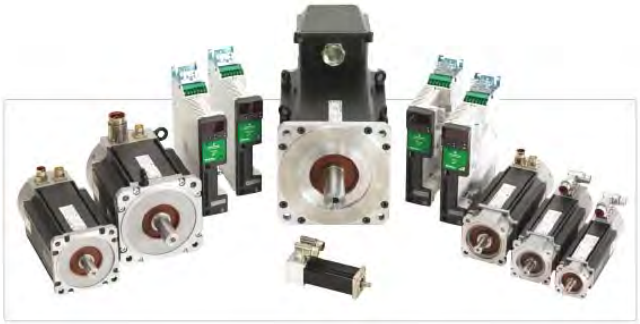
InterTronic Antennas

Creating solutions in communications and science

High Performance Integrated Antenna Control Systems

InterTronic offers a complete controller upgrade service including installation for older (or new) antennas and telescopes that require accurate pointing. We supply the overall solution using readily available control system hardware, custom designed mechanical interfaces and software developed by InterTronic Antennas specifically for these applications. InterTronic also provides all the additional skills needed to design and manage the implementation of a complete control system upgrade.



Features:

- Our advanced Integrated Antenna Controllers are available in two, three and four drive versions
- Uses off the shelf, standard, Control Techniques drives and motors
- Capable of controlling up to 3 antenna axes simultaneously
- Proven on our own 2-3m and 12m systems, and on various older systems up to 27m.
- Suitable for use with state of the art Radio Astronomy applications as well as LEO and GEO satellite communications applications
- Can be retrofitted onto older radio telescopes to prolong system life with a much enhanced feature set together with much improved performance

Major advantages when used as an upgrade or retrofit for older antenna or telescope systems:

- Much improved pointing accuracy under all conditions (depending on the integrity of the existing mechanical structure)
- Full remote monitoring, control and diagnostics
- High reliability
- AC brushless servo motors for long life
- Easily obtained spare parts
- More careful control of accelerations and loads for older structures

Additional System Features

- Whole system is in one well proven RFI tight enclosure, not separate drive amplifiers and ACUs
- State of the art fully digital motion controller technology for accurate positioning and tracking with velocity and position control loops
- All antenna specific calculations and corrections are implemented within the controller
- Comprehensive monitoring, diagnostics and fault reporting
- Ethernet TCP/IP multi-client Interface, optional optical interface
- Built-in pointing correction for axes misalignments using a 9-term pointing error model
- Built-in correction for atmospheric refraction if required
- Tracking from time tagged azimuth and elevation data files
- Tracking from time tagged right ascension and declination data files
- Pointing offsets (equatorial and horizon coordinates) superimposed on track profiles
- Built in real time clock synchronized to a network time server
- Capacity to handle control and monitoring (analogue and digital) of external equipment such as feeds and receivers
- API for remote installation of software updates and modifications
- Local control mode and position readouts for maintenance purposes
- Multiple modes of satellite tracking including:
  - Program track using satellite position data
  - Advanced beacon or data tracking
  - Can use inputs from a monopulse feed to track

A 27meter system upgraded by InterTronic in 2012

Drive Cabinet Examples

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