Marmot
An Antelope Device Server
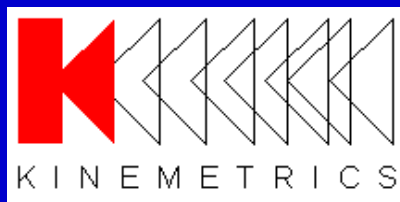
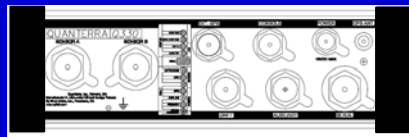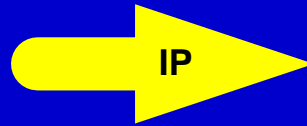# Marmot

KEY BENEFITS

- Rugged field deployable computer
- Antelope based local data acquisition and telemetry
- Antelope based local data processing
- Currently up to 8Gb on CF card [in the near future includes field replaceable SD cards]
- Multiple interfaces: Ethernet, serial [in the near future USB, Bluetooth]
- Average power requirement of about 5W [in the near future << 1W]
- Embedded Linux 2.4.25
- Reports temperature & voltage, Antelope start-up at boot, watchdog
- Including standard protocols, e.g., DHCP, NTP, ssh
- Menu-driven configuration

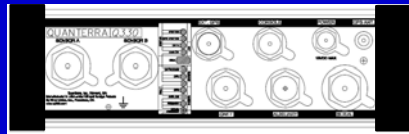# Marmot's Design Philosophy

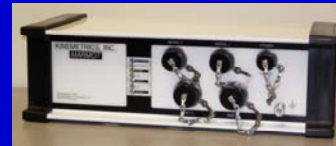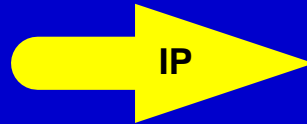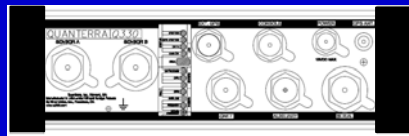Q330 → IP → Marmot → Telemetry

