eNet-A429™

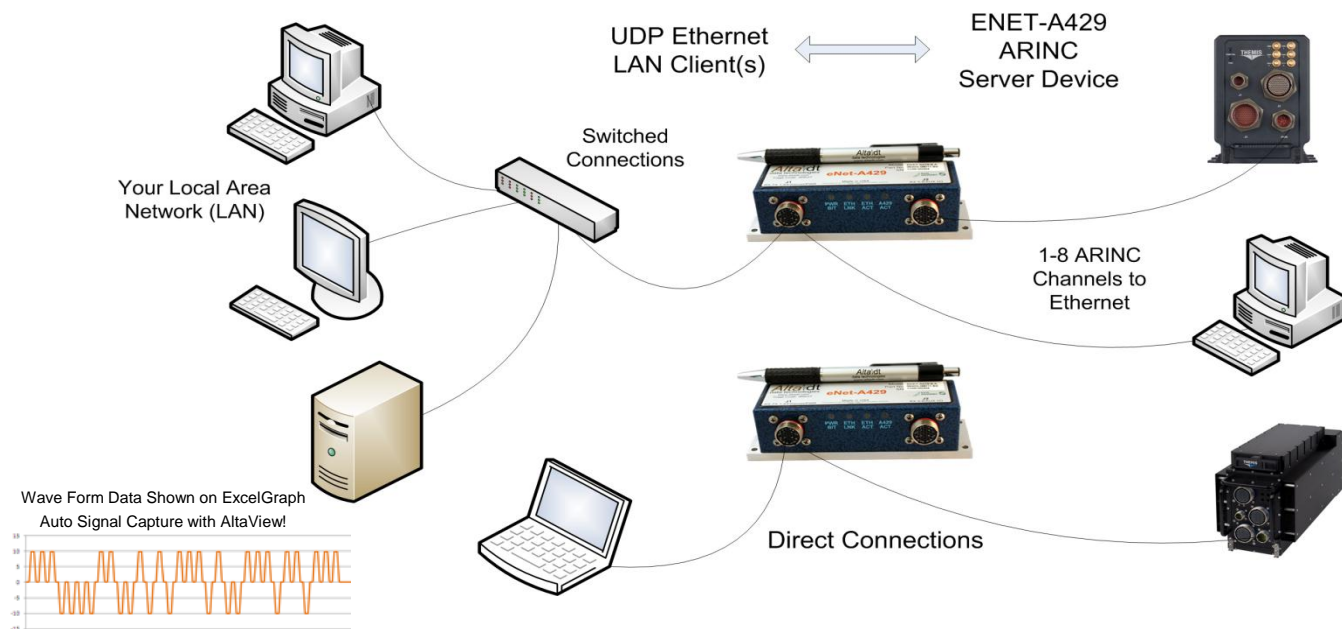## Remote ARINC Operations for Ethernet Networks

Small 13.5 x 3.7 x 4 cm
200 grams

- 10/100/1000 Ethernet <-> 1-8 ARINC Channels
  - 4 Channels RX or TX; 4 RX Only Channels
- Thin-Server, Real-Time UDP Ethernet to/from ARINC **
- Remote ARINC Devices on the LAN – Small Size
- Auto TX Images for Fast Startup
- Auto RX Mode for ARINC->Ethernet Bridging
- 5-30 VDC, 300-900 mAmp max/300-700 mAmp typical 200g Weight, POE Optional
- Ideal for Lab or Rugged Deployed Applications
- IRIG-B RX Decode, PPS, Triggers, Discretes
- Supports ARINC-429/575/573/717

Alta's ENET-A429 Provides Ethernet to ARINC Connectivity
Ideal for Lab or Rugged Vehicle Applications

UDP Ethernet LAN Client(s)

ENET-A429 ARINC Server Device

Switched Connections

Your Local Area Network (LAN)

1-8 ARINC Channels to Ethernet

Wave Form Data Shown on ExcelGraph
Auto Signal Capture with AltaView!

Direct Connections

eNet-A429™ is an innovative product that provides "remoting" of ARINC operations on 10/100/1000 Ethernet IP/UDP local area networks (LAN). eNet-429 is a small, low-power, rugged device that provides connectivity for 1-8 ARINC 429/575/573/717 Channels - Ideal for remoting ARINC connections for in-field applications or point-point lab usage.

Alta has combined the industry's most advanced 32-bit ARINC FPGA protocol engine, *AltaCore*™, with a real-time IP/UDP thin server. The customer can implement their application with the same feature-rich application programming interface, *AltaAPI*™, as used with standard cards – often without even recompiling - the ultimate in code portability.

**NOTE: eNet-A429 (server) is a real-time Ethernet/ARINC device, but your computers' (client) IP stack may not be! The eNet-ARINC device provides real-time UDP receive and transmit requests to ARINC buffers, but the client's IP/UDP stack will induce path delays as compared to backplane cards. For many applications (<100-1000 packets per second), this product will provide unparalleled flexibility in ARINC configurations (much better than USB devices). Contact Alta for test results on various OS and computer configurations – your system results may vary.

AltaCore-A429
eNet-A429™ Specifications

General

- 4 RX/TX Selectable Channels; 4 RX Only
- 13.5 x 3.7 x 4cm, 200g without cabling
  Rugged, Mountable
- Support ARINC-429/575/573/717
- Standard 10/100/1000 Ethernet UDP
- Power 1000E @ 50% Load: 800 mAmps
  Power 100E @ 50% Load: 400 mAmps
  5-30 VDC Input Accepted
  POE Optional (+55C Ambient Max Temp)
  USB Powered (1000 mAmp Source)
- Glenair Mighty Mouse Connectors.
  801-011-02M10-26PA/B Mates.
- Encode or Decode Almost any ARINC-429
  Physical Layer Signal (512-200K Baud)
- 8-bit, 1 uSec A/D Signal Capture
  on First Two RX Channels!!
- One Megabyte RAM for Buffering
- Flash Disable Factory Setting for Secure Mem
- Parts Temp (C) : -55 to +120 Storage, 0 to +70
  Commercial, -40 to + 85 Extended Temp
- Full Word/Label Encoding/Decoding
  - Bit Rates 512 to 200K
  - Bit Types, Length, Start/Stop and
    Parity Settings (most advanced in
    industry)
- 2 Avionics, 2 RS-485, One TTL In and Out
- Power-Up, Loop-Back and User BIT
- IRIG-B RX PAM and RX/TX PPS Time Sync
- IPC Level 3 and ISO 9001:2008 Processes

TX Features

- Simple or Detailed Frequency (Hz) Control Per
  Label/Word List
- ARINC-717 Frame Support
- Interrupts, External Trigger
- Full Error Injection

RX Features – Three Buffering Modes

- Channel Level Label/Word Tables
- Channel Level Current Value Tables
- Multi Channel Data Tables for All Channels
- ARINC 717 Frame Support
- 64-Bit, 20 nsec Time Tags
- Interrupts, External Trigger
- Full Error Detection

Playback/Signal Generator (TX)

- Real Hardware Playback from Archive Files
- H/W Playback Timing to 10 usec
- Signal Vector Generation at 1 uSec **INDUSTRY
  FIRST**
  - Construct Bit Encoding
  - Ideal for Test Validation

Software: *AltaAPI & AltaView*

- Multi-Layer *AltaAPI* Architecture to Support
  Windows and C Linux, VxWorks, LabVIEW, etc..
  - Contact Factory For RTOS Platforms
- Optional *AltaView* is Based on the Latest
  Windows MS Office 2007 User Interface Style with
  Ribbon-Bar
  - Full Analyzer Integration Tool
  - Multi Language Support

Part Numbers

- **eNet-A429-8**
  - 4 Shared Rx/TX; 4 RX ARINC-429 Channels
  - 2 RX/2TX ARINC-717 Shared Channels
    - (Each 717 Tx or Rx Replaces Two 429
      Channels – J1 Connector)

  Options: Add -E for Ext Temp Parts (-40 to +85C)
  and -P for POE

Optional Cables:

- **ENETCAB-A429-J1-01**
  - 4 ARINC RX/TX, Ethernet & USB Power
- **ENETCAB-J2-01**
  - 4 ARINC RX and Auxiliary Mini DB-26

5 Year Limited Warranty

EU and China RoHS Compliant
Contact Alta for Special Lead Build Configurations
Non-Public Telcom/CE Device

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