



Specialists in design and manufacture of COTS equipment for integrating satellite, defense and terrestrial networks.

## TODAYS MOST FLEXIBLE ENCRYPTION SOLUTION JUST GOT MORE FLEXIBLE

### KIV-7M INTERFACING



#### Metrodata Provide Interfacing Capability To KIV-7M

As a designer and manufacturer, Metrodata support a variety of serial interfaces across our 300 products. Widely used to interface to serial satellite modems, encryption devices, radio systems and telecoms equipment, Metrodata have taken our existing serial products utilised by the Defense community and added LVDS/EIA644 to a number of these products to support the new KIV-7M Encryptor. We already support EIA530 to 20Mbits, HSSI to 110Mbits, ECL to 110Mbits and also commonly found X.21, V.11 and V.35 interfaces. LVDS is usually interfaced as 25 way D Type, which is similar to EIA530, but electrically it is similar to HSSI and ECL.



With the new KIV-7M there is the capability to go to 51.84Mbits utilising its LVDS/EIA644 interface, which is not the typical type of interface found on routers, switches or fiber optic modems. Whilst LVDS Satellite Modems do exist, HSSI is the more prevalent interface. LVDS might place constraints on your network topology, network data rates and network mode of operation but...

# KIV-7M Interfacing!

## Now Metrodata Provides Complete Flexibility and Usability Of LVDS Interfaces

With Metrodata products in your network, you can make the KIV-7M interoperable with your existing equipment and optimize your network at the same time. For example:

- End to End Crypto Transport—LVDS KIV-7M Over WAN, ATM or Fiber (LVDS CE)
- Switch to KIV-7M to Satellite Modem (ATM Over LVDS)
- IP Router to KIV-7M (IP Over LVDS)
- KIV-7M to HSSI Radio Relay System ( LVDS to HSSI)





## DEFENSE CLIENTS



With our extensive portfolio of COTS interface, speed and protocol converters we are able to provide connectivity between:

- ATM Switches, ATM Access Devices and ATM Concentrators
- Low Speed Synchronous Serial Equipment - Cryptographic Equipment
- Any speed Serial Satellite Modems
- ATM Encrypters
- Serial Encrypters
- Fiber Optic Modems
- Routers and SDH/Sonet Muxes

These are the "Building Blocks" of Global Communication Networks. These are inherent in almost all tactical/military and commercial satellite systems. Often these "Blocks" cannot be fitted together, because of an incompatibility between their interfaces, protocols or clock/data rates. This is where Metrodata can help. Metrodata products basically provides the "cement" between the blocks, removing interface connectivity issues, optimizing the use of specific protocols and resolving clocking problems.



*"After an extensive trade study, we selected Metrodata's AP product line as the backbone switch in our extensive, deployable satellite communications offering. The AP product line was used to support the **US Joint Forces Command Millennium Challenge**, the **Joint US Army / US Navy High-Speed Vessel**, and the **Flag Ship of the US Navy's Commander Second Fleet / NATO Striking Fleet Atlantic**.*

*As robust as their product offering is, the most impressive trait of Metrodata is their responsiveness and willingness to support the customer with superior engineering services and second-to-none customer service. Metrodata has developed custom firmware updates that were required in order to support the nuances of US Depart-*

**Mark Solsman, President, ENGENUITY, LLC**



### **Metrodata designs and manufactures network access technology that:**

- Aggregates and Concentrates legacy networks
- Supports Secure mission specific networks
- Enables Interoperability between COTS and Military Platforms
- Supports disparate information rates, modes of operation and interfaces



# ADDITIONAL DEFENSE INFORMATION

This document outlines a specific application Metrodata offers in Defense. Everyone has a different application, network topology or interfacing challenge and Metrodata are here to help. More detailed information about Products, Applications and Defense Procurement is available either from Mike Holdsworth [Space and Defense Manager +44 1784 744 700] , our website [ [www.metrodata.co.uk](http://www.metrodata.co.uk) ] or on our Corporate CD. This includes:



- Defense Related Application Notes
- White Papers
- Data Sheets
- Manuals
- Technical Bulletins

Email [sales@metrodata.co.uk](mailto:sales@metrodata.co.uk) to receive your Metrodata CD.

## DEFENSE TECHNICAL BULLETINS

### AUTOMATIC CRYPTO RESYNC

The Metrodata AP3000 Access Concentrator has been deployed as an ATM Cell Bearing Serial Interface Converter by the Naval Warfare Development Command. In order to enhance speed and agility of operations, an Automatic Crypto Resync feature was added to the APSAT Platform.



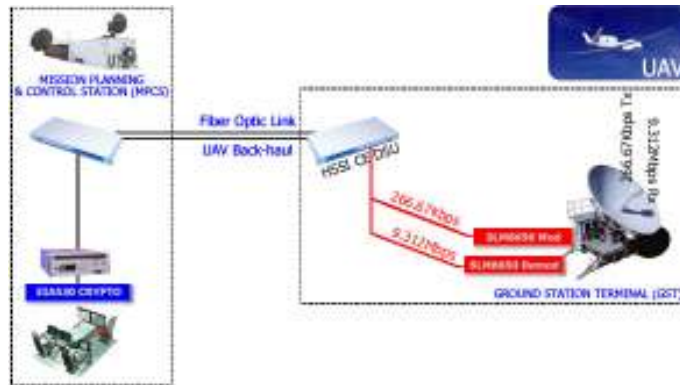
**"We appreciate all the work you guys put into this in the short time period that we had. It was quite a sight watching the resynchronization work as the ship transitioned in and out of SATCOM coverage."**

**Kent Slater—BMH Associates, Inc**

## DEFENSE APPLICATIONS NOTES

### UNMANNED AERIAL VEHICLE [UAV] BACKHAUL

Using the Metrodata AP3000 and HSSI CE DSU to transport Asymmetric Data from the Ground Data Terminal (GDT) over Fiber or ATM to the Mission Planning and Control Station (MPCS).



### OTHER DEFENSE APPLICATION NOTES INCLUDE

- Ensuring Exact Clocking In Defence Networks
- Saturating Satellite Transponders with Data
- Multicasting ATM Over Satellite



"We were faced with a unique service opportunity that required an unconventional backhaul solution. We were familiar with Metrodata's satellite related products and knew they had an ATM product line as well. After some technical discussions, Metrodata quickly proposed their AP3000 to solve our problem".

"The availability of the product and Metrodata's commitment to supporting Netsat Express during the implementation phase, allowed us to provision the hybrid satellite/terrestrial circuit within our customer's very aggressive schedule."

**Alan Henderson—Netsat Express**



## Metrodata Defense, Military and Satellite Communications

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