Q330 → IP → Marmot → Telemetry
Q330 → IP →

Telemetry →
Telemetry → Marmot → Telemetry
Telemetry →

Technical Specifications

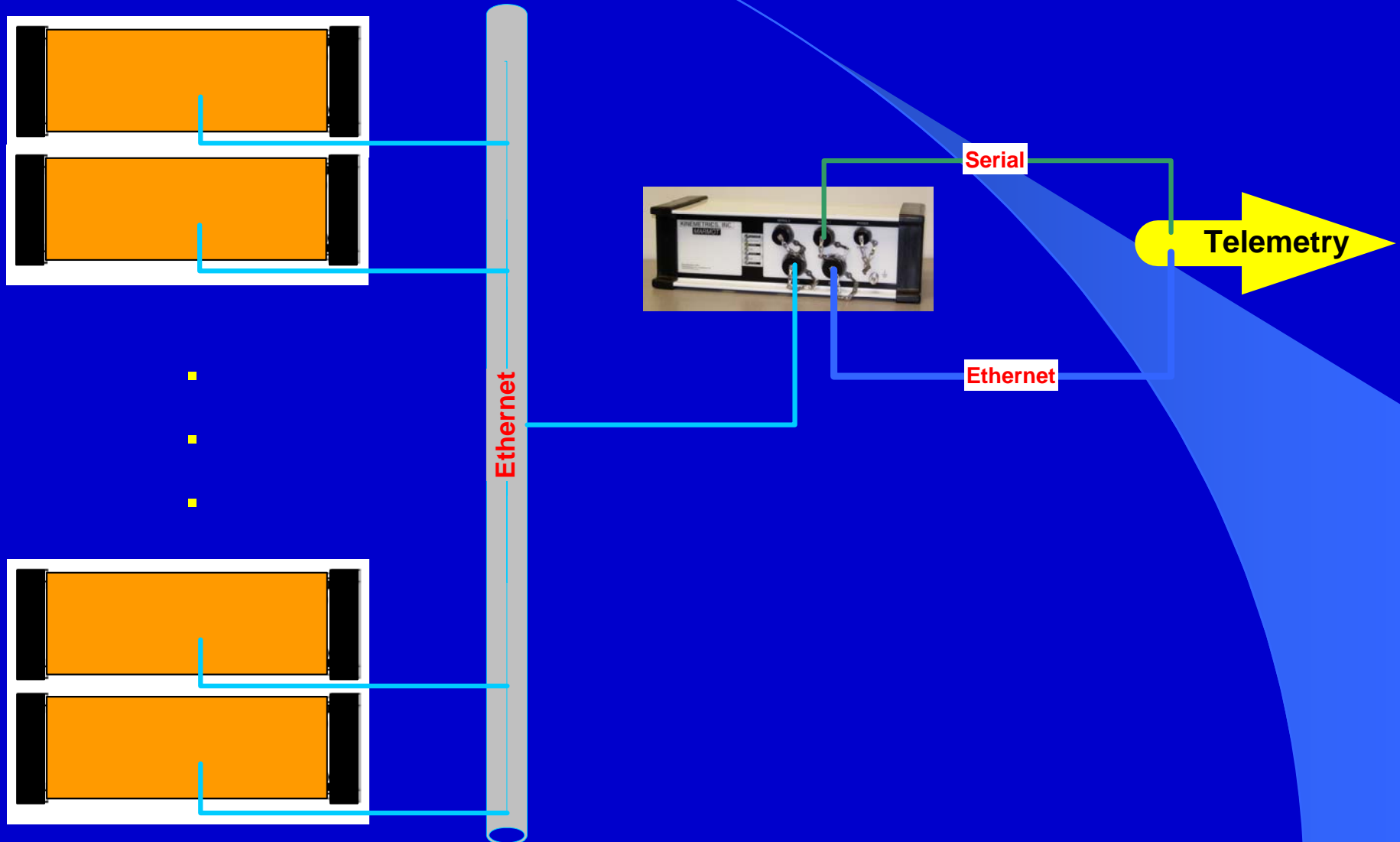| Specification	Description [April 2006]
CPU	Intel XScale 400MHz
Memory	64Mb [246Mb]
Disk	Up to 8Gb on CF card [additional internal CF card + removable SD card]
Interfaces	2 Ethernet, 2 Serial [2 USB, Bluetooth, integrated modem or SS-radio]
Input Power	10-36VDC [8-18VDC]
Power Consumption	~5W [0.6W] @ 12VDC
Backup Power	UPS build in to support graceful shutdown [supercaps]
Auxiliary Data	Temperature, DC Voltage
Temperature	-10 to 55°C [-20 to 70°C, optional –40 to 85°C]
Telemetry	Supports any Ethernet and serial com-link (TCP/IP, UDP/IP, PPP, SLIP etc.)
Timing	NTP (including orb2ntp)
Antelope	Embedded
Physical	Sealed, Aluminum, 3 x 4 x 6 in

Application: Simple Local Data Acquisition and On-Site Processing
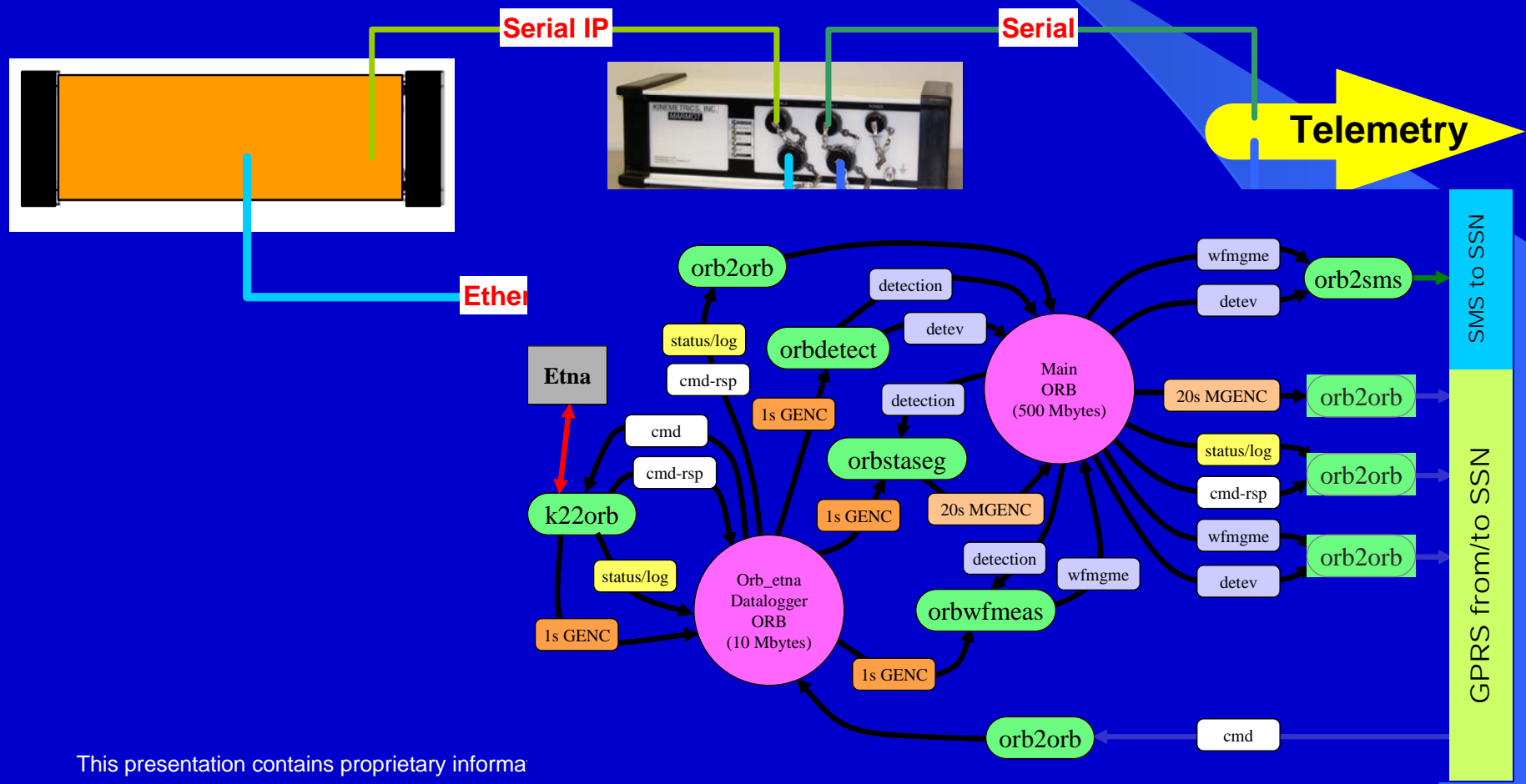
Application: Multiple Local Data Acquisition

Serial IP

Serial

Telemetry

Ethernet

Ethernet
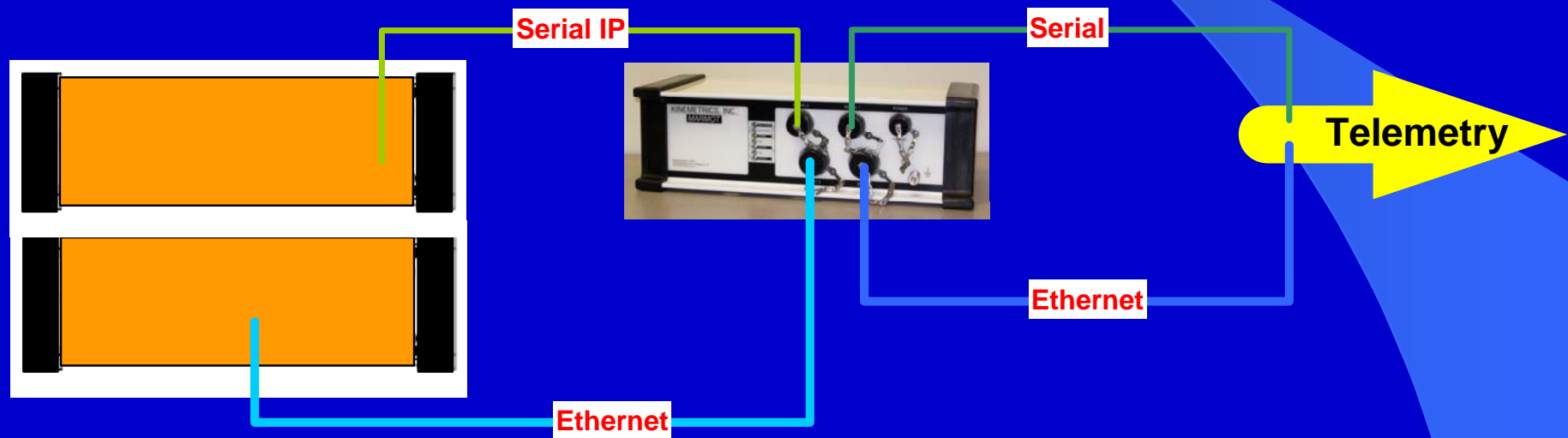
Application: Data Concentrator

Ethernet

Serial

Ethernet

Telemetry

Application: Store-Forward

Telemetry

Telemetry

Telemetry

Serial

Serial

Telemetry

Ethernet

Ethernet
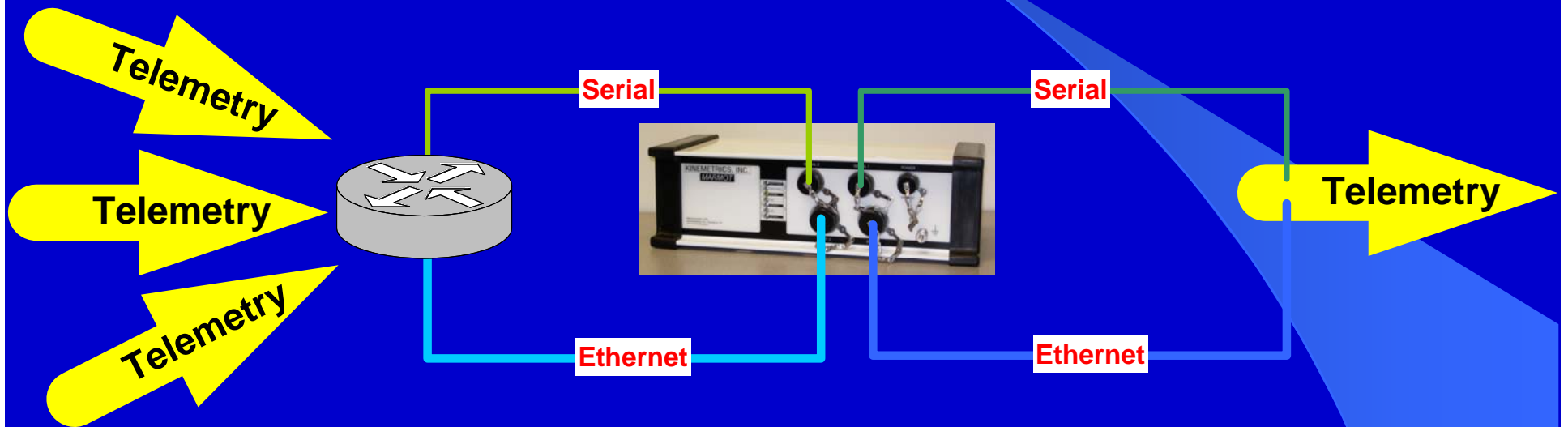
Application: Remote Station Store-Forward

Ethernet

FreeWave Spread-Spectrum Radio

FreeWave Spread-Spectrum Radio

Ethernet

Ethernet

Satellite
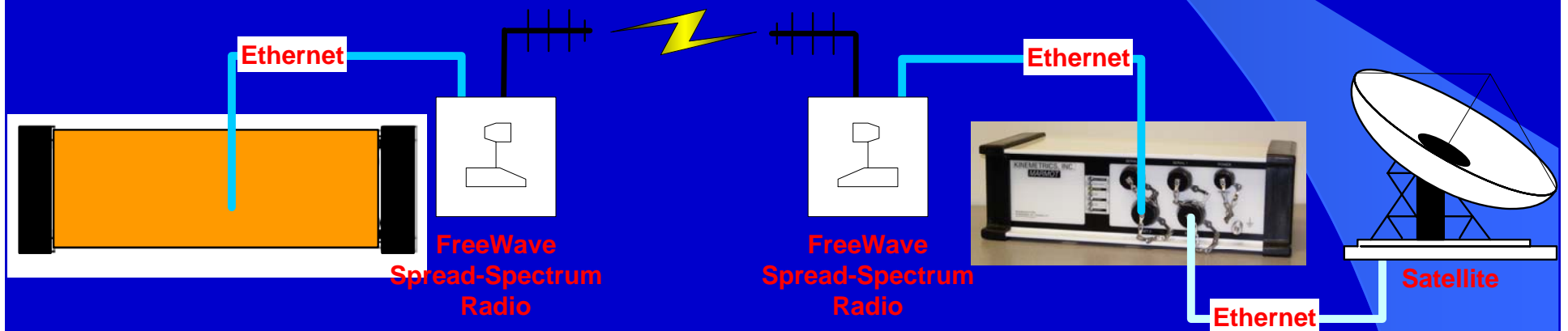
Application: Integrating Other Equipment

Serial

Geodetic GPS

Serial

Strain Gauge

Telemetry

Ethernet

Ethernet

Simple Configuration

```
Session  Edit  View  Bookmarks  Settings  Help

KMI Marmot Configuration Utility, v1.0.14

        1. View System Info
        2. View Current Logins
        3. Configure Network
        4. Configure System Time
        5. Change Passwords
        6. Configure BRTT Antelope
        7. Restore KMI/BRTT Software
        8. REBOOT
        9. Exit

Make a selection and press [Enter]

>

Shell
```

Example Deployment