integrated Wi-Fi Router for Wireless Communication to APS00 Indoor Unit
- Power Requirement
 - DC & BLDC Motors: 110-240V AC, up to 1200W
 - DC & AC Servomotors: 110-240V AC, up to 30kW, 400V AC 3ph(opt.)
- Cabinet: powder painted steel, IP 65 protected
- Size: typical 600 x 500 x 210mm, other sizes possible
- Weight: approx. 35 kg, depending on configuration
- Operation Temperature: -30° to 50°C
- Humidity: 100% (condensing)



Features

- Control via 7" Touchscreen
- 7 Axis Antenna control
 - Azimuth & Elevation + 4 Polarizations & 1 Revolver (Multifeed Revolver)
- 99 Satellite position store
- Automatic satellite pointing based on Positioner Location(GPS)

- Controller Options

1. Tracking
2. Autopointing
3. Polarization Switch
4. Modbus over TCP
5. Revolver
6. Externals Sensors

1. Tracking(opt.) of Inclined Orbit Satellites

- 4 Different tracking algorithms
 - Program Track
 - Time Track
 - Signal Track
 - Optimized Track

- Communication via Analog(Voltage) interface with Beacon & DVB Receiver with AGC output

- Digital(RS232 & Ethernet) Interface for Beacon Receivers & DVB- DVB-S2 Receivers

2. Autonomous Satellite Pointing based on Position(GPS) and Heading(Compass, Inclinometer) sensors

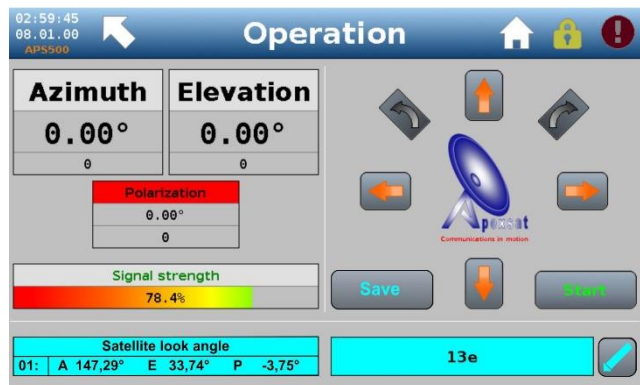
- Autonomous Satellite Acquisition via DVB Receiver
- Search & Scan algorithm for wideband satellite detection
- One Button Interface
- Antenna Stow feature for mobile antennas
- Automatic Antenna Position calibration(referencing)

- Add-on Controller(opt.) for LEO/MEO tracking

3. Polarization Switch(opt.) for Feed polarization changes

- Can be utilized for circular polarized Feeds (C, X, Ku, Ka)
- Works with GIML/A Polarization Drive & Rotary Joint
- Switching in-between LHCP, Linear & RHCP and vice versa.

4. Remote Control via WebGUI, same UI, same features as touchscreen



- Remote Control via Modbus over TCP(opt.) Integration of APS700 Antenna Control unit into a multisystem NMS or external Control Device.
 - Special Remote 10Hz IPM Mode for UAV tracking
- 5. Multifeed Revolver Control(opt.) for Multiband Antennas equipped with GIML/A Revolver and various feeds
 - Including Single Feed polarization motorization control for every feed
- 6. External Sensor upgrade(opt.) for ODU temperature control, humidity supervision etc.

APS720 ACU Schematics